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# A Companion to Linear B

*Mycenaean Greek Texts and their World*

VOLUME 1

edited by

Yves DUHOUX

and

Anna MORPURGO DAVIES



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**For John Chadwick and Michel Lejeune**  
*in memoriam*



## FOREWORD

Successive Mycenaean colloquia offer a record and a demonstration of the expansion of Mycenaean studies in the last decades. The first Linear B scholars necessarily concentrated on the linguistic analysis of the texts. Currently philosophical analysis is still fundamental, but considerable progress has been made in our understanding not only of the tablets' literal content but also of their links with each other and with non-textual evidence (archaeological, geographical, etc.). The new approaches have greatly increased our knowledge of Mycenaean administration, economy, history, religion, etc., but the rate of expansion is such that it is becoming difficult even for the specialist to follow all the recent developments. At the Eleventh Mycenaean Colloquium in Austin it was suggested that we needed an up-to-date book which would inform both specialists and non-specialists (including graduate and undergraduate students who take their first course in Linear B) about the whole range of Mycenaean studies and the contribution that they make to our understanding of Mycenaean Greece. For a book of this type accessibility is not enough; the information provided must be reliable and have sufficient authority to be trusted. This called for a collective volume written by a number of specialists; we followed the model of our earlier volume, *Linear B: a 1984 Survey*, but aimed at a more complete, more detailed, and of course more up-to-date work. At the same time we thought of those who approach Mycenaean without any knowledge of the secondary literature and of the numerous editing conventions which are regularly followed but hardly ever explained. This is the motivation for Chapter 2 ('How to begin?') which introduces the reader to the basics — the way in which texts are edited, how the editions should be consulted, the most useful grammars, dictionaries, introductions and works of interpretation, the bibliographical tools, etc.

*Linear B* had 8 chapters for a total of 310 pages. This *Companion* will at least be double in size; it will appear in two volumes. We have tried to provide a systematic account of most, if not all, the questions which confront students and scholars who want to exploit the data offered by the Linear B texts — Decipherment, Working tools, Chronology of the Linear B texts, Mycenaean history, Society, Economy, Technology, The inscribed vases, Mycenaean anthology (volume 1); Writing, Scribes, scribal hands and palaeography, Greek and the Linear B script, Language, Onomastics, The geography of the Mycenaean kingdoms, Religion, Mycenaean and Homeric language, Mycenaean and the world of Homer (volume 2). We anticipate that in a few years new chapters will have to be added.

Each chapter was read and commented upon in successive drafts by the two editors and in each instance the authors were involved in repeated electronic or postal dialogues with the editors; what is now published is a final version agreed by the authors and the editors. Only in one instance it was impossible to follow this procedure in its entirety. Yves Duhoux's chapter was read like all the others by Anna Morpurgo Davies, but we felt that here too a second reading was necessary; we were fortunate in securing the help of José Melena who agreed to read a version of the chapter and on this occasion act as one of the editors. We are very grateful to him for his willingness to help us out and for being so generous of his time and learning.

We would also like to thank all the colleagues who agreed to take part in this work and have patiently endured the constraints imposed by the coordination of such a large undertaking. It is a great sorrow that one of them, Kees Ruijgh, will not be able to see his contribution in its published form.

We dedicate this book, with deep gratitude, to the memory of two great masters of Mycenology, John Chadwick and Michel Lejeune.

YVES DUHOUX  
ANNA MORPURGO DAVIES

## EDITORIAL NOTE

Linear B spellings are often ambiguous. In some instances we are certain about our transcriptions. Thus *pa-te* represents two different words: *patēr* 'father' in PY An 607 and *pantes* 'all' in KN B 1055. In both cases the context guarantees the interpretation. A different problem arises when we can recognise the word represented by the Linear B signs, but more than one transcription is possible. Thus *do-e-ro* 'slave' clearly corresponds to Greek δοῦλος, but some scholars transcribe it as *dobelos* and others as *dohelos*. Both readings are possible and, since there is no agreement about the etymology, we cannot know whether there was an aspiration between the two vowels or not. Even when both interpretations and etymology are certain, different readings may be possible. Thus *e-ke* means 'has' and corresponds to Greek ἔχει; the verb derives from \*segh- which yields *hekhi-* and then the dissimilated form *ekh-*. It is not easy to decide whether the dissimilation happened before our texts or after; the spelling allows both a reading *hekhei* and a reading *ekhei*. Not too different is the case of *i-ko* 'horse', Classical ἵππος. We know that the initial aspiration of ἵππος is a Greek innovation and there are reasons to suspect that this may be later than Mycenaean but we cannot be absolutely certain and we may decide to write either *hi-* or *i-*. In this volume when more than one transcription was possible different authors have adopted different solutions. It might have been easier for the readers if we had introduced the same forms all through, but we decided to respect the authors' decisions, since they reflect the real ambiguity of our data. Consequently the reader will find both *dobelos* and *dohelos*, both *hekhei* and *ekhei*, etc.

Y. D.  
A. M. D.



## CHAPTER 1

# THE DECIPHERMENT OF LINEAR B\*

Maurice POPE

### § 1.1. BACKGROUND<sup>1</sup>

Cretan writing is unique and there is no bilingual aid. So how was it deciphered? At one time the feat would have been unimaginable. But by 1900 successful decipherments — Palmyrene (1754), Sasanid (1787), Persian cuneiform (1815–1846), Egyptian Hieroglyphic (1822–1824), Babylonian cuneiform (in the 1850s), Cypriot (1871–1875) — had revealed much about different writing systems and how they worked.

The most obvious variable was the number of separate signs. This ranged from the twenty-two of the Semitic alphabet to the ten thousand or so of Chinese. This number correlated with the function they could be expected to have. Less than thirty or forty suggested single speech-sounds; between forty and seventy, that they stood for open syllables (e.g. *a, ta, pi*); two hundred or so that they might stand for open and/or closed syllables, (e.g. *tab, tal, pan* etc. as well as *a, ta, pi*). But if each sign was to stand for a whole word or idea then there would have to be many thousand, as in China.

Not all signs, however, need belong to the same class. Our own script contains numerals, punctuation marks, symbols and conventional abbreviations whose combined total far surpasses the number of letters in the alphabet. Visually 8, ?, ¥, &, + are arbitrary patterns of exactly the same kind as H, Q, G, S, X, and the only way to distinguish them is how they behave. Phonetic signs are likely to be found in groups of ever-shifting membership, and to be few in number but frequent in occurrence; non-phonetic signs are likely to stand alone or in specialised contexts. One lesson of the nineteenth century decipherments was that the same can be the case with ancient scripts.

Another was the importance of proper names (of persons or places) whose approximate pronunciation could be known. Indeed locating them had been a key element in every previous decipherment. In the case of Persian cuneiform the

\* The editors received the first version of this chapter in October, 2001.

<sup>1</sup> For further detail see POPE (1975 and 1988) and ROBINSON 1995.

first clue had been Grotefend's guess that a phrase repeated in the Persepolis inscriptions ought to read (in the manner of Persian court language) 'King X, King of Kings, son of King Y, son of Z' and that the most likely candidate was Xerxes, the son of Darius (who had founded the dynasty) and who had been the son of Hystaspes (who was not a king). For Egyptian it was the names Ptôlemy and Kleopatra on the Philae obelisk that with the repetitions of *p*, *o*, *l*, *e*, *a* first opened the door for Champollion.<sup>2</sup> For Palmyrene, Sassanid, and Cypriot the key had been the names (*Septinion Ouaroden ...; Sapor, Papak; Karyx, Euagoras, Idalion*) recorded in parallel inscriptions in Greek or Phoenician. But with the Cretan scripts how could one ever tell what sign-group concealed a name, let alone what that name might be (Fig. 1.1)?

### § 1.2. EVANS (1851-1941)<sup>3</sup>

It was the discoverer of the scripts, Arthur Evans, who at first contributed most to their understanding. By 1903 he had identified the writing as indigenous, probably syllabic, and existing in three forms, one 'semi-pictorial' and two 'highly developed linearised systems' (Fig. 1.2). The numerals were decimal. The main archives from Knossos, in the later of the linear scripts, were 'inventories of precious vases, ingots, chariots, and horses, arms and other possessions, the meaning of which was partly made clear by pictorial illustrations' while others 'might prove to be deeds or public records.' Particularly important were long lists of personal names with a 'man' or 'woman' sign attached. A comparative study of these revealed 'the existence of male and female terminations, changing suffixes, and compound formations of a similar type to the Indo-Germanic.'

Unfortunately Evans never fully published these conclusions,<sup>4</sup> nor did he continue to pursue the subject with the same intensity. After dealing with the

<sup>2</sup> Despite its reputation it was not the Rosetta Stone that opened the door. Its hieroglyphs had been puzzled over in vain for more than twenty years before Champollion's decipherment. There was no way to tell which hieroglyph or which group of hieroglyphs corresponded to which word in the Greek text. Its only cartouche, though recognised as being that of Ptolemy, contained no repeated hieroglyph that could be matched with a repeated Greek letter. On the other hand the two cartouches on the Philae obelisk did. The obelisk, brought over by a wealthy English antiquarian, William Bankes, had arrived in England in 1821. Copies of its hieroglyphs and of the accompanying Greek inscription were made available that year and Champollion's decipherment followed in the next. The obelisk was eventually erected by Bankes on his estate at Kingston Lacy in Dorset, where it still stands.

<sup>3</sup> The fullest account of Evans's life is by his half-sister, Joan EVANS 1943.

<sup>4</sup> Evans's address (EVANS 1903) is preserved only in a summary, and my quotation marks show the words of the summariser, not necessarily of Evans himself.

'semi-pictorial script' in *Scripta Minoa I* in 1909, the *Palace of Minos* began to engross his attention. He never got round to publishing his Linear B finds in full, nor did he find anybody he was willing to hand them over to.

So for forty years there were only two notable steps forward. In 1927 A.E. COWLEY identified words for 'total' (later deciphered as *to-so* and *to-sa*), and for 'boy' and 'girl', 'as if κοῦπος & κούρη', and put forward an ingenious argument of more general application. Having been given by Evans a copy of a tablet that seemed to list over sixty men by their names, Cowley pointed out that if the Linear B signs that most resembled signs in the Cypriot syllabary (Fig. 1.3) had the same value, then half the men's names would end in *-o*. This suggested three things. The first was that *-o* could be a masculine case-ending (for the names on the list, being totalled, must all have been in the same case). The second was that the Cypriot sign values could in some instances at least be used as a decipherment aid. The third was that the language could not be Greek — for if it were the Cypriot-syllabary rules would surely apply and the masculine nominative ending *-os* would appear as *-o-se*. The first two suggestions were valid, but the last was misleadingly wrong.

The other step forward was a proof of inflection published by Evans in 1935 in the final volume of *The Palace of Minos* (Fig. 1.4). Whether this was new thinking or something he had had in mind since 1903 is not clear, but it was a major marker on the path to decipherment.

### § 1.3. KOBER (1906-1950)<sup>5</sup>

Its potential was recognised by an American scholar, Alice Kober. In an 'almost unprecedented study' (KÖBER 1945) she set out to prove the existence of inflection. It would, she realised, be harder to detect in syllabically written texts than with an alphabet. To take an example from Latin, DOMINUS / DOMINA employ eight different letters when they are written alphabetically, and, of these eight, five will be the same. That is over 60%. Syllabically written, however, they would employ five different signs with only two of them, those for DO and MI, being repeated. That is only 40% of the total, and it will be much less apparent that the two words share the same stem. Added to this systematic difficulty there are accidental pitfalls. For instance HEAVY and HEAVEN despite their high proportion of shared letters are unrelated words, and in A-VU-S / A-TA-VU-S the syllable TA is not a grammatical infix. Extreme caution is therefore necessary.

<sup>5</sup> On Kober's life see PALIMA forthcoming.

The best control is context. The same words are most likely to be used when dealing with the same things. Now in the published samples of the Knossos chariot tablets there were eight words that recurred with identical beginnings and different terminations — the word-beginnings she listed were those now deciphered *wi-ri-ni-*, *e-re-pa-*, *a-ja-me-*, *i-qi-*, *a-ni-ja-*, *po-si-*, *a-na-*, *a-ra-ru-*. Another control is word-length — one of Kober's examples had seven syllables, now transliterated *a-ra-ro-mo-te-me-na/-nō*. A third control was frequency. The alternation of *-ja* and *-jo* found in what is now transliterated as *i-qi-jā*, *i-qi-jō* on the chariot tablets often occurred elsewhere. Kober claimed, correctly, that her instances proved inflection of some kind to be highly plausible.

Her next article (KOBER 1946) was aimed at defining more precisely the exact nature of the inflection. It is a fair assumption, she argued, that where a list takes the form WORD IDEOGRAM NUMERAL the words listed will belong to the same grammatical case, and that if some of them have the same termination, then that termination may indicate a case-ending. Nor was that all. With great clear-headedness she pointed out that if the same word-stems occurred in another list with a different termination, then that termination might indicate the ending of a different case. In the event the changes of termination proved to be not always signs of a different grammatical case but of gender or of an adjectival form: but this did not affect the principle from the point of view of the decipherment of the syllabograms.

Despite there having been only 740 words available in the published material, Kober managed to show the existence of not just two but three grammatical cases. Even better she found not just one but two sets with the same overall pattern (and therefore presumably of the same 'declension'), but with different signs — as if SER-VU-S / SER-VA and PAR-VU-S / PAR-VA in addition to DO-MI-NU-S / DO-MI-NA and CO-LO-NU-S / CO-LO-NA. On this analogy two of the four highlighted characters will share a consonant, and two a vowel (Fig. 1.5). Kober was right. The signs she pinpointed are now deciphered as *ti*, *to*; *si*, *so*.

Soon afterwards, following the same logic, she produced (KOBER 1948) what she called the 'Beginnings of a Tentative Phonetic Pattern' (Fig. 1.6). This showed ten signs each of which shared its vowel with five others and its consonant with one other. Once again the results were to prove wholly correct.

Her last article (she died, sadly early, in July 1950) argued that the two forms of the word for 'total', already identified by Cowley, differed in gender, no ideogram used with one ever being used with the other, and that the animal ideograms are distinguished according to sex (KOBER 1949). She was again right on both counts.

#### § 1.4. BENNETT AND MYRES

Kober's results were achieved when the Linear B texts had only been published in specimen samples. This was now to change. The first full corpus to become available was that of the Pylos tablets, found by Blegen in 1939 and put into storage during the war. But they had been photographed and a set of the prints had been brought back to the United States. These were worked on by Emmett L. Bennett, Jr. for a Cincinnati PhD thesis and then published in 1951 as a 'preliminary transcription'. The reason for this title was that the text could not be checked against the still inaccessible tablets. Nevertheless the photographs were clear enough for the great part of the readings to be reliable, 'archaeologists, philologists, historians, mathematicians, cryptanalysts' would be grateful for rapid access to the material (over 500 tablets), and one might even — or so Bennett wrote — 'expect to advance quickly to a solution.'

The hope was to be justified. But meanwhile Bennett felt that one important conclusion was already possible. The repertoire of signs on the Pylos tablets was almost exactly the same as at Knossos, and so were the sign forms. Thus 'there should no longer be any hesitation in considering the script of Pylos as Minoan Linear B' — a point on which Kober had refused to commit herself. What was more, Bennett's forthright statement made it equally plausible for the matter to be put the other way round. For if Knossos Linear B was identical with the Pylos script then they both could be thought of as 'Mycenaean' as opposed to 'Minoan Linear A.'

Bennett also produced a classification of the signs. There were 78 used in sign-groups. These were 'probably' phonetic, 'perhaps' syllabic, and 'presumably' recorded names and the words of the language. There were also 63 ideographic signs, always found in close association with numerals, and apparently referring to what was being counted or measured. And there were the numeral signs for units, tens, hundreds, and thousands.

Bennett wished to include in his publication a comprehensive index to the sign-groups. For this he had to create as it were an 'alphabetical order', and chose to do so by shape — upright, triangular, rectangular, curvilinear, each in order of increasing complexity. This choice, though a small matter in itself, was important in that it was thoroughly objective and made it much less tempting to imagine meanings in the signs because of their shape.

For the ideograms, however, there was more to go on. Their meaning might be obvious from the picture, as had been so eminently the case with the horse-heads and chariots that Evans had long previously recognised on his Knossos tablets. Even when the object or commodity represented was not immediately obvious the ideograms could be grouped in categories according to the metric

signs used in counting them (as we measure money in dollars and cents, weight in pounds and ounces, length in metres and so on). Indeed this provided Bennett with a rational principle not only for labelling the ideograms but also for arranging his whole publication of the tablets. He gave those that were shown by their ideograms to deal with men and women numbers preceded by A, those that dealt with cattle and other animals numbers preceded by C. The letters E to M were assigned to 'commodity tablets' of the various categories, the letter S to the tablets that were similar to those from Knossos dealing with chariots and horses, and W to those tablets and sealings that they had been pressed on to wickerwork or basketry. Further categorisation was given by a lower-case letter. Finally the tablets were given individual numbers.

The resultant clarity (see Fig. 1.7) was itself a kind of decipherment, and Ventris and Chadwick freely acknowledged the extent of its contribution, stating that without Bennett's publication their own book could never have been written (*Documents*<sup>1</sup>, 14).

In 1951 the Knossos tablets too were at long last in the press. The tablets had been photographed on their discovery in the early 1900s and drawings of them made. A Minoan font had even been cast (at Evans's expense) by the Oxford University Press. But Evans had died (at the age of 90). Moreover it was thirty years since he had been working consistently on the tablets and his notes were no longer in the best of order. The daunting task of seeing the publication completed devolved on his friend, Sir John Myres. He was himself an old man with failing eyesight and though he had received help both from Alice Kober and, after her death, from Emmett Bennett it is not surprising that when *Scripta Minoa II* saw the light of day in spring 1952 it was imperfect. Myres wanted to keep as much of Evans in it as he could. Hence the use of the Minoan font in the introduction, a discursive style with wide-ranging observations that are often irrelevant, and (most inconvenient of all) the retention of Evans's classification of the signs. This had been an attempt to give a synoptic view of the two Linear script signaries, but it was unsuccessful since the different sign-forms were not accurately observed. Furthermore, although the ideograms were arranged on a system that was similar to (but not identical with) that in Bennett's edition of the Pylos tablets, the phonograms, that is to say the phonetic signs that constituted the words, were listed in an altogether different order.<sup>6</sup> This doubled the labour of comparing the Knossos and Pylos vocabularies.

<sup>6</sup> The explanation for the sign-order of the 'AB series' (that is to say the signs considered to be common to Linear A and Linear B, but a different collection from that now in use) given in the Introduction to *Scripta Minoa II* is of interest for the history of ideas about the origin of writing. First (AB 1-9) come 'arbitrary linear signs composed of a few strokes, usually straight'. These are the signs 'most like masons' marks'. Next (AB10-34) come 'alphabetiform signs resembling

Nevertheless *Scripta Minoa II* was an imposing achievement, generously produced in exactly the same format as its predecessor despite the intervention of two world wars, and it made available to scholarship a corpus of inscriptions more than twice the size of that from Pylos.

This was the main thing, and it was to make possible within months the decipherment of the script by Michael Ventris.

### § 1.5. VENTRIS (1922-1956)<sup>7</sup>

Michael Ventris was an architect, not a professional scholar. Nor, despite repeated legend, did he ever train or serve as a cryptographer. His interest in Minoan scripts began at the age of fourteen when he was taken with a school party to a Minoan exhibition at Burlington House and the party was by chance taken round by Evans himself.<sup>8</sup> His first article was published four years later (VENTRIS 1940), but the next eight years were spent on war service in the RAF<sup>9</sup> and on gaining his architectural qualifications. He then re-introduced himself to Minoan scholarship with a 'mid-century report', sending a questionnaire to experts world-wide.<sup>10</sup> He translated their replies into English, re-circulated them together with his own answers, and thereafter sent them updates on his progress.<sup>11</sup> This was unconventional procedure, but appropriate to current technology. Stencils could be cut by typewriter (or by a pyrographic technique on stencils in the case of handwritten pages with Minoan signs on them) and run off quickly and cheaply.

Greek or Phoenician letters,' though 'without proof of connexion'. After that come 'pictorial signs' (human, animal, plants), then 'skeuomorphic signs' (weapons, implements, vessels), and finally (AB64-69) 'commodity signs' not recognisable as pictures. Thus it was claimed that the numerical order allotted to the signs 'corresponded to the historical order of their appearance.'

<sup>7</sup> For Ventris's life see TETLOW 1984 and ROBINSON 2002b. More detailed accounts of the actual decipherment can be found in *Decipherment*; POPE, 1975 (159-180), 1989; ROBINSON 2002a, 74-103; VENTRIS 1988.

<sup>8</sup> The fullest account of the occasion is given by ROBINSON, 2002b, 21-23.

<sup>9</sup> He flew as a navigating officer and, after hostilities ended, was transferred to serve in Germany because of his fluency in German and Polish. He was never engaged in code-breaking.

<sup>10</sup> Ten of them replied — Bennett, Bossert, Pugliese Carratelli, Georgiev, Grumach, Ktistopoulos, Myres, Peruzzi, Schachermeyer, and Sundwall.

<sup>11</sup> His mailing list grew as time went on, to include Devoto, Gaya Nuño, Hrozny, Pallottino, Wace (for *Notes* 1-6); Blegen, Jones, Kreitschmer, Meriggi, Perrson, Sittig, Steinherz, Tovar, van Windekom, and Werner (for *Notes* 7-8); Brandenstein, Chapouthier, Darga, Deroy, Marinatos, Marzullo, Mylonas (by *Note* 15). The *Mid-Century Report* and the *Work Notes* have now been published (VENTRIS 1988). For a discussion of them see BENNETT 1989.

The questionnaire shows how various the problems raised by Linear B were and how clearly Ventris understood them. One of the most impressive replies came from Myres himself, despite his great age and his not being a trained philologist. He was the only one to declare his hand on all twenty-one questions. Pugliese Carratelli, who had just edited in exemplary fashion the Linear A texts from Hagia Triada, and could therefore be reckoned as the world's leading expert on Aegean writing, concentrated on the more technical aspects, pointing out that the contents of the tablets were administrative, concerned with incomings and outgoings and inventories, and that one should not 'over-emphasise the importance of the ritual element in Cretan life' as some scholars (such as Sundwall) tended to do. He saw Hittite Hieroglyphic (as it was then called) as a cousin and the Cypriot syllabary as a direct descendant of the Cretan scripts. He thought that Linear A and Linear B were likely to represent the same language because of the number of identical or near-identical words or parts of words in the two scripts. As for the identity of the language he thought that it would not turn out to have been Greek but that nevertheless Minoan must have played a large part in the formation of the Greek language as we know it.

Other notable replies included a long one from Bossert on the connections between Crete and Anatolia and a brief one from Bennett arguing that research should concentrate on areas where objectivity was possible — the weights and measures used with the commodity ideograms and statistical analysis of the phonetic signs. But he agreed with Alice Kober that Linear A and Linear B were likely to represent different languages.

Alice Kober herself refused to reply, saying it was a waste of time and (rather oddly) a step in the wrong direction. She can hardly have meant by this that collaboration was in itself undesirable. Perhaps she felt that many of Ventris's questions would only encourage *a priori* speculation as to what the answers ought to be.

But, as Chadwick was to remark later (*Decipherment*, 48), what the answers did show was how little anybody expected that the Linear B documents would prove to have been written in Greek.

Whatever the value of the 'Mid-Century Report' may now be, the twenty *Work Notes* that followed it possess unique historical interest. They are not only a chronicle of successful research, but their informality lets us see both wrong turnings and passing thoughts. For example when identifying (correctly) the enclitic sign for 'and' (now deciphered *qe*) Ventris compares Etruscan *-c*, Lemnian *-m*, and the sign-forms of Cypriot *mo* and Luvian *ha*. He wonders whether the high initial frequency of Evans's 'throne and sceptre' sign (now *o*)

meant that it was a determinative and not a syllabogram. He speculates on the structure of Aegean names of persons, places, and gods. He favours Etruscan for the language and shies away from Greek, deemed impossible by orthodox archaeology and discredited by previous 'decipherments'. Once he comes tantalisingly close. Work-note 11 isolates a three-word phrase that occurs forty-seven times on a class of the just-published Pylos tablets. The first word was always different, the second always one of four and in Kober's 'genitive case', the third always the same word but with an alternative ending. Could this ending indicate gender? If so, the first word in each case could be the name of an individual (male or female) and the third descriptive of him or her. Moreover the first words had a limited number of final signs and (a key observation this) the pattern of their variation corresponded almost exactly with that found in the segregated lists of men and women at Knossos. Ventris suggested *exempli gratia* and 'to facilitate thought', a meaning 'A the male/female servant of B', A being the name of the individual and B the name or title of an official, while the remaining word could by a further and even more tentative guess, be read as *do-we-lo / do-we-la*, and in that case the origin of the Greek for 'slave', δοῦλος which had no generally accepted Indo-European etymology. However he rejected the possibility that the word could itself be Greek: for one thing its masculine would then have been *do-we-lo-se*, as in Cypriot.

This last assumption was natural enough and had never previously been questioned. But Ventris was about to question it. In Note 14 he observed of an affix that its employment *never* affected the spelling of the host word, whereas on Cypriot analogy it would *often* have done so. The argument was complex but highly important because if Cypriot spelling rules fell away so did one of the main obstacles to a Greek solution.

However the major preoccupation of the work-notes and the chief instrument of the eventual decipherment was what Ventris nicknamed his syllabic grid. This was an experimental table in the different columns of which could be entered signs suspected of sharing the same vowel while vowels suspected of sharing the same consonant were entered in the different rows. It therefore followed the theory of Kober's 'phonetic pattern' (see Fig. 1.6), but Ventris's practice was much more adventurous and much less unerring (Fig. 1.8-10). To begin with only a third of its vowel-consonant matchings were correct and at the end only three-quarters of them. He also went further than Kober in suggesting, albeit with many a question-mark, actual phonetic values.<sup>12</sup> The private

<sup>12</sup> The attributions on the grid were evidently made with varying degrees of certainty and it is not always possible to be sure of the reasons for them. The value -i seems to have been suggested for column I mainly because one of the signs in it was strikingly similar to the Cypriot *ti*

nature of the work-notes of course made it easier to put forward suggestions that were not solidly founded. But provisional though they were they brought success. Partly (as Ventris had foreseen might happen) this was through a surprise discovery. In his explorations he had noticed a class of tablet from Ugarit which listed contributions from local towns. Could any Cretan tablets have done the same? Place-names are conservative, and many classical ones were known. In particular Amnisos, a harbour near Knossos, might be recognisable. It would presumably begin with the pure vowel *a*, and he had already proposed a likely syllabogram for this in the third state of the grid (Fig. 1.10).

If this was correct there was a possible candidate in one of Kober's triplets (Fig. 1.5):

*a-----* and *a-----i---*

Now the second and third signs, and fourth sign of the longer word were assigned by the grid to 'vowel 1', the suggested value for which was *i*. If that was correct, the words became

*a-i-i---* and *a-i-i-i-i--*

But the grid had further suggestions too — *n* for the consonant of the third sign and *ja* for the value of the fifth. These gave

*a-i-ni--* and *a-i-ni-i-j-*

making the word look very like Amnisos. All that was needed was to assign the value *m* to the ninth and *s* to the seventh consonant of the grid:

*a-mi-ni-so* and *a-mi-ni-si-ja*

but that was not all. There automatically followed, for the others in this set of triplets,

*\*o-no-so* and *\*o-no-si-ja*  
*\*\*\*-i-so* and *\*\*\*-i-si-ja*

---

(see Fig. 1.3) and the value *n* for row 8 partly because of the Cypriot *na* (and partly on an Etruscan based argument). The value *ja* was largely based on an argument from Linear A where what is to all appearances the same sign alternates with *a* at the start of the well-known sign group on religious inscriptions that seems to read *alja-sa-sa-ra-me*. But the arguments were not whole-heartedly put. In 1952 Linear B was considered by reputable opinion as an independent problem and attempts at cross-script letter identification were heavily frowned on, even in relation to Cypriot and to Linear A, because they had been so unsuccessfully pursued in the past.

Knossos and Tylissos (*tu-li-so*) were the obvious candidates. If accepted, they enabled a word accompanying the SPICE ideogram at both Knossos and Pylos to be read

*ko-li-ja-•a-no* (KN) or *ko-li-••-na* (PY)

Presumably this would be coriander. The word can be spelt in various ways (including κολιανδρον) in classical Greek, and Ventris already suspected (in *Work-note* 20, 174) that the syllabary might not differentiate between *l* and *r*. Next came

*ko-••* and *ko-•a*  
*to-so* and *to-sa*

for the groups already acknowledged as meaning 'boy/girl' and 'total'. Assuming *ko(r)-wo(s/i)*, *ko(r)-wa(i)* produced two Greek words properly inflected in Greek manner — κοῦρος / κοῦροι, κούρα / κοῦραι and τόσος / τόσοι, τόσαι / τόσαι. The orthography might be surprising, but it was consistent and logical in that they were all two-syllable words and were all spelt with two syllabograms.

The Greek solution was now well under way. Ventris soon assembled a very plausible-looking vocabulary that included trade-names like *ke-ra-me-u*, *a-to-po-qo* (κεραμεὺς 'potter', ἀρτοπόκος 'baker'), a word for animals, *qe-to-ro-po-pi* (instrumental plural of τετράπονς 'quadruped'), and some ten personal names beginning, as many Greek names did, with *e-u-* (Εὐ-). Of course at this stage Ventris was discovering phonetic values by speculatively completing words that were already nearly complete and updating his grid accordingly rather than mechanically following its original predictions. It has therefore been doubted whether the grid was in fact as decisive a pilot as Ventris claimed.<sup>13</sup> And it is true that even in its third stage it was still 25% wrong. But even so it was of primary importance both in getting the decipherment off the ground and in the firmness of the foundations it laid. Without the grid even if the first step, guessing 'Amnisos', had been made (and it would have been much less certain), the next step, guessing 'Knossos' and 'Tylissos', would have been neither obvious nor particularly plausible. And of the first twenty phonetic values to be found five interlocked on the grid as regards either vowel or consonant and thirteen as regards both. This was strong confirmation of their correctness.

<sup>13</sup> By ROBINSON 2002b, 83.

Furthermore twenty signs were a significant proportion of the total phonetic signary — between a third and a quarter. This is just about the same weight of initial support that the reading of proper names identified by bilinguals had given to previous decipherments. It therefore seems justifiable to claim that in the decipherment of Linear B the grid played an equally indispensable part.

Ventris announced his results on the BBC.<sup>14</sup> The broadcast was heard by John Chadwick, a young classicist about to take up his first academic post. He borrowed a copy of the *Work Notes*, was convinced, and wrote to Ventris congratulating him and offering support as 'a mere philologist'.<sup>15</sup> Ventris welcomed the offer and they wrote a joint article (VENTRIS – CHADWICK 1953), whose title 'Evidence for Greek Dialect in the Mycenaean Archives' modestly disclaimed certainty. But acceptance among those qualified to judge was rapid and their book, three years later, was firmly called *Documents in Mycenaean Greek*. Ventris never saw it appear. Just before its publication he was killed in a motor accident.

### § 1.6. AFTER THE DECIPHERMENT

Confirmation of the decipherment came rapidly and spectacularly with a new tablet from Pylos which contained *ti-ri-po* and *ti-ri-po-de* next to clearly drawn tripods, and *a-no-we*, *ti-ri-jo-we*, *qe-to-ro-we* ('earless', 'three-eared', 'four-eared') next to jugs illustrated with the appropriate number of handles (Fig. 1.11 — see also Chapter 9.37 below). A convincing minor detail was the first sign for 'four', *qe*. It was, as it should have been, the same as the sign for the enclitic word for 'and'. In classical Greek the relevant words are τέτταρες and τε, in Latin *quattuor* and *que*. The ancestral consonant, a labiovelar, had long been hypothesised by philologists, and here it now was in Mycenaean Greek.

No phonetic value stated as certain in *Evidence* (Fig. 1.12) has had to be retracted and there has only been one major refinement, the addition of a new class of syllabogram — Consonant + Semi-vowel + Vowel. *te-mi-de-we-te* on

<sup>14</sup> In the Third Programme (which was devoted to matters of cultural interest) on July 1<sup>st</sup> 1952. It has now been republished (VENTRIS 1988).

<sup>15</sup> Unlike Ventris Chadwick had served in the Special Branch (of the Royal Navy), and cryptographic experience may have played a part in his ability to recognise Ventris's achievement even though Linear B was not a 'code' or intended to be secret. See CHADWICK 2001. He contributed to the decipherment by establishing the basic values *pu* (which allowed the identification of *pu-ro* with Pylos) and *nu*, and, above all, by showing that the language of the tablets was what philologists expected for the second Millennium (see KILLEN – MORPURGO DAVIES 2002).

a Pylos tablet<sup>16</sup> found in 1957 seemed likely to be an alternative spelling for the previously attested *te-mi-\*71-te / te-mi-\*71-ta*. If so, \*71 ought to have had the value *dwe*. In 1962 Lejeune listed a series of similar possibilities — *nwa* (\*48), *pte* (\*62 from an original value *pje*), *rjo* (\*68), *rja* (\*76), *twe* (\*77), *dwo* (\*90), and in 1968 Chadwick added *swi* (\*64) and *swa* (\*82). In addition two further rare signs have been allocated values, *ju* for \*65 and *au* for \*85.<sup>17</sup>

In the beginning there was opposition, some of it acerbic, to the decipherment, as there had been to the decipherments of hieroglyphic and of cuneiform. But it passed away. Mycenaean scholarship is singularly free of *odium philologicum* and still continues to be inspired by the spirit of collaboration not competition that characterised Ventris's *Work Notes* and the subsequent equal partnership between him and John Chadwick.

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<sup>16</sup> PY Sa 1266, published by LANG 1958, 189.

<sup>17</sup> The credit is to be shared between MERIGGI (1955), PALMER (1955), EPHRON (1961), PETRUŠEVSKI and ILIEVSKI (1958). The *au* has been subsequently confirmed by *au-to-te-qa-jo* on a Theban tablet.

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Fig. 1.1 The first published photograph of a Linear B tablet. How was it ever to be understood? (A. EVANS, *ABSA* 6 [1900], 56)



**Fig. 1.2** The first published transcriptions of Cretan writing — the two linear scripts were not recognised as distinct until 1903

- A Gemstone from Palaikastro with pictographic inscription (A. EVANS, *JHS* 14 [1894], 297)
- B Linear inscription (Linear A) on the libation table from the Dictaean cave (A. EVANS, *JHS* 17 [1897], 352)
- C Linear tablet (Linear B) from Knossos 'with chariot and horses and, perhaps, cuirass' (A. EVANS, *ABSA* 6 [1900], 58)

	a	e	i	o	u
*	*	*	*	※	γ
y	◊			~~	
w	λ	ι	χ	ɔ	
r	Ω	η	ϑ	χ	χ
l	χ	θ	≤	+	ω
m	χ	χ	χ	⊖	χ
n	τ	η	χ	χ	χ
p	†	ς	χ	ς	χ
t	τ	ι	↑	F	F
k	↑	χ	χ	Λ	χ
s	χ	η	↑	χ	χ
z	χ			χ	
x	χ	χ			

Fig. 1.3 The Cypriot Syllabary (as normalised: the sign-forms vary quite considerably from town to town) (MASSON 1961, 58)

◎ ◎ ◎	{	◎ ◎	平 平	=
◎ ◎ ◎	{	◎ ◎	2 2	11
◎ ◎ ◎	{	◎ ◎	平 平	11
◎ ◎ ◎	{	◎ ◎	2 2	111
◎ ◎ ◎	{	◎ ◎	平 平	111
◎ ◎ ◎	{	◎ ◎	2 2	111

Fig. 1.4 A. Evans's evidence for declension. 'Groups followed by the "woman sign" that repeatedly undergo the same change in their terminal character before signs connected with numbers' (EVANS 1922-35, IV [1935], 714)

	(a)	(b)	(c)
Case I	◎◎◎目	◎◎◎目	◎◎◎目
Case II	◎◎◎五	◎◎◎五	
Case III	◎◎◎	◎◎◎	◎◎◎

	(a)	(b)	(c)
Case I	◎◎◎目	◎◎◎目	◎◎◎目
Case II	◎◎◎五	◎◎◎五	
Case III	◎◎◎	◎◎◎	◎◎◎

Fig. 1.5 A. Kober's 'triplets' — nouns of Type A and Type B (from A. KOBER's drawings in AJA 50 [1946], 273-4)

Consonant	Vowel 1	Vowel 2
1	Ⓐ	Ⓕ
2	Ⓜ	Ⓛ
3	Ⓣ	Ⓛ
4	Ⓑ	Ⓔ
5	Ⓜ	Ⓔ

Fig. 1.6 A. Kober's 'phonetic pattern' now confirmed by Ventris's decipherment, the vowels being -i and -o, and the consonants t-, s-, n-, m-, w- (AJA 52 [1948], 98)



Fig. 1.7 From E.L. BENNETT, JR., *The Pylos tablets. A preliminary transcription*, Princeton University Press for University of Cincinnati, 1951, 1, 5, 21

A PY Aa03: 37 women and children (26 girls and 16 boys)

B PY Ad03: 3 men and 9 boys

C PY Cn05.6-8: 30 he-goats, 20 nanny-goats and 50 ewes

## 'B' SYLLABARY PHONETIC 'GRID'

Fig. 1  
MGFV

1: State as at 28 Jan 51: before publication of Pyles inscriptions.

	<b>Vowel 1</b>	<b>Vowel 2</b>	<b>Other vowels?</b>	<b>Doubtful</b>
CONSONANTS	-NIL? (-o?) = typical ‘nominate’ of nouns which change their last theme syllable in oblique cases	-I ? = typical changed last syllable before -E and -B.	-a, -e, -u ? changes in last syllable caused by other endings. (5 vowels in all, rather than 4?)	
1 t- ?	F ag	A aj		⊕ ax (Sandwell)
2 r- ??	Z az	F iw	↑ ah A ol	
3 s- ??	Ψ eg	M aw	↗ oc K dj	
4 n- ?? S- ??	W od	M ok	X ib	˥ is P <sup>4</sup> oh
5	A	—?	Ψ ef	
6 l- ?	I ac	I ej		
7 h- ??	H ix		M if	
8 θ- ??	W en		M id	X ex
9 m- ? k- ?	⊕ ay -if an enclitic and?			A al
10				˥ om M ov
11				
12				
13				
14				
15				
	A ej I ej A ak F il M aw X og Ψ ej P <sup>4</sup> oh Y er K ej X ex M ok X ib F iw		◆ group of syllables, including those occur- ring before -B on 'woman' tablet (Nr 44. PM fig 689), and those characteristic of alter- nating endings -E & -B. About 3/4 of these 14 signs very likely include vowel Z.	

Fig. 1.8 Ventris's grid — first stage (from VENTRIS 1988, *Work Note 1*)

## LINEAR SCRIPT B SYLLABIC GRID (2ND STATE)

DIAGNOSIS OF CONSONANT AND VOWEL EQUATIONS  
IN THE INFLECTIONAL MATERIAL FROM PYLOS:

WORK NOTE IS

FIGURE 10

ATHENS, 28 SEPT 51

THESE 51 SIGNS MAKE UP 90% OF ALL SIGN OCCURRENCES IN THE PYLOS SIGN GROUP INDEX APPENDED FIGURES GIVE EACH SIGN'S OVERALL FREQUENCY PER MILLE IN THE PYLOS INDEX.

pure vowels?	pure ending typical syllables before - <b>ε</b> -	pure ending typical nom-natives of forms in Case 2c & 3 in Column 1	includes possible 'accusatives'	Also, but less frequently, the nominatives of forms in Column 1
THESE SIGNS DON'T OCCUR BEFORE - <b>ε</b> -	THESE SIGNS OCCUR LESS COMMONLY OR NOT AT ALL BEFORE - <b>ε</b> -			
MORE OFTEN FEMININE THAN MASCULINE?	MORE OFTEN MASCULINE THAN FEMININE?		MORE OFTEN FEMININE THAN MASCULINE?	
NORMALLY FORM THE GENITIVE SINGULAR BY ADDING - <b>ε</b> -	NORMALLY FORM THE GENITIVE SINGULAR BY ADDING - <b>ε</b> -		NORMALLY FORM THE GENITIVE SINGULAR BY ADDING - <b>ε</b> -	
vowel 1	vowel 2	vowel 3	vowel 4	vowel 5
<b>ε</b>	30.3			<b>ε</b> 37.2
a semi-vowel?			<b>ε</b> 34.0	<b>ε</b> 29.4
consonant	<b>λ</b> 14.8	<b>f</b> 32.5	<b>ε</b> 21.2	<b>λ</b> 28.1
2	<b>λ</b> 19.6	<b>γ</b> 17.5		<b>τ</b> 15.7
3		<b>ρ</b> 12	<b>ν</b> 3.3	<b>τ</b> 10.0
4	<b>λ</b> 17.0	<b>τ</b> 28.6		<b>τ</b> 0.4
5	<b>λ</b> 17.7	<b>γ</b> 10.3	<b>υ</b> 4.1	<b>ν</b> 10.2
6	<b>χ</b> 7.4	<b>σ</b> 20.5	<b>ψ</b> 14.8	<b>η</b> 14.4
7	<b>χ</b> 4.1	<b>τ</b> 44.0		
8	<b>δ</b> 6.1	<b>γ</b> 6.1	<b>β</b> 19.5	<b>ψ</b> 15.2
9		<b>θ</b> 33.1	<b>χ</b> 32.3	<b>τ</b> 2.4
10	<b>χ</b> 22.2		<b>σ</b> 3.5	<b>τ</b> 2.2
11	<b>τ</b> 31.2	<b>+</b> 33.8	<b>ψ</b> 8.3	<b>ψ</b> 0.7
12	<b>ψ</b> 17.0		<b>λ</b> 37.7	<b>⊕</b> 24.0
13	<b>τ</b> 9.4	<b>○</b> 14.2		
14	<b>τ</b> 5.0			
15	<b>γ</b> 12.6			

MICHAEL VENTRIS

Fig. 1.9 Ventris's grid — second stage (from VENTRIS 1988, *Work Note 15*)

Fig. 1.10

LINEAR B SYLLABIC GRID  
THIRD STATE: REVIEW OF PYLOS EVIDENCE

FIGURE II  
WORK NOTE 17  
20 FEB 1952

POSSIBLE VALUES	VOWELS	-i?	-o?	-e?	-u?	-ɛ?	VOWEL UNCERTAIN
		-ɪ?	-ʊ?	-ɛ?	-ʌ?		
CONSONANTS		v 1	v 2	v 3	v 4	v 5	
PURE VOWEL?	-	ꝝ				ꝝ	
j-?	c 1			ꝝ		ꝝ	
s-? v-? θ-? c-?	c 2	(ꝝ)	ꝝ	ꝝ	(ꝝ)	ꝝ	
z-? p-?	c 3	ꝝ		ꝝ		ꝝ	
š-?	c 4	X	(ꝝ)	X		ꝝ	
t-?	c 5		ꝝ			ꝝ	
t-?	c 6	ꝝ	ꝝ	ꝝ			
θ-? r-?	c 7	(ꝝ)	(ꝝ)	(ꝝ)		ꝝ	
n-?	c 8	X	X	(ꝝ)	(ꝝ)	ꝝ	
f-?	c 9	ꝝ	(ꝝ)	(ꝝ)		ꝝ	
b/x? θ?	c 10		ꝝ	ꝝ	ꝝ	ꝝ	
p-? l-?	c 11	(ꝝ)		ꝝ		ꝝ	
l-?	c 12	ꝝ	ꝝ	ꝝ		ꝝ	
r-? r-?	c 13	ꝝ		ꝝ		ꝝ	
c-?	c 14			(ꝝ)			
m-?	c 15		ꝝ	(ꝝ)	ꝝ		
OTHER CONSONANTS		ꝝ	ꝝ	ꝝ	ꝝ	ꝝ	

SMALL SIGNS INDICATE UNCERTAIN POSITION. CIRCLED SIGNS HAVE NO OBVIOUS EQUIVALENT IN LINEAR SCRIPT A.

Fig. 1.10 Ventris's grid — third stage (from VENTRIS 1988, Work Note 17)

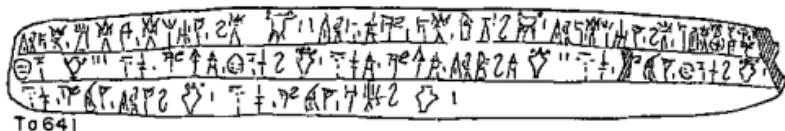


Fig. 1.11 C. Blegen's discovery that confirmed the decipherment  
The 'tripod tablet' (PY Ta 641) from E.L. BENNETT, JR., *The Pylos Tablets. Texts of the Inscriptions Found, 1939-1954*, Princeton, Princeton University Press for University of Cincinnati, 1955

a	τ	a <sub>2</sub>	ν	e	Α	i	Ψ	o	Ω	u	φ
ai	ω			je	X			jo	ε		
ja	□			we	Ζ	wi	Α	wo	η		
wa	Π										
da	†			de	Ω	di	Τ	do	ς	da <sub>2</sub>	λ
ka	⊕			ke	Ω	ki	Ψ	ko	θ	ku	γ
ma	Μ			me	Ρ	mi	Ψ	mo	ϟ		
na	Γ			ne	Ψ	ni	Ψ	no	ω	nu	χ
pa	†	pa <sub>2</sub>	?	pe	Δ	pi	Α	po	γ	pu	δ
				qe	◎	qi	Τ	qo	τ	qo <sub>2</sub>	β
ra	Λ	ra <sub>2</sub>	॥	re	Ψ	ri	Χ	ro	†	ro <sub>2</sub>	Ϛ
sa	Υ			se	¶	si	Η	so	η	ru	Ϝ
ta	Η	ta <sub>2</sub>	Ω	te	≡	pte	Μ	ti	Α	to	†
				z?e	Ξ			z?o	↑	z?o <sub>2</sub>	Ϛ

Fig. 1.12 The grid as published in *Evidence* (JHS 73 [1953], 86)



## CHAPTER 2

# HOW TO BEGIN? AN INTRODUCTION TO LINEAR B CONVENTIONS AND RESOURCES\*

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### § 2.1. INTRODUCTION

#### § 2.1.1. *A personal experience*

Many students and scholars will come to Linear B studies from Greek philology or comparative linguistics, while others will be drawn in through Greek archaeology or history. In my experience, the resources that each student or scholar first finds most easily accessible given their own background will shape their approach to the material for a very long time.

As an undergraduate, I was first introduced to Linear B texts in a Bronze Age Greek archaeology class in 1975, where we were asked to read J. Chadwick's *Decipherment of Linear B*. I thought that the description of the decipherment was like a good detective story, and studied the chart of conventionalised signs but did not pay much attention to the photographs of the actual tablets. Instead I was most interested in the chapter on life in Mycenaean Greece. It was exhilarating to read about *te-me-no* and *ki-ti-me-na* and find out that these words survived into later Greek with somewhat different meanings. When several years later I began a study of the land tenure tablets, the logical place to start was Ventris and Chadwick's *Documents in Mycenaean Greek* (second edition, 1973), where the transcription, translation and commentary of the most complete tablets were set out in chapters according to subject. For a second opinion, I could always go to L.R. Palmer's *Interpretation of Mycenaean Greek Texts* (1963). The first editions of both books were published in or before 1963, and many new approaches have developed in forty years, but these volumes are still the logical place to start, because the basic approach to the study of the

tablets has not changed. Also it is important to recognise what the scholars of the 1950s and 1960s contributed to the foundation of Mycenaean studies. In my own research, I soon moved on to more specialised books, including dictionaries of Linear B words, and to articles in scholarly journals. The one thing I did not do at that time was study the actual tablets, because good photographs or drawings usually did not appear in the dictionaries or periodical articles. Consequently I regarded the transliterations of the syllabic signs into Latin alphabet as more accessible and more real than the actual signs on the tablets. It is difficult to break away from this mindset, and only those who are studying Linear B through palaeography may be truly free of it. There is much to be learned from looking at the actual tablets or at least at photographs or drawings.

### § 2.1.2. *How to begin?*

It is impossible to approach Linear B studies without at least a very basic knowledge of Greek, and even the most accomplished classicist may find the Mycenaean Greek dialect disconcerting, because it is so very different from literary texts in its word forms, text formats and subject matter. First of all, it is a form of Greek which is more than 400 years older than our first alphabetic documents. Secondly, it is written in a syllabic script which is difficult to grasp for people trained only in alphabetic writing systems, because of the spelling rules and the lack of differentiation between voiced : voiceless, and aspirated : unaspirated phonemes. Thirdly the various editorial conventions used by Mycenologists are different from those used by Classicists. Finally the amount of relevant bibliography produced after the decipherment is immense and it is easy to get lost in it.

What follows is a systematic account of some of the conventions and data which the Linear B specialist takes for granted; the other chapters of this book will provide detailed analyses of particular subjects — including the way in which the syllabic script works — and offer selected bibliographies in each. Here we simply present a basic account of how to look at a text in its published version and an introduction to the bibliographic resources of Mycenaean studies.

How might someone new to Linear B studies begin to find out about words in Linear B? Let us use *te-me-no* as an example. The glossary of Chadwick's second edition of *Documents* is a good place to start, because it presents the meaning of the word, its etymology and later Greek parallels, and the main tablets in which the word is found. The entry for *te-me-no* on *Documents*<sup>2</sup> page 584 states that the word occurs in PY 152 = Er 312. 152 is the number assigned

to the transcribed document by Ventris and Chadwick purely for the purposes of their publication; PY Er 312 is the generally accepted classification number of the tablet. Document 152 is found on page 266, and in it, *te-me-no* appears on lines 1 and 3. But what does the tablet designation PY Er 312 mean? It refers to 1. the site where the inscription was found, 2. the content of the inscription and 3. the excavation number assigned to the inscribed object at the site. This system was devised by E.L. Bennett, Jr. who was the first to study the Pylos tablets. The details are explained below.

## § 2.2. THE TEXTS AND THEIR CLASSIFICATION SYSTEM

### § 2.2.1. *Tablets and other inscribed objects*

The most numerous type of inscribed document is the clay tablet (see Fig. 2.1a, 1d), but other kinds of objects, most notably pottery, can bear Linear B inscriptions (see Chapter 8 below). The tablets are assigned to categories according to their subject as shown by the ideograms, signs that represent commodities, materials, finished objects, human beings, and animals. These categories are indicated by capital letters from A to V (excluding H and I) — for more details about this classification, see § 2.2.3. The letter X is reserved for fragments of tablets which bear no ideograms. Class W- indicates labels and sealings. Labels (see Fig. 2.1b), classified in the series Wa-We, are small oblong pieces of clay pressed against a box or basket; their inscription refers to the contents of the basket. Sealings (see Fig. 2.1c), classified as Wm-Wu, are small three sided nodules, i.e. lumps of clay most commonly formed around a string, with one side frequently bearing the impression of a seal, and one or more sides inscribed with an ideogram or word. Class Z- is reserved for inscriptions on clay items other than tablets, and objects of stone or ivory. The most numerous type of inscribed object in this class is category Z, inscriptions on clay vases. These are primarily terracotta stirrup jars with painted inscriptions, but a few domestic vessels with incised inscriptions have also been found; they will all be discussed below in Chapter 8. There are to date three other Z- class objects. The first, MED Zg 1, is an ivory lentoid seal from Medeon in Phocis with a Linear B word inscribed on it. The second, OL Zh 1, from Kafkania near Olympia, is a flat pebble inscribed on both sides with signs; its exact interpretation and authenticity requires further discussion (see below, Chapter 3.10). The third, DI Zh 1, is a new inscription on a stone slab discovered at Dimini in Thessaly. However, since inscriptions appear most frequently on tablets, we will normally use 'tablets' to refer to any kind of Linear B document.

### § 2.2.2. Site identification

The name of the site where each inscribed object was found is indicated by the first two or three capital letters. For instance, PY Er 312 comes from Pylos.

*In the Peloponnese*, MID = Midea, MY = Mycenae, OL = Olympia, PY = Pylos, TI = Tiryns.

*In Central Greece*, DI = Dimini, EL = Eleusis, KR = Kreusis, MED = Medeon, OR = Orchomenos, TH = Thebes.

*In Crete*, KH = Khania, KN = Knossos, MA = Malia, MAM = Mamelouko Cave.

### § 2.2.3. Class identification

In PY Er 312, the two letter combination of capital (E) and lower case (r) form the prefix Er which identifies the series to which the tablet belongs. For a list of these series, see *Introduction*, 36-7.

*The capital letter* refers to the class of the tablet, which is determined by its general subject. For instance, the tablets of the E- class all deal with the ideogram transcribed GRA, which is interpreted as grain or land measured in terms of seed grain. All tablets from any site which record primarily GRA may be assigned to class E-. However, tablets which have the ideograms for men or women, or other food ideograms in addition to GRA may be placed in other classes such as A- or F-. Fragmentary tablets where not enough of the inscription is left to indicate the subject of the text are placed in class X-. As we have seen, W- is reserved for labels and sealings and Z- for inscribed vases and other objects.

*The lower case letter* indicates the sub-group to which the tablet belongs. These letters primarily identify the general shape of the tablet: lower case a-m signify leaf shaped or narrow tablets (see Fig. 2.1d), while n-z are used for page shaped or tall tablets (see Fig. 2.1a).

*The combination of upper and lower case letters* is unique to each site. Thus it characterises tablets as: coming from a specific site; using a specific format and bearing the same kind of information; frequently written by the same hand (on scribal hand, see § 2.4.1.4). PY Er 312 deals with grain (because of its E- capital letter) and is a page shaped tablet (hence its -r lower case letter). It is one of only two Er tablets from Pylos. The two are placed in their own category because they share vocabulary and handwriting. But other tablets from Pylos which record GRA as land belong to distinct series made up of many tablets which share the same shape, vocabulary, format, kind of information

and scribal hand. In some series, such as the PY En series, the tablets form a 'set' making up a single document with multiple pages.

The designation 'PY E- series' found in bibliographies is a generic reference to the whole group of series Ea, Eb, Ed, En, Eo, Ep, Eq, Er and Es from Pylos which deal with *GRA* as land measure. A designation like E- should not be confused with the E prefix without hyphen or accompanying lower case letter. Such a capital letter standing alone indicates that the tablets placed under this classification are a miscellaneous group with diverse formats and scribal hands which do not fit into the other subcategories. The Knossos corpus contains the greatest number of texts designated by just the single capital letter: B, C, D, E, F, G, K, L, M, R, U, V and X.

In the standard transliterated editions, the tablets are listed alphabetically according to their prefixes, so first the Aa tablets are listed, then Ab, Ac, Ad etc. However, the Knossos edition *KT*<sup>5</sup> lists the single letter tablets after the tablets classified with two letters, so for instance, KN L comes unexpectedly after KN Lc-L.n, and B after Bg. Moreover some of the Knossos tablets under single letter categories have been subdivided into 'sets' according to scribal hand, as in F (1) 51, and F (1) 157, both written by Hand '124'd and classified as linked somehow by hand and format. A few tablet categories from other sites also use the single letter classification, but in general tablet classifications usually consist of two letters.

#### § 2.2.4. *Identification number*

For the tablet PY Er 312, the numeral 312 is the identification number assigned to the tablet when it was excavated; it was put in class Er after it was cleaned and photographed, and the ideograms on it were identified. The tablet number should be unique to the site. This was not always the convention. In the first edition of the Pylos tablets (*PT I*) published in 1951 before the decipherment, E.L. Bennett, Jr. decided to number consecutively the Pylos tablets that belonged to each class, for example the livestock tablets: PY Cn01, 02, etc. The first edition of *Documents* also refers to some of the Pylos tablets in this manner (see § 2.5.3.2). This proved confusing when more tablets were excavated, and editors then wanted to reassign a tablet to another category. For instance, in *PT I*, a tablet which recorded deer was assigned to the category Cn and given the number 01 because the deer seem to be treated like livestock. In fact when two more tablet fragments were found which also listed deer, Cn01 was placed in its own class, Cr, and given its excavation number, 591. In *PT II* (1955), Bennett changed the system of numbering to the one used

now, where each tablet found at a site has a number unique to that site. *PT II* pages xxi-xxxii give a concordance of the old and new numeration.

The numbering systems for the Knossos tablets differ from the Pylos texts because Evans gave identification numbers only to the best preserved Knossos tablets. Immediately after the decipherment, Bennett and Ventris examined and catalogued trays of unnumbered tablet fragments found in the Heraklion Museum. Further groups of fragments continued to turn up, with few descriptions of their findplace or archaeological levels. The tablets in these batches have been given identification numbers which do not indicate the order in which they were excavated. The numbers jump from 2138 to 4400, and again from 6068 to 7000, reflecting the different spots in the museum where they were rediscovered. Most recently, J. L. Melena and R. Firth have undertaken the study of these tablet fragments and their original finds; their work has been published in *Minos*.

The tablet identification numbers for the texts excavated at Thebes, Tiryns, Khania and Midea are consecutive, but the numbers of the Mycenae tablets are not. Instead the numbering, which runs from 101-140, 201-224, etc., reflects the years and the locations in which they were found.

Not many tablets were found whole, so tablet fragments with identifiable signs or portions of signs are normally given separate identification numbers. If fragments of tablets can be joined together, the resulting tablet is published with the numbers of all its fragments. The first number of such a join is always the lowest one; for instance KN C (3) 979 + 1032 + 7051 + 7052 + 7657 is made up of five fragments and its identification number is 979. When unnumbered fragments are joined to a tablet, this is shown by *fr.* (one fragment) or *frr.* (several fragments: their number may be added in brackets) — for instance KN F (1) 157 + *fr.* [+] 7356 (Fig. 2.5b) (one fragment) or KN Fh 5506 + *frr.* (8) (eight fragments).

We have seen that class X(-) designates those fragments of tablets that have no identifiable subject. However, the analysis of the handwriting or the shape of the fragment may lead to joins with other tablets which may yield new words or ideograms; if so, the fragment loses its X(-) classification and the tablet to which it is joined may acquire a new number and/or a new class. New joins are always being made, or new pieces found, especially for the Knossos tablets, and are regularly published in scholarly journals. Because of such advances, tablets and words found in an older resource such as *Documents* should always be checked in the new editions or corpora, and in a later bibliography such as *SMID*, to find out the corrected reading or the most recent references for that tablet or word. The proceedings of the Mycenaean Colloquia which are held every five years regularly include a list of newly found texts and information about joins (see § 2.5.3.5).

### § 2.3. THE LINEAR B SIGNS

#### § 2.3.1. *Overall view*

For the serious study of any script it is necessary to identify the separate signs and to find a quick way to refer to them even when we do not know their phonetic value or their function. In Linear B, all the signs except for numerals, check marks and word dividers have been given identification numbers, usually preceded by an asterisk. For instance \*2 or \*02 refers to the sign † (see Fig. 2.2a); the asterisk shows that the number refers to a sign, and is not the transliteration of a numeral. These identification numbers were assigned before the decipherment; now most signs are referred to by their phonetic or ideographic transcription. However, signs which have not been securely interpreted are indicated by the identification number in italics plus asterisk preceding it (see Fig. 2.2d). Some signs originally given separate numbers now have been shown to be variants of similar signs; for example, close analysis of the contexts in which they occur show that the syllabogram \*35 is a variant of \*34, differing only in orientation, and similarly the ideogram \*124 is a variant of \*125, CYP.

Identification numbers are assigned to the following categories of signs: syllabic signs (or syllabograms), usually with a vowel or consonant+vowel value, ideograms (or logograms) indicating commodities or living creatures, and signs indicating dry measure, liquid measure, and weight. The numbers \*1-89 are reserved for the syllabic signs, while the signs numbered \*100-258 represent ideograms, or weights and measures (Figs. 2.2, 2.3). Three classes of signs, numerals, word dividers and check marks, do not have identification numbers because they are distinctive forms that are usually simple to identify. The word divider is usually a short vertical line placed in the lower half of a line that marks where a word ends and another begins; it is transliterated with a comma (see § 2.4.1.3 and Table 2.2). The check mark is a simple x lightly inscribed at the end of some entries, so it is transliterated as a capital X. For numerals, the units and subunits are transcribed into Arabic numerals (see § 2.3.4 and Fig. 2.4b).

The syllabic signs whose phonetic values are known are transliterated with letters of the Latin alphabet: *a*, *pa*, *ti*, etc. (see § 2.3.2 and Fig. 2.2). Immediately after Ventris and Chadwick published their article *Evidence* in 1953, most scholars transliterated the ideograms with words of their own language. It was finally agreed that in the standard transliteration of the texts, the ideograms would be represented by Latin words. Some ideograms are transliterated by a full Latin word: *ROTA*, *VIR*, etc. for 'wheel', 'man', and so forth, and others by an abbreviated form of the Latin word (normally the first three letters): e.g. *GRA*.

for GRANUM 'wheat' (see § 2.3.3). Those few remaining syllabograms or ideograms which are still undeciphered are referred to by the number which has been conventionally assigned to them.

### § 2.3.2. *Syllabograms*

Most introductory books list the syllabograms not according to their conventional number but either in alphabetical order or in a sort of 'grid' which reflects the decipherment grid devised by Ventris (see Chapter 1.5 above); this arranges the signs in rows with shared consonants (*pa*, *pe*, *pi*, *po*, *pu*) and columns with shared vowels (*pa*, *ta*, *ka*, etc.; see Fig. 2.2a = chart of syllabograms). In addition to these basic syllabograms there are the so-called doublets and complexes (see LEJEUNE, in *Acta Mycenaea* I); a sign which alternates with *one* more frequent sign in the same word and seem to have the same phonetic value is called a doublet and is normally transliterated with an added subscript 2 or 3 (cf.  $a_2$ ,  $a_3$  vs.  $a$ ; see Fig. 2.2b); if a sign alternates with *two* signs in the same word and seems to refer to the same phonetic entity as the two signs, it is called a complex and is normally rendered with a transliteration of the CCV type (cf. *pte* vs. *pe-te*, *dwo* vs. *du-wo*, etc.: see Fig. 2.2c). Doublets normally have a more specialised value. For instance, the two doublets  $a_2$  and  $a_3$  can replace the basic syllabogram  $a$  when the scribes do not want to express the general phonetic value /a/, but the specialised one /ha/ (=  $a_2$ ) or /ai/ (=  $a_3$ ). Thus the same form of the same word, *pharweha* 'cloths' (neuter plural, cf. Classical φᾶπος) happens to be written in two different ways, *pa-we-a<sub>2</sub>* and *pa-we-a*. The identification number continues to designate syllabograms whose phonetic values are unknown (see Fig. 2.2d).

The decision whether to stick to the conventional transliterations or to alter them (should we write *ai* instead of  $a_3$ ?) is left to the quinquennial Mycenaean Colloquia or to the editors of the main corpora; the same Colloquia decide whether a syllabic value can replace the conventional numerical identification for the signs which were not deciphered from the start. For instance, it is now accepted that \*85 has the value *au*. Moreover the original *pa<sub>2</sub>* transliteration of \*16 proposed by Ventris and Chadwick was replaced by *qa* when it became clear that Mycenaean had special signs for the original labiovelar sounds of Indo-European and Proto-Greek, instead of using the signs for the dental or labial sounds into which most of the labiovelars had developed in first millennium Greek. Anyone who is researching the word *qa-si-re-u* in sources earlier than the mid-1960s thus needs to look under *pa<sub>2</sub>-si-re-u*. Some general handbooks choose to give a provisional phonetic value instead of the conventional transliteration, for instance *rya* and *phu*, for *ra<sub>2</sub>* and *pu<sub>2</sub>* (cf. DICKINSON 1994, 196 fig. 5.45), but to date these values have not been officially accepted.

### § 2.3.3. Ideograms

The ideograms which are used to represent commodities, raw materials, finished goods, human beings, animals and plants can be identified because they normally occur after a space left after a word or phrase, and usually have units of measure and/or numerals after them. Most ideograms are distinct from syllabograms, and many are quite pictorial: pots, men, women, horses etc. are immediately identifiable, a feature which allowed Emmett Bennett, Jr. to classify the subjects of these tablets even before the decipherment. The most common or pictorial ideograms are transliterated by Latin words or abbreviations in SMALL CAPITALS (e.g. MUL is the abbreviation for MULier, 'woman'; see Fig. 2.3a). In general, the most pictorial of the ideograms were probably most recently invented by scribes, and occur on relatively few tablets. The more schematic signs were borrowed from Linear A, and their interpretations are based upon the contexts or descriptive words accompanying these signs. Some of the identifications are still open to interpretation; these have been marked with a question mark in Fig. 2.3a. For instance, from context we know that \*120 and \*121 are common grains, but the identification of \*120 as wheat and \*121 as barley is not securely proven. The meaning of \*129 also is not securely identified. This sign is designated \*65 when it is used as a syllabogram, and may have the phonetic value \*ju (see Fig. 2.2a). As \*129, it has been given the Latin designation FAR, based on the context provided by PY Un 718, but any one of the meanings presented by Latin *far, farris*: 'emmer wheat, spelt wheat or flour' is as yet not securely proven (see Fig. 2.3a; also § 9.41 on PY Un 718, which suggests that \*129 might possibly represent a pulse). The meanings of other ideograms have been generally accepted, e.g. \*152 and \*153 as oxhide and sheepskin respectively (*Documents*<sup>2</sup>, 51), but they have not yet been assigned a Latin transliteration.

Some commodities can also be represented by syllabic signs. Four of the signs which function as syllabograms, \*21 (qi), \*22 (phonetic value not known), \*23 (mu), and \*85 (au), also denote the four most common domesticated animals, sheep, goats, cows and pigs. The main difference is that when these signs are used as ideograms, the lower half of the sign is usually modified with added strokes to show that the animal is male or female (see Fig. 2.3a). In their function as ideograms the signs are given specific numbers (\*106, \*107, \*109, \*108) and are transliterated by the Latin word for the animal or its abbreviation (OVIS, CAP, BOS, SUS), with a superscript 'f' (for female) or 'm' (for male) showing the sex of the animal: OVIS<sup>f</sup>, OVIS<sup>m</sup>, etc. Their transliteration should always be given in SMALL CAPITALS.

When other syllabograms are also used as ideograms to designate for instance a vegetable commodity, such as figs or flax, they are known by their number or their transliteration as syllabograms in italicised uppercase letters. For example,

sign \*30 has the phonetic value *ni*, but is also used as an ideogram for figs. When it appears in the tablets as an ideogram, it is transcribed as *Nl*. Similarly, sign \*31 has the phonetic value *sa*, but when used as the ideogram for flax, it is transcribed as *SA*. These single syllabograms most likely were used as acronyms, representing the first syllable of the word for the commodity; some of them may be Pre-Hellenic in origin.

Syllabograms may also be drawn one on top of the other to form a monogram which has ideographic value (see Fig. 2.3b). This is transcribed in italicized uppercase letters with no hyphens between the syllables; e.g. *MERI* represents the monogram for the commodity honey (*meti*). Finally, a syllabogram can be incorporated into an ideogram as a ligature or an adjunct, acting as an acronym to further define the commodity. If the syllabogram is drawn directly on the ideogram, using some of its strokes, it is called a ligature. The cyperus ideogram \*/25 with the syllabogram *ku* drawn over its lower half is transcribed as *CYP+KU* (see Fig. 2.5a [g]), showing a kind of cyperus distinct from varieties represented by other ligatures. If the syllabogram is placed close to the ideogram but does not touch it, it is called an adjunct, and is transliterated in lowercase italics, e.g. *MUL di*, an abbreviation for the word *di-da-ka-re*, 'women under instruction'.

Many editions of transliterated texts will have a chart showing the ideographic signs, their identification numbers and Latin abbreviations. However, some introductory handbooks such as *World*, and MELENA 2001, represent the ideograms with modern words.

#### § 2.3.4. Subunits and numerals

Linear B uses subunits which represent specific quantities in three systems of measure: weight, and dry and liquid volume. The subunits are transliterated by small capital letters. Each subunit has a set value (see *World* Ch. 7). Dry and liquid measure share the two smallest subunits, *z* and *v*, but differ in the largest subunit: dry measure uses *t*, while liquid measure has *s* (see Fig. 2.4a). The numerals are based on the decimal system, and are cumulative; a number such as 598 would be represented by 5 circular hundred signs, 9 horizontal ten signs and 8 vertical one signs (see Fig. 2.4b). The numerals are transliterated as Arabic numerals.

#### § 2.3.5. Linear B Unicode

Nowadays, it is easy to type the actual Linear B signs and see them on the computer screen or to print them, because the Unicode Consortium has presented the Linear B phonetic signs, ideograms and numerals in a standard

order (<http://www.unicode.org/>). This standard order is independent of any platform, program, or language. Even better, different Linear B fonts are available where all the signs, syllabograms, ideograms, subunits and numerals are placed in the internationally recognised order. Figs. 2.2, 2.3 and 2.4 illustrate these Unicode forms and values. Thus everybody, everywhere, is now able to choose his favorite Linear B font — just as for English or alphabetic Greek texts. The Unicode tables of the Linear B script can be found in *The Unicode Standard, Version 5.0*, 2006. For the Unicode tables of the Linear B syllabary, see also <http://www.unicode.org/charts/PDF/U10000.pdf>. For the Unicode tables of the Linear B ideograms, see also <http://www.unicode.org/charts/PDF/U10080.pdf>.

## § 2.4. EDITING CONVENTIONS AND EDITIONS

### § 2.4.1. *Editing conventions*

#### § 2.4.1.1. Transliteration versus transcription

A full edition of a Linear B text normally offers a photograph, a line drawing, and a transliteration in Latin letters and Arabic numerals. Some editors also printed the text in a standardised form of the original script; this was done by Bennett both for his first edition of the Pylos tablets, published in 1951 before the decipherment, and for the second edition (1955). More recently *Introduction* (1983) presented texts in a standardized version of the script, mainly for pedagogical reasons.

There is a difference between transliteration and transcription even if some authors use the two terms interchangeably. A *transliteration* is an alphabetic representation of the words written in Linear B: each syllabic sign corresponds uniquely to an alphabetic sequence of one or two (and, rarely, three) letters. A *transcription* aims at providing a different type of information: it indicates the form of the word as we think it was actually *uttered*, reproducing the vowels and consonants that the Linear B spelling does not give. Thus *pa-te* is the unique *transliteration* of the signs \*03-\*04. But the Linear B spelling rules allow at least two different *transcriptions* for this sequence: *pantes* 'all' or *pater* 'father'. One could add that in theory a third form, *phantes* 'saying' might also have been written as *pa-te*. But *pa-te* cannot be read as *bantes* 'coming' because this verb would have had an initial labiovelar and we would expect *\*qa-te*. This is the sort of linguistic information which is crucial for the understanding of Mycenaean texts. Thus the linguistic identification of the Linear B words is the most immediate and challenging feature facing beginners.

### § 2.4.1.2. Line divisions (Table 2.1)

Linear B tablets frequently are divided into lines by horizontal rulings incised by a writing instrument. In the transliteration of a ruled tablet, each line is indicated by a numeral: .1 .2 .3, etc. with a dot preceding the numeral (see Fig. 2.5b). If the tablet is not divided by rulings, but has more than one row of signs, each row is indicated by a lower case letter: .a .b .c, etc.; see Fig. 2.6b. When a tablet is divided by a ruling for only part of its length, as is common in the Knossos sheep tablets, uppercase letters are used; the first line is designated .A, the second as .B, etc (see Fig. 2.7b). Often the signs for the first word in the unlined portion of the tablet are larger than the remainder of the inscription; change in size of the signs is shown in the transliteration by / for a smaller size after the slash (see Fig. 2.6b), and by // for a larger size after the slash. If within a ruled line the scribe has run out of room and squeezed in signs or words above the end of the line, but still within the ruling, the signs in the uppermost row are designated as belonging to .1a (if we refer to the first line), and those in the lower row as belonging to .1b (even though the top row of words is usually a continuation of the bottom row).

The following conventions for designating lines are derived from Latin and Greek epigraphy. The front side of a tablet is called the *recto*, and the back side the *verso*. The front is usually flatter than the back: in the process of tablet making the moist clay is flattened on a hard surface and this more even side is generally preferred for the writing of the text. Few Linear B tablets have inscriptions on the back. When they do, in the transliteration of the *verso* the line numbers are preceded by v: v.1, v.2, etc.

If a line in a ruled tablet is empty, this is indicated by the Latin term *vacat* (cf. Fig. 2.5b; *vacant* can be used if more than one line is empty). If a tablet is broken at the top, and it is not clear how many lines are missing, the term *supra mutila* is used, and then the first legible line is given the number .1. *Infra mutila* means that the lower part of the tablet is missing (cf. Fig. 2.5a [k]).

Table 2.1.

<i>Line divisions</i>	
Convention	Explanation
.1, .2, .3, etc.	Arabic numeral preceded by dot
.A, .B, etc.	Capital letter preceded by dot

Line divisions		
Convention		Explanation
.a, .b, etc.	Small letter preceded by dot	line numbers for a tablet with no rulings
.1a, .1b, etc.	Arabic numeral preceded by dot and followed by small letter	the upper line is .1a, the lower is .1b, even if the upper line continues the lower line entry
/	Single slash	size of signs changes from large to small
//	Double slash	size of signs changes from small to large
‘ ’	Single quotes framing a sign or word	these signs are written at a level higher than the preceding signs
<i>recto</i>		front side of the tablet
<i>verso</i>		back side of a tablet
v.1, v.2, etc.	'v' preceding dot and Arabic numeral	line numbers for the <i>verso</i> of a tablet with horizontal rulings
<i>vac(at)</i>		single empty ruled line
<i>vac(ant)</i>		multiple empty ruled lines
<i>infra) mut(ila)</i>		damaged below
<i>sup(ra) mut(ila)</i>		damaged above
<i>lat(us) dex(trum)</i>		right side
<i>lat(us) sin(istrum)</i>		left side

### § 2.4.1.3. Editing conventions within lines (Table 2.2)

The editing conventions for transliterations of Linear B texts are based upon the Leiden Convention rules for transcribing alphabetic Greek and Latin texts; however, the conventions for transliterating words are unique to Mycenology.

When words are transliterated, the syllabic signs making up the words are usually shown linked by hyphens, e.g. *me-ri* 'honey' (but a less common but acceptable alternative is to dispense with the hyphens but keep the transliteration in lower case italicised letters, e.g. *meri*). Syllabic signs used as monograms are capitalised and italicised but not hyphenated, e.g. *MERI*.

Word dividers, normally short vertical strokes set low, mark the end of a word and the beginning of the next, and are represented in transliteration by a comma (see Fig. 2.6a [f] and 2.6b, 2.7a [d] and 2.7b) — in the tablets, they

resemble, and can be misidentified as, the numeral 1. Words may also be divided by a space, whether accompanied or not by a word divider.

Square brackets [ ] denote a break in the text due to physical damage. The open end of the bracket points to the missing part of the tablet. If a break goes through a sign or it is damaged in some other way, but is still recognisable, as for example the first sign *tu* in *tu-ni-ja* in KN Dd 659.B (Fig. 2.7), it is transliterated without any notation showing that the sign is only partially present. One can find out which signs are complete, and which are fragmentary only by looking at the photograph or facsimile drawing. If missing signs or words can be restored because the text consists of formulaic entries characteristic of that class of tablet, the supposedly missing signs are placed within the brackets, as in PY Eb 893.A: *ku-so , e-kē[-qe ke-]ke-me-na . ko-to-na.*

If a tablet is broken immediately next to a complete sign, or actually through an identifiable sign, in the transliteration a square bracket is placed immediately next to the first or last identifiable sign: as for example *ke-re-na-i[* in TH Gp 176.a or *Je-ke-me-de* in KN Dd 659.B (see Fig. 2.7a [a]). The placement of the bracket shows that we don't know if the word began or ended at that point, or had further signs. But when it is clear that a word continues into the broken or damaged portion of a tablet, a hyphen will precede the bracket: *e-ke-[.*

If a damaged sign has not been securely identified, subscript dots are placed below the sign in the transliteration, as in KN Od 666.B *]kē-me-no* (see Fig. 2.6a [d]). In this example, only the right hand strokes survive, and can be reconstructed in several different ways; the reading of *kē* is simply the most likely candidate given the context.

If the tablet becomes illegible after or in the middle of a numeral, a bracket should be placed right next to the Arabic numeral in the transliteration. In KN F (1) 157.1, all that is left of the numeral are three circles and the top of a fourth (see Fig. 2.5a [d]). This arrangement shows that at least four circles had been written, and that the numeral was probably 400 or higher. Consequently it is written as 400[. If the number is apparently complete and the tablet is broken right after it, the bracket is set a little apart from the numeral: e.g. 400 [.]

If the tablet entry begins with a bracket open to the left, and/or ends with a bracket open to the right, this indicates that the tablet has missing or damaged edges, as in KN Dd 659.A (see Fig. 2.7).

Angled brackets <> indicate a word or sign that should have been included but which the scribe inadvertently left out, as in PY An 261 v.4: *ta-]wē-si-jo-jō , ke-ro-si<-ja>* vir 20. In the other twenty or more lines of the tablet, the scribe

wrote *ke-ro-si-ja*, so the form *ke-ro-si* in line v.4 used in the same formula as the other *ke-ro-si-ja* entries must be a spelling mistake. Such cases are identifiable only in entries with extremely repetitive formulas. The form *ta-]we-si-jo-jo* in the same line is restorable because this man's name in the genitive occurs in five other entries in PY An 261. In KN Dd 659.A (see Fig. 2.7a [c]), the scribe omitted *ovis<sup>m</sup>* (male sheep). The other tablets by this scribe all have an *ovis<sup>m</sup>* and an *ovis<sup>f</sup>* ideogram in the upper line. Therefore the transliteration supplies < *ovis<sup>m</sup>* > in angle brackets.

Double square brackets [ ] represent a word written and then erased by the scribe. In KN Od 666.a, *to* was written on top of an erased sign which might be *o* (see Fig. 2.6a [c]). The erased sign is then indicated in the apparatus as [o].

**Table 2.2.**

<i>Editing within lines</i>		
Convention	Name	Explanation
-	Hyphen	links syllabic signs within words
,	Comma	word divider
[ ]	Square brackets	missing text within the space where the brackets point
[ ]	Double square brackets	signs erased by the scribe
< >	Angle brackets	reintroduces signs which were left out by the scribe
{ }	Curly brackets	signs erroneously written by the scribe
[...]	Dots in brackets	one dot for each missing sign
[---]	Dashes or hyphens in brackets	an unknown number of missing signs
4[	Bracket after numeral	more digits may or may not have followed
4 [	Space between numeral and bracket	the number is apparently complete
<i>po</i> [	Sign next to bracket	a sign may or may not have followed
<i>po</i> -[	Hyphen next to bracket	a sign definitely was inscribed but cannot be reconstructed
<i>po</i> [	Empty space next to bracket	no sign immediately follows

<i>Editing within lines</i>		
Convention	Name	Explanation
e-ke-[qe]	Sign(s) inside bracket	restored reading, often based on formulaic entries from other tablets
« »	Angle-brackets	a word divider was likely present
*	Subscript dot	sign is damaged, and may be read in several ways; the present reading is the most likely one

#### § 2.4.1.4. Scribal hands and find spots of the tablets

In a corpus like *CoMIK* or an edition like *KT*<sup>5</sup> (see § 2.4.2.2.1-2) we often find next to each tablet a number which indicates the so-called scribal hand; we may also find information about the find spot. The Linear B texts that we have are nearly all inscribed in (or painted on) clay and show clearly the individual characteristics of the hands of their scribes. By studying the ways in which the signs are formed, it is possible to assign most tablets to individual scribes. When the find spots of the tablets are linked to the identification of scribal hands, very interesting patterns of administration can be seen. The study of scribal hands is basic to understanding how the tablets from each site were organised since tablets written by the same scribe often share the same subject matter. Yet this is the aspect least discussed in most resources on Linear B. At Pylos, the study of the exact find spots of the tablets can help reconstruct how the tablets were filed in series, and in what order they were brought into the archives. At Knossos, groups of tablets bearing the same kinds of information but by different scribes can be seen to belong to sub-series, showing that in specialised bureaux each scribe handled a different aspect of the same resources. However the lack of archaeological context and findspot for many of the tablet fragments from Knossos (see above, § 2.2.4) has created difficulties in reconstructing scribal activity. Olivier presents the evidence for assigning scribal hands for Knossos in *Scribes Knossos*, and Palaima does the same in *Scribes Pylos*. Most of the site reports which present small groups of tablets, such as the Mycenae tablets and the new Thebes publication (2005), discuss scribal hands. If one wants to study scribal hands though, and cannot obtain access to the actual texts, accurate photographs or drawings of the tablets are vital. Begin with any one of the corpora or editions with photographs and drawings — for instance *CoMIK* or *TOP*. Chadwick's 1976 (*World*) and 1987 books also have good quality photographs and facsimile line drawings of tablets.

### § 2.4.2. *Editions*

#### § 2.4.2.1. How editions are made

The publication of any group of tablets from a site is dependent on a number of factors: the way the excavations were conducted, the physical contexts in which the tablets were found, the quantity of tablets from each deposit, state of preservation, and arrangements for study and publication. For example, Arthur Evans, the excavator of Knossos, found most of the tablets from his site by 1904, but did not publish them in their entirety because he was determined to decipher the script himself first. Before his death in 1940, he did publish in *PoM* IV.2 (1935) drawings and photographs of 120 of the tablets; his aim was to give an overview of the classes of tablets, and the word signs and ideograms associated with each class. However, there were many mistakes in the drawings and transcriptions. *Scripta Minoa II*, published in 1952 by Sir John Myres, was meant to be the definitive corpus of the Knossos tablets, but suffered from the same problems. In contrast Carl Blegen, who had excavated over 600 tablets at Pylos in 1939, entrusted their publication to one of his students, E.L.Bennett, Jr. who even before the decipherment set very high editing standards and made his data (texts and index) available to Michael Ventris, who depended largely on them for his decipherment. The Knossos tablets have gone through seven editions, counting *Scripta Minoa II*. Each time an edition came out, yet more fragments were found in the Heraklion Museum which had to be studied. At the same time, improvements in our techniques such as in the identification of scribal hands led to new joins of a considerable number of fragments. The Pylos tablets themselves in spite of their very good start have gone through four editions, because new texts were excavated, new joins were made, or tablets were reclassified. This work is ongoing; Melena has made it his task to find joins in the Knossos and Pylos tablets, and regularly publishes the new readings in *Minos*.

#### § 2.4.2.2. The published texts

Texts (tablets, sealings, labels, vases etc.) are published in a number of ways: in large corpora, compact or large editions, individual articles, excavation reports. This may make it difficult to trace their publication history, but the basic references can be found in the proceedings of the international Mycenaean Colloquia, held every five years. Each Mycenaean Colloquium includes a report on new finds, forthcoming editions of texts and the progress made towards the creation of more definitive corpora. These accounts give a summary of what

resources are being developed, but it is also necessary to check the more frequent accounts in *Nestor* and in the *SMID* bibliographies (see § 2.5.4).

#### § 2.4.2.2.1 *Corpora*

A publication which aims to present images of all the tablets and other inscribed records from a site (or from a single deposit in a site) in the form of photographs and/or facsimile line drawings is called a corpus. The texts will also be presented in transliterated form. There are also corpora of special types of inscribed objects, in particular inscribed vases. To publish a large corpus of texts is a time-consuming and expensive proposition. If a large group of tablets is found, it will take a while to clean, conserve, find joins, study, transcribe and draw them (not to mention interpreting them). Most newly found texts first appear with photos, facsimile drawings and transliterations in excavation reports or in articles published in the main journals for Mycenaean epigraphy such as *Minos* and *Kadmos*.

The ideal publication of a corpus would include a photograph and facsimile line drawing of each tablet or inscribed object, with a transliteration of the text on the same page, and an *apparatus criticus* giving information about the scribe and find spot as well as comments on alternate readings and possible restorations, plus a concordance of the tablets' numbers and prefixes, and scribal hands. It may include indexes of the words and the ideograms and also an index of the scribal hands and classes of texts. The four volume set of the *Corpus of Mycenaean Inscriptions from Knossos* (*CoMIK*), and the newly published Thebes volumes have many, though not all, of these features, as will the forthcoming corpus of Linear B tablets and inscribed nodules from Pylos in *PNPWM*. Another feature typical of a corpus is that the tablets are presented in numerical order rather than by class, which makes using the publication in some ways more complicated, since one cannot find all the tablets belonging to a certain class in the same section of the volume. But while a tablet might be assigned to a different class, its identification number would not change, and so it would be more easily found in a corpus.

However, publication of a corpus can never be entirely complete, because people are always studying and making new discoveries. Some of the information in Volume I of *CoMIK* (published in 1986) was outdated due to the publication of *KT*<sup>5</sup> in 1989, even before the other *CoMIK* volumes were completed. The existing corpora for Mycenae (SACCONI 1974b), and for the vase inscriptions (SACCONI 1974a) all need updating, because of recent finds. The earlier publication of the Thebes tablets (GODART - SACCONI 1978) has already been replaced by ARAVANTINOS - GODART - SACCONI 2002; 2005.

For more complete lists of corpora or editions per site for Mycenae, Tiryns, Thebes and Pylos up to 1982, see *Introduction*, 46; for the most recent publications, see FEUER 2004.

#### § 2.4.2.2.2. Other editions

The body of Linear B tablets from any site most often is published in transliteration, because it is faster, more economical, and easy to update, especially in this age of desktop publishing. These can be called 'minor editions' because they do not have photographs or facsimile drawings of the texts. The prefaces to these editions will give the full bibliography for previous publications of the texts.

Most editions of texts in transliteration organise the tablets by classes rather than by number. The apparatus will present epigraphical comments, the scribal hand and sometimes the find spot. At this date, *PTT* and *KT*<sup>5</sup> are the main editions for texts in transliteration from Pylos and Knossos respectively. *Tithemy* presents transliterated texts of tablets and nodules from Tiryns, Thebes and Mycenae before 1991. An updated edition of *Tithemy*, with the Midea sealings and the new Thebes texts is being prepared by Melena.

*TOP* has many of the features of a corpus: photos and facsimile drawings, tablets presented in numerical order etc. but also contains extensive commentary on the texts and vocabulary, which is more a feature of an edition. Its format follows that of the early editions of the Mycenae tablets, *MT* II and III, where relatively small groups of tablets found in particular deposits, or in particular years were published with photographs, facsimile drawings etc. and commentary. Consequently *TOP* should be considered an unusually full edition.

### § 2.5. WORKING TOOLS

#### § 2.5.1. Linear B indexes

A Linear B index should contain all the words found on all the texts, presented in (Latin) alphabetical order according to the syllabic value of the signs, and all the ideograms presented in numerical order. Each entry should list all the texts in which each form occurs, by tablet, identification number and line, even for cases where the reading of the word or ideogram is doubtful. For instance, the index *IGLB* shows that the word *te-me-no* found in PY Er 312 appears only on that tablet, on lines 1 and 3, but that the ideogram GRA used

in Er 312 is very common in the Pylos texts, appearing in the E- category of tablets and Ab ration lists and occasionally on other classes such as the U- category of mixed commodities. However, an index will not mention the category or meaning of the word or ideogram, nor present later Greek parallels.

The last comprehensive Linear B index published was *IGLB* in 1973. Much work has been done in the thirty years since it was compiled: new tablets and texts have been found, many old texts have been interpreted differently, and we have new joins of fragments providing new texts and interpretations. At present, a new index is in preparation that will include the new readings of the Pylos and Knossos tablets, and the new tablets from Thebes. But the 1973 index is still useful for basic consultation. Reverse indexes, where words are arranged in alphabetic order but starting from the end, are also useful both for epigraphists who need to restore broken words and for linguists who study word formation. *IGLB* includes a reverse index which replaces the older *Index inverse du grec mycénien* by LEJEUNE (1964).

## § 2.5.2 *Lexica and dictionaries*

### § 2.5.2.1. Mycenaean lexica

To find out how a word has been interpreted, it is necessary to check a dictionary or lexicon. Because of the peculiar spelling rules, a word in Linear B can be regularly interpreted in many different ways (cf. above § 2.4.1.1). For instance, the word *ka-po* has been understood as *karpos*, 'fruit' or *skaphos*, 'hull, tray' depending on the context. The dictionary entry will discuss the various interpretations and cite the sources where these different forms have been proposed. The most complete presentation of Linear B words to date is in *Diccionario*. It lists in transliteration all Linear B words known at the date of publication (1985-93), including partially missing words, or uncertain readings, and offers a complete list of alternative interpretations. A new edition is currently in preparation. The updated glossary in *Documents*<sup>2</sup> (1973), compiled by Chadwick, contains most of the vocabulary known from the tablets by that date, and the most accepted interpretations. It remains an excellent resource for any lexical research. The glossary of *Interpretation*, which has not been revised, can still be useful but is outdated. The same is true of MORPURGO's *MGL* (1963). *MGV* (1963), and *MGV II* (1971) present the Mycenaean Greek vocabulary as known by 1971; the entries are arranged alphabetically according to the later Greek lexical forms. However, check *Diccionario* for interpretations proposed in later publications.

### § 2.5.2.2. Other Greek lexica with Mycenaean Greek words

*Diccionario* and the glossary in *Documents*<sup>2</sup> were compiled specifically as lexica for Mycenaean Greek as found in the Linear B documents. A general Greek lexicon may also include specific Mycenaean Greek words which illustrate the development of the Greek language. The updated (1996) supplement to LIDDELL – SCOTT – JONES, *Greek-English Lexicon* lists under the relevant Greek lemma the Mycenaean words for which there is a known Greek equivalent, as established by John Chadwick and Anna Morpurgo Davies. The *Diccionario griego-español* includes Mycenaean Greek words too (even proper names) with a reference to the *Diccionario*. CHANTRAINE'S *Dictionnaire étymologique* (1999) normally refers to Linear B words when they have a Classical equivalent, and is especially useful in showing the relationship of the Mycenaean to the later Greek forms. FRISK's *Griechisches Etymologisches Wörterbuch* (1954-72) also makes some use of Mycenaean material in his presentation of Greek etymology.

### § 2.5.3. General Linear B studies

There is such a wide variety of books and articles dealing with different types of information drawn from the Linear B texts that it is hard to divide them into categories. Grammars focus on the form, etymology and syntax of Mycenaean Greek words, while other works may present an overview of social and economic systems. But the two types of study overlap considerably, and the one is not possible without the other. In this section, we give a few examples of grammars and handbooks, but the other chapters of this book all offer more specialised bibliographies to which to turn for specific topics.

#### § 2.5.3.1. General works

The two major works published within ten years after the decipherment, *Documents*<sup>1</sup> (1956) and *Interpretation* (1963), were planned as handbooks for the new discipline of Linear B studies. They gave all the basic information and presented a wide range of texts as well as a number of original and exciting interpretations. New discoveries of texts and new interpretations have made them partially obsolete though they are still useful. The revision of *Documents* by John Chadwick in 1973 ensured that it remains indispensable, even if it is not very easy to use (see § 2.5.3.2). However, the beginner may find it useful to look first at some other introductions to Linear B.

At one end of the spectrum, CHADWICK's *The Mycenaean World* (1976) gives the broadest overview of the subject matter of the tablets without giving any transliterated texts. His other introductory book *Decipherment of Linear B*, first published in 1958, has become a minor classic and still remains the best thing that one can read first about the process of the decipherment. A basic and very useful introduction in English with commentary on a number of texts can be found in *Introduction* (also in a 1994 Greek edition). HILLER – PANAGL (1976) in German, and RUIPÉREZ – MELENA (1990) in Spanish are two good introductions in languages other than English, which cite more fully the tablets themselves, and discuss the specialised information from the tablets (although HILLER – PANAGL lacks more recent information). MELENA (2001) presents a selection of 126 tablets. His approach is philologically oriented, giving both the transcription, the transliteration of the words in Mycenaean Greek, and the commentary. *Idéogrammes* (1979) on the other hand presents archaeological parallels to the more pictographic ideograms.

### § 2.5.3.2. *Documents*<sup>2</sup> and how to use it

The first edition of *Documents*<sup>1</sup> (1956) contained an overview of the history of the decipherment, a Mycenaean grammar, a lexicon, a concordance of texts, a selection of tablets in transliteration and in English translation, a commentary on each tablet studied, a few photographs of tablets, parallels from contemporary Near Eastern archives, and much more. This was an amazing feat of scholarship completed within just four years after the decipherment.

The texts analysed in *Documents*<sup>1</sup> (1956) are 300 tablets from Knossos, Pylos and Mycenae, arranged by subject and site, and given consecutive document numbers in bold type. For the Knossos tablets the book also provided information about the find spot of each text. For instance, document **20** (on page 164) is Ak824, found at area K lviii in the palace; the site name and classes of tablets are given in the section heading, 'Women and children at Knossos (Ai, Ak)' (p. 162). However, the information for the Pylos texts was confusingly different, because between 1951 and 1955, Bennett had changed the numbering system (see above, § 2.2.4); for the first 621 tablets from Pylos, Ventris and Chadwick put the new number in brackets by the old number published in *PT I*. The entry for Er 312 on page 266 is labelled **152 = Er01 [312]**, meaning that Er01 had just been changed to Er 312. However, the tablets found between 1952 and 1955 and published in *PT II* have only one number, their find number. Concordance C at the back of *Documents*<sup>1</sup> shows the new numbers which correspond to the Pylos tablets in the first edition.

For the second edition of *Documents*<sup>2</sup>, published in 1973, Chadwick kept the first and second parts of *Documents*<sup>1</sup> essentially unchanged both in homage to Ventris, who was killed in an automobile accident just as the first edition was published (cf. *Documents*<sup>2</sup>, xiii), and because he thought that most of the commentary on the tablets was still valid. He completely revised the glossary, bibliography and general index, added 25 more tablets and numerous pages of additional commentary to the texts. However, in order to preserve the integrity of the original publication, all the new commentary was put into the 140 pages of Part III with a number of cross references to the earlier text. The result is that the reader must keep flipping back and forth between the two sections, since one cannot be used without the other.

The word *qa-si-re-u* presents a good example of how problems may arise. It is found under *qa* in the glossary. The entry connects the form with Classical βασιλεύς, transcribes it as *g<sup>asileus</sup>* and gives the meaning as “chief”, used of local headmen, not sovereign’; it then quotes an Homeric example, lists all the other tablets where the word appears and also refers the reader to PY document 258 = Jo 438. However, in the entry for document 258 on pages 358–359, the tablet is referred to as Kn01 [Jo438], and we find the older transliteration *pa<sub>2</sub>-si-re-u*. An editorial dagger by the tablet number directs the reader to page 514, where we are given a correction to the text and our word is quoted as *qa-si-re-u* without any explanation. The entry *basileus* in the general index (page 606) refers the reader to discussions of the status of the *basileus*, in comparison to the *qa-si-re-u*, in both the original and the new commentary, but to find an explanation of the use of *qa* instead of *pa<sub>2</sub>* we must turn to the section about the values of signs (p. 385–6) and read the paragraph about *qa* at p. 386. This example illustrates the need to keep track of changes in readings or editions, and always consult the additional commentary when using *Documents*<sup>2</sup>. But even now some thirty years after the publication of the second edition, and despite its faults, *Documents*<sup>2</sup> is an indispensable resource, not least because in the midst of endless diverging opinions it offers a place to start or come back to. Its views may be wrong or obsolete but are always sensible. Because of its usefulness, a new edition of *Documents* is currently being planned as a collaborative enterprise edited by John Killen and Anna Morpurgo Davies, with separate chapters by different scholars showing the most recent reading and interpretation of the texts.

#### § 2.5.3.3. Interpretation

The organisation of Palmer’s *Interpretation of Mycenaean Greek Texts* (first published in 1963 and revised in 1969) is very similar to *Documents*<sup>1</sup> in that

the work is divided into sections by subject, the Linear B texts are given consecutive document numbers in bold face (but not the same ones as in *Documents*<sup>1</sup>) and there is a concise but comprehensive glossary at the back of the book. *Interpretation* is in many ways a reaction to *Documents*<sup>1</sup>, and strongly reflects the personality of its author, with its constant highlighting of the methodology to be practised in the analysis of the Mycenaean texts. It can be used alone or in conjunction with *Documents*, with the proviso that many of the analyses are now obsolete, and all readings should be checked against the most recent editions of the tablets.

#### § 2.5.3.4. Grammars

Most of the books cited above (*Documents*<sup>2</sup>, *Interpretation*, HILLER – PANAGL 1976, *Introduction* and RUIPÉREZ – MELENA 1990) contain at the very least a sketch of Mycenaean grammar. The much more detailed *Tentative Grammar of Mycenaean Greek* by E. VILBORG (1960) is now partly outdated because of new texts and new interpretations, but is nevertheless still useful, and the same problems arise with the useful sketch of Mycenaean grammar offered by A. Scherer in THUMB – SCHERER, *Handbuch der griechischen Dialekte* II (1959), 314–61. *Études* (1967) presents an overview of grammar and also discusses word formation and a number of individual vocabulary words and phrases, while three recent works by I. Hajnal focus on the case system (HAJNAL 1995), dialect variation within Mycenaean (HAJNAL 1997), and form and syntax of Mycenaean and Homeric words and phrases (HAJNAL 1998). A new comprehensive grammar of Mycenaean by A. BARTONĚK has just appeared (*Handbuch*) and offers often more detailed discussion than any of the previous works.

Most of the grammatical discussion has appeared in separate articles. The four volumes of the *Mémoires de philologie mycénienne* (by Michel LEJEUNE, 1958–97) collect Lejeune's Mycenaean papers which are still essential, providing basic foundations for grammatical and textual interpretation. Other important collections of papers with a prevailing philological and linguistic focus are RISCH (1981) and RUIJGH (1991–96) — and of course many others, including HEUBECK (1984), SZEMERÉNYI (1987), RUIPÉREZ (1989) and HOOKER (1996).

#### § 2.5.3.5. Periodicals, colloquia, and other collective volumes

One periodical is largely dedicated to Mycenaean studies: *Minos*, started in Salamanca in 1951. A second periodical, *Kadmos*, published in Berlin since 1962, has as its focus the epigraphy and linguistics not only of Greece, but also of the Eastern Mediterranean, and contains articles on Mycenaean and Minoan

epigraphy, including the initial publication of newly discovered texts. A third publication, *Studi Micenei ed Egeo-Anatolici (SMEA)*, which started in Rome in 1966 and presents articles on the Aegean Bronze and early Iron Age in general, often contains articles on the Cretan scripts and Linear B. In addition most periodicals that cover the ancient world occasionally publish articles about Linear B.

The Mycenaean Colloquia, held every five years, provide a setting for cutting-edge research and free communication of ideas. But because each Colloquium takes place at a different host institution which is also responsible for publication, the Colloquia do not appear in a single series, but in many forms (see § 2.7.4.1 in the bibliography under International Colloquia on Mycenaean studies).

In addition, the publications of other conferences on Mycenaean civilisation are useful sources for Mycenaean bibliography. Of particular importance are the proceedings of the two large Mycenaean congresses held in Rome or Rome and Naples in 1967 (*Atti I*), and 1991 (*Atti II*), as well as the proceedings of various other meetings, such as *Studio Mycenaean Brno*, *Pylos Comes Alive*, and many of the conferences in the Aegaeum series, published by the Université de Liège and the University of Texas at Austin. The 25<sup>th</sup> anniversary of the decipherment of Linear B was celebrated with a special volume of *SMEA XX* (1979) which covered a number of Linear B subject areas. The conference volume *Linear B: a 1984 Survey* (1985) is the much shorter predecessor of this volume, but some of the articles in it have not been reprinted and/or updated and must still be consulted in the original publication. Also important are a number of volumes in honour of great Mycenologists: *Studies Palmer*, *Studies Chadwick*, *Studies Bennett*, *Studies Bartoněk*, *Studies Killen*, in which many or most of the articles are about Mycenaean studies. At a somewhat less specialised level, G. MADDOLI edited *La civiltà micenea. Guida Storica e critica* (1992) which is an updated version of a 1977 book.

#### § 2.5.4. *Bibliographies*

After the decipherment, intensive work on the Linear B texts led not only to the publication of many books but also to myriads of articles. The generation of scholars working immediately after the decipherment had a somewhat easier task of keeping track of developments in Mycenaean studies, but now about fifty years later, newcomers to the subject may find it difficult to trace back the relevant information to its source. We are fortunate to have two publications which contain bibliographic information from 1953 to the present. *Nestor* covers Aegean studies, Homeric society, Indo-European linguistics, etc.

It began at the University of Wisconsin in Madison in 1957, moved to Indiana University at Bloomington in 1978, and from 1995 has been compiled and published by the Department of Classics at the University of Cincinnati. The entries from 1957 to two years before the present are available in the on-line database at University of Cincinnati at this URL: <[www.classics.uc.edu/nestor](http://www.classics.uc.edu/nestor)>, but this web address may change without notice. This database can be searched by author, title and keyword. The second major resource, *Studies in Mycenaean Inscriptions and Dialect (SMID)*, is a comprehensive bibliography from 1953, geared especially toward Linear B and Aegean scripts, originally published by the Institute of Classical Studies, University of London and compiled by a number of scholars (L.J. Richardson, J. Chadwick, L.R. Palmer, J.T. Killen, A. Morpurgo Davies, G.R. Hart, etc.). The bibliography for 1953-1964, and 1965-1978 is published in two volumes, *SMID I* and *II*, edited by the late Lydia Baumbach, who collected and classified the information published yearly in separate fascicles by the Institute of Classical Studies. After a hiatus of ten years, the *SMID* bibliographies are now being prepared and published by PASP at the University of Texas at Austin. To date, six volumes covering 1979-85, and 1994-2001 have come out. The *SMID* entries are especially useful, because they are cross-indexed by tablets, word, sign, script and even subject. The bibliographical index in *SMID* is invaluable for researching specific subjects, such as religion, economy, weapons, personal names, as well as word forms, or texts. *SMID* is currently also available on-line at the PASP website <[www.utexas.edu/research/pasp](http://www.utexas.edu/research/pasp)>; again, this web address may change without notice. In addition, three recent books, EDER 1994, DARDANO 2000 and FEUER 2004, provide compilations of bibliographies for Mycenaean civilisation, Homeric studies and Bronze Age archaeology, and have detailed sections on Linear B script and tablets. EDER and FEUER present a brief commentary on each entry, and FEUER often links related books or articles on the same subject. One may also see J.T. Hooker's account of Mycenaean work in the 1980's published in *Kratylos* 36 (1991). In addition *Diccionario* gives full bibliography for every word and all the chapters in this book present more specialised bibliographical sources according to subject.

More general Classical bibliographies also include entries on Mycenaean studies. *L'Année Philologique* reports on publications on a yearly basis; books and articles on Linear B can be found under the categories "Grec et dialectes helléniques", and "Epigraphie mycéniennes". *L'Année* also has a searchable database at its website, at <[www.annee-philologique.com/aph/](http://www.annee-philologique.com/aph/)>. *La Bibliographie linguistique — Linguistic Bibliography* (an annual volume) has a subsection on *Mycenaean — Mycénien* in the section on Ancient Greek; it gives references to studies on the language of Mycenaean Greek. From 1967 to ca 1995, the periodical *Die Sprache* (Vienna) published a yearly bibliography

account on the Indo-European languages which included a section on Greek and a sub-section on Mycenaean.

## § 2.6. CONCLUSION

Let us now return briefly to where we began. The students or scholars who want to know whether a certain Greek word is attested in Mycenaean or to find the meaning of a Mycenaean word have enough lexica and word lists to achieve this. The real challenge begins when they want either to check the information they are given or investigate the context of the words in question: the two inquiries are closely related. Since the spelling rules for the syllabic writing system ensure that many sequences of Linear B signs are likely to have more than one interpretation, identifying the context in which the word appears is the key. If we use the example of *pa-te* (cf. § 2.4.1.1), an entry where the word *ma-te* is next to *pa-te* leads us to understand that *pa-te* is the word for 'father' (as in PY An 607); on the other hand if *pa-te* is next to a numeral or is part of a totalling formula, we should read it as the word for 'all' (as in KN B 1055.9). An understanding of the contexts of the tablets is also at the heart of any general conclusion about Mycenaean culture or economy. In an ideal world the Mycenologist would be equally competent in epigraphy, linguistics, history, archaeology, technology, etc. but at the most fundamental level, for every branch of Linear B studies, we all know that our work always begins with the interpretation of words and entries in the texts.

## § 2.7. BIBLIOGRAPHY

The bibliography is arranged in sections corresponding to the parts of the chapter. The entries in each category are listed chronologically by publication date. For clarity's sake the works in this bibliography are also listed in alphabetical order in § 2.8.

† denotes an obsolete work. \* denotes the most current work to date.

### § 2.7.1. *Corpora and editions*

#### § 2.7.1.1. Knossos

†*SM II.*

*ComIK.*

*KT<sup>5</sup>*: new edition in preparation.

BENNETT 1955.  
FIRTH – MELENA 1998-1999.  
MELENA 1999.  
FIRTH 2000-2001.  
FIRTH – MELENA 2000-2001.

### § 2.7.1.2. Pylos

†PT I.  
†PT II.  
BENNETT 1958.  
PTT: new edition in preparation  
PNPWM.

### § 2.7.1.3. Thebes

†GODART – SACCONI 1978.  
TOP.  
ARAVANTINOS – GODART – SACCONI (eds) 2002.  
ARAVANTINOS – DEL FREO – GODART – SACCONI (eds) 2005.

### § 2.7.1.4. Mycenae

†MT II: with commentary.  
†MT III: with commentary.  
†MT IV.  
SACCONI 1974b.

### § 2.7.1.5. Tiryns, Thebes, Mycenae

Tithemy: new edition in preparation.

### § 2.7.1.6. Inscribed vases

†RAISON 1968.  
SACCONI 1974a.

## § 2.7.2. Indices, lexica and epigraphical studies

### § 2.7.2.1. Indices

†LEJEUNE 1964.  
\*IGLB.

### § 2.7.2.2. Lexica and dictionaries

#### § 2.7.2.2.1. Mycenaean lexica

†*MGL*.

*MGV*.

*MGV II*.

\**Diccionario*: new edition in preparation.

#### § 2.7.2.2.2. General Greek lexica

FRISK 1960-1972.

*Diccionario griego-español*.

LIDDELL – SCOTT – JONES 1996.

HAJNAL 1998.

CHANTRAINÉ 1999.

#### § 2.7.2.2.3. Epigraphical studies

*Scribes Knossos*.

*Scribes Pylos*.

### § 2.7.3. General Works

†*PoM IV.2*.

†*Evidence*.

† *Documents*<sup>1</sup>.

*Decipherment*.

*Interpretation*.

*Documents*<sup>2</sup>.

*World*.

HILLER – PANAGL 1976.

*Idéogrammes*.

*Introduction*.

CHADWICK 1987.

\*RUIPÉREZ – MELENA 1990.

MADDOLI (ed.) 1992.

\*DICKINSON 1994.

\*MELENA 2001.

#### § 2.7.3.1. Grammatical, philological and linguistic studies

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THUMB – SCHERER 1959.

VILBORG 1960.

*Études.*

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HEUBECK 1984.  
SZEMERÉNYI 1987.  
RUIPÉREZ 1989.  
RUDIGH 1991-96.  
HAJNAL 1995.  
HOOKER 1996.  
HAJNAL 1997.  
\**Handbuch.*

**§ 2.7.3.2. Periodicals and regular publications***Minos.**Kadmos.**SMEA.***§ 2.7.4. Colloquia and collective volumes****§ 2.7.4.1. International Colloquia on Mycenaean Studies**

- 1<sup>st</sup> International Colloquium on Mycenaean Studies, Gif-sur-Yvette 1956: *Études Mycéniennes.*  
 2<sup>nd</sup> International Colloquium on Mycenaean Studies, Pavia 1958: *Atti Pavia.*  
 3<sup>rd</sup> International Colloquium on Mycenaean Studies, Racine, Wisconsin 1961: *Wing-spread.*  
 4<sup>th</sup> International Colloquium on Mycenaean Studies, Cambridge 1966: *Cambridge Colloquium.*  
 5<sup>th</sup> International Colloquium on Mycenaean Studies, Salamanca 1970: *Acta Mycenaea.*  
 6<sup>th</sup> International Colloquium on Mycenaean Studies, Chaumont sur Neuchâtel 1975: *Colloquium Mycenaicum.*  
 7<sup>th</sup> International Colloquium on Mycenaean Studies, Nuremberg 1981: *Res Mycenaee.*  
 8<sup>th</sup> International Colloquium on Mycenaean Studies, Ohrid 1985: *Tractata.*  
 9<sup>th</sup> International Colloquium on Mycenaean Studies, Athens 1990: *Mykenaika.*  
 10<sup>th</sup> International Colloquium on Mycenaean Studies, Salzburg 1995: *Floreant.*  
 11<sup>th</sup> International Colloquium on Mycenaean Studies, Austin, Texas 2000: in preparation.  
 12<sup>th</sup> International Colloquium on Mycenaean Studies, Rome 2006: in preparation.

**§ 2.7.4.2. Acts of other congresses and meetings***Atti I.**Studia Mycenaea Brno.**Pylos Comes Alive.*

*Linear B.*

*Studia Mycenaea* (1988).

*Atti II.*

#### § 2.7.4.3. Collective volumes and festschriften

*Studies Palmer.*

*SMEA* XX.

*O-o-pe-ro-si.*

*Studies Chadwick.*

*Studies Bennett.*

*Studies Bartonek.*

*Studies Killen.*

#### § 2.7.5. Bibliographic resources

##### § 2.7.5.1. Linear B and Mycenaean studies

*Nestor.*

*SMID* I.

*SMID* II.

*SMID* 1979-.

*HOOKER* 1991.

*EIDER* 1994.

*FEUER* 1996.

*DARDANO* 2000.

\**FEUER* 2004.

##### § 2.7.5.2. Bibliographies with subsections on Mycenaean studies

*L'Année philologique.*

*Indogermanische Chronik* 1967-1990.

*La Bibliographie linguistique.*

##### § 2.7.5.3. Linear B Unicode

Unicode Consortium (ed.) 2006.

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*Wingspread*: see Chapter 10 below.

*World*: see Chapter 10 below.



Fig. 2.1. The four types of clay records

- a Page tablet: PY An 657 (CHADWICK 1987, 41)
- b Label: PY Wa 114 (BENNETT 1955, 15)
- c Sealing: PY Wr 1457 (*Introduction* 204, Pl. 6)
- d Leaf tablet: PY Aa 62 (CHADWICK 1987, 19)

Fig. 2.2a

08 a	11 t̪	38 e	11 i	28 y	61 o	10 u	f
01 da	11 t̪	45 de	11 di	07 m̪	14 do	11 d̪	51 du
57 ja	11 t̪	46 je	11 ji		36 jo	11 j̪	65 ju?
77 ka	11 t̪	44 ke	11 ki	67 y	70 ko	11 k̪	81 ku
80 ma	11 t̪	13 me	11 mi	73 y	15 mo	11 m̪	23 mu
06 na	11 t̪	24 ne	11 ni	30 y	52 no	11 n̪	55 nu
03 pa	11 t̪	72 pe	11 pi	39 y	11 po	11 p̪	50 pu
16 qa	11 t̪	78 qe	11 qi	21 y	32 qo	11 q̪	
60 ra	11 t̪	27 re	11 ri	53 y	02 ro	11 r̪	26 ru
31 sa	11 t̪	09 se	11 si	41 y	12 so	11 s̪	58 su
59 ta	11 t̪	04 te	11 ti	37 y	05 to	11 t̪	69 tu
54 wa	11 t̪	75 we	11 wi	40 y	42 wo	11 w̪	
17 za	11 t̪	74 ze	11 zi		20 zo	11 z̪	

Fig. 2.2a. 'Basic' syllabograms listed according to phonetic value. The phonetic value of \*65 is probably ju, but this reading has not yet been officially adopted; hence the transliteration ju? is adopted here

25 a <sub>2</sub>	43 a <sub>3</sub>	85 au	29 pu <sub>2</sub>
76 ra <sub>2</sub>	33 ra <sub>3</sub>	68 ro <sub>2</sub>	66 ta <sub>2</sub>

Fig. 2.2b. 'Doublet' syllabograms

71 dwc	90 dwo	48 nwa	62 pte	87 twe	91 two
-----------	-----------	-----------	-----------	-----------	-----------

Fig. 2.2c. 'Complex' syllabograms

*18	*19	*22	*34	*47
*49	*56	*63	*64	*79
*82	*83	*86	*89	

Fig. 2.2d. Syllabograms with unknown phonetic values

Fig. 2.3a

Humans	100 man VIR	102 woman MULIER		
Animals	104 deer CERVUS	105 horse EQUUS	105 <sup>f</sup> female horse EQUUS <sup>f</sup>	105 <sup>m</sup> male horse EQUUS <sup>m</sup>
	106 sheep OVIS	106 <sup>f</sup> female sheep OVIS <sup>f</sup>	106 <sup>m</sup> male sheep OVIS <sup>m</sup>	
	107 goat CAPer	107 <sup>f</sup> female goat CAPra <sup>f</sup>	107 <sup>m</sup> male goat CAPer <sup>m</sup>	
	108 pig SUS	108 <sup>f</sup> female pig SUS <sup>f</sup>	108 <sup>m</sup> male pig SUS <sup>m</sup>	
	109 ox, cow BOS	109 <sup>f</sup> female cow BOS <sup>f</sup>	109 <sup>m</sup> male cow BOS <sup>m</sup>	
Vegetable products	120 wheat? GRANum	121 barley? HORdeum	122 olives OLIVA	123 condiment AROMa
	125 cyperus CYPeros	129 grain/pulse/ flour? FAR	130 olive oil OLEum	131 wine VINum
	144 saffron CROCus	174 young tree 	176 fruit tree ARBOR	30 figs NI
Metal	140 bronze AES	141 gold AURum	167 ingot 	
Fiber and cloth	31 flax SA	145 wool LANA	146 garment? 	159 cloth TELA
Animal products	151 agrimi horn CORNu	152 oxhide 	153 sheepskin 	154 hide? 
Vases and containers	155 <sup>VAS</sup>	200 <sup>VAS</sup>	201 <sup>VAS</sup>	202 <sup>VAS</sup>
For interpretation of these vase signs, see <i>Documents</i> <sup>2</sup> , 323- 332, and <i>Idéogrammes</i> .	203 <sup>VAS</sup>	204 <sup>VAS</sup>	205 <sup>VAS</sup>	206 <sup>VAS</sup>
	207 <sup>VAS</sup>	208 <sup>VAS</sup>	209 <sup>VAS</sup>	210 <sup>VAS</sup>
	211 <sup>VAS</sup>	212 <sup>VAS</sup>	213 <sup>VAS</sup>	215 <sup>VAS</sup>

	226 <sup>VAS</sup> 	227 <sup>VAS</sup> 	229 <sup>VAS</sup> 	225 bathtub ALVeus
Armor and weapons	162 corslet TUNica	163 suit of armor ARMA	191 helmet GALea	230 spear HASTa
	231 arrow SAGitta	232 axe? 	233 dagger? PUGio	254 javelin JACULum
Chariots	240 chariot BIGae	241 chariot body CURRus	242 chariot cab CAPSuS	243 wheel ROTA

Fig. 2.3a. Identified ideograms according to category (not all the identified ideograms have been included). The Latin word representing the ideogram is given in full, with small capitals indicating the standard abbreviation

127 fruit? KAPO	128 safflower KANAKO	133 ointment AREPA	135 honey MERI	156 cheese TURO <sub>2</sub>	247 leather pieces DIPTE
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Fig. 2.3b. Monograms

Weight	118 L	117 M	116 N	115 P	114 Q
Dry measure	112 T	111 V	110 Z		
Liquid measure	113 S	111 V	110 Z		

Fig. 2.4a. Signs for measure

10000 	1000 	100 	10 -	1 
Example: 12 469 =				

Fig. 2.4b. Numerals

Fig. 2.5

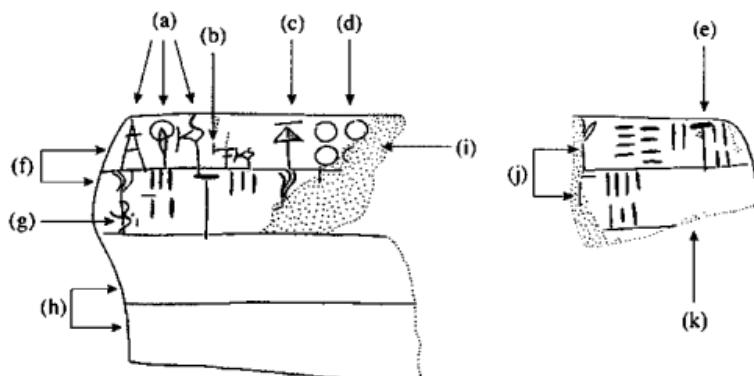
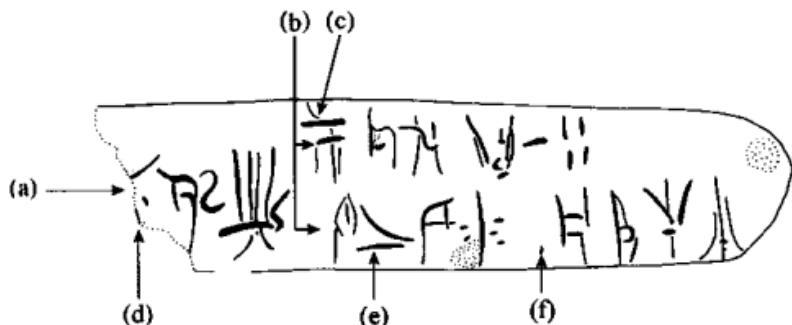


Fig. 2.5a. KN F (1) 157 (after CoMIK I, 74)

- (a) syllabograms (*e-ko-so*: place name)
- (b) word divider, followed by smaller syllabograms (*to-so*: total)
- (c) ideogram (GRA)
- (d) numeral (hundreds)
- (e) subunit (T in dry measure)
- (f) first two lines in tablet with horizontal ruling (.1, .2 etc.)
- (g) ideogram with ligature (CYP+KU)
- (h) empty ruled lines (*vacat*)
- (i) tablet broken across numeral; one numeral partially damaged; in the transliteration, 400[ indicates that more numerals could have followed
- (j) tablet broken across ideograms in lines .1-2; in the transliteration, subscript dots in JOLIV and T indicate that signs may be read in several ways
- (k) tablet broken or damaged below this point (*infra mutila*)

F(1)	157 + fr.	[+]	7356	C
.1	e-ko-so	, /	to-so    GRA 400[	JOLIV 82 T 4
.2	CYP+KU	5	T 3    CYP [+?] 1[	JT 7
.3		v a c a t		[ <i>infra mutila</i>
.4		v a c a t		[
		.2	Perhaps CYP+O.	

Fig. 2.5b. KN F (1) 157: transliteration (after CoMIK I, 74).



**Fig. 2.6a.** KN Od 666 (after CoMIK I, 250) — this tablet is inscribed on its recto, verso and upper edge; only the recto is shown here

- (a) the recto begins with a single unruled line, where a possible man's name (*l<sup>k</sup>e-me-no*) is written in large characters (majuscule). In the transliteration, this line is conventionally numbered as .b.
- (b) the initial single line becomes two unruled lines. The upper is conventionally numbered as .a and the lower is .b, although line .b was written first and should be read before line .a. These lines are written in smaller characters (minuscule); in the transliteration, this is shown by /. Line .b bears the word *au-u-te* (perhaps an adverb) and the verb *a-pe-i-si* (meaning that *l<sup>k</sup>e-me-no* 'is going away'). Line .a records how much (*to-so*) of wool (the ideogram **LANA**) is owed (abbreviation *o*).
- (c) deliberately erased sign (possibly *o*) under *to* in line .a; in the transliteration, this is shown by double brackets ([*o*]).
- (d) damaged sign reconstructed as *k<sup>e</sup>*, but could be possibly *j<sup>e</sup>* or *sq*; in the transliteration, this is shown by bracket and subscript dots
- (e) sign \*85 used here as a syllabogram *au*, but it may appear elsewhere as the ideogram **SUS** (pig)
- (f) word divider after *au-u-te*

Od 666

.a	]	to-so	<i>o</i>	LANA	14
.b	<i>l<sup>k</sup>e-me-no</i>	/	<i>au-u-te</i>	,	<i>a-pe-i-si</i>
			.a	<i>to-</i> over erasure, perhaps [ <i>o</i> ].	

**Fig. 2.6b.** KN Od 666: transliteration of recto (after CoMIK I, 250).

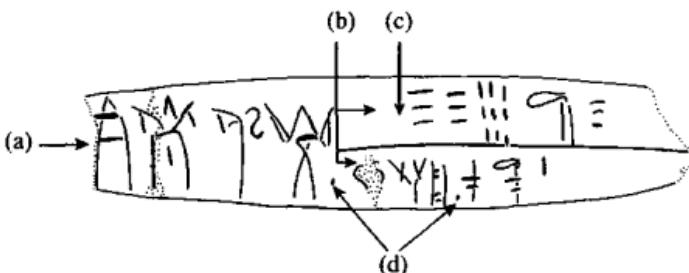


Fig. 2.7a. KN Dd 659 (after CoMIK I, 249)

- (a) the tablet begins with a single unruled line with a man's name (*je-ke-me-de*) written in larger characters. In the transliteration, this is conventionally numbered as line .B.
- (b) halfway through, the tablet becomes partially ruled, with the two lines conventionally numbered as .A (upper line) and .B (lower line). These lines are written in smaller characters (shown by / in the transliteration). Line .B is read before .A, and lists a place name (*tu-ni-ja*) and an entry of sheep (*pa ovis<sup>m</sup>* 1); line .A lists two entries of sheep.
- (c) the upper ruled line .A has two sheep entries but the ideogram *ovis* is written only in the second entry (as *ovis<sup>f</sup>*, female sheep). The other tablets by scribe 117 show that here he has left out *ovis<sup>m</sup>* (male sheep). Hence the transliteration supplies *ovis<sup>m</sup>* between angle brackets <>.
- (d) word dividers (.)

Dd 659 + 1252 + 7278 + fr.

.A	]	< <i>ovis<sup>m</sup></i> >	69	<i>ovis<sup>f</sup></i>	30	[	
.B	<i>je-ke-me-de</i>	,	/	<i>tu-ni-ja</i>	,	<i>pa ovis<sup>m</sup></i>	1

Fig. 2.7b. KN Dd 659: transliteration (after CoMIK I, 249)

## CHAPTER 3

# CHRONOLOGY OF THE LINEAR B TEXTS\*

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**Table 3.1: Aegean Relative and Absolute Chronology, based on WARREN – HANKEY 1989, 169.**

	Crete	Mainland
Late Minoan/Helladic II	1425-1390	1440-1390
Late Minoan/Helladic IIIA	1390-1340/1330	1390-1340/1330
Late Minoan/Helladic IIIB	1340/1330- <i>ca</i> 1190	1340/1330-1180
Late Minoan/Helladic IIIC	<i>ca</i> 1190- <i>ca</i> 1070	1180-1065

### § 3.1. INTRODUCTION

Dating the tablets that carry the Linear B script is of course an entirely different matter from dating the language and the evolution of the script, two activities which belong in the domains of linguistics and palaeography respectively. Since our tablets only occasionally contain chronological references such as ‘in the month of....’ or ‘last year’ their content is practically useless when it comes to placing them in a general time frame. Here only archaeology provides a clue, not only because we can investigate the date of the buildings where the tablets were found, but also because some of the logograms and descriptions featuring in the tablets can be compared with objects found in excavations and dated either stratigraphically or stylistically (*Idéogrammes*; DRIESSEN 1990, 131). The following review presents some recent observations on the chronology of Linear B tablets. But, although there is general agreement that the 13<sup>th</sup> century BC represents the apogee of the use of Linear B, there is serious discussion about the chronology of the individual Linear B tablet deposits, especially those found at Knossos, and about the date of the creation

\* The editors received the first version of this chapter in November, 2001.

of the script. Despite long-time belief that all Linear B tablets belong to the same, limited, chronological time span, recent research has made it clear that in most Mainland sites (Pylos, Mycenae, Thebes), Linear B tablets were used over a long period, which belonged to more than one destruction phase of the relevant palaces. Consequently it is very likely that a similar thing happened at Knossos.

### § 3.2. KNOSSOS

The chronology of the *ca* 3500 Knossos Linear B tablets and fragments remains one of the most controversial points in Mycenology and to understand this, we have to go back to the discovery of the very first tablets by Arthur Evans, in the Spring of the year 1900 (DRIESSEN 1990). Tablets, in various states of preservation, were excavated in many rooms of the palace and at different levels above the ground floor (DRIESSEN 1997). After the first campaign, Evans placed the destruction of the palace of Knossos and its contents in the Late Minoan II phase (*ca* 1420-1400 BC), a conclusion he reached because of the discovery of a fair number of so-called ‘Palace Style’ sherds in the destruction layer (EVANS 1900). He realised that some parts of the Knossos palace remained in use afterwards, during Late Minoan IIIB (13<sup>th</sup> century BC) but this seemed to have been largely for religious reasons. According to Evans the occupants settled only in certain areas of the ruined palace which they patched up and were labelled ‘squatters’. Evans’s view remained unchallenged till the 1950s, despite the discovery of Linear B tablets in the Late Helladic III ruins of the palace at Pylos in 1939. The decipherment of Linear B by Michael Ventris in 1952 and its identification as Greek, in part based on these newly excavated tablets of Pylos, made several archaeologists question Evans’ chronology. Carl Blegen, excavator of Pylos, as early as 1958 suggested that, since the tablets of Knossos and Pylos were identical in many aspects, they were probably contemporary and dated them to Late Helladic IIIB, a date that was later modified to early Late Helladic IIIC, around 1190 BC (BLEGEN 1958). This belief was taken over by Leonard Palmer, professor of comparative philology at Oxford, who for the next three decades vigorously defended a late date, around 1200 BC, not only for the destruction of the Knossos palace and its tablets, but also for the construction of the last palace at this site (PALMER 1969). Evans’ point of view was mainly defended in the sixties by J. Boardman, seconded by Mervyn Popham, an archaeologist and ceramic specialist who went through the sherds of Evans’s excavations, stored at Knossos (PALMER – BOARDMAN 1963). Boardman and Popham observed that the pottery from the main destruction layer in the palace

at Knossos indeed included later elements and modified Evans's date for the tablets to early Late Minoan IIIA2, around 1375 BC (POPHAM 1970). At the same time, J.-P. Olivier examined the palaeography of the Knossos tablets, noting that some tablets, inscribed by one and the same scribe, were found in different areas of the palace (*Scribes Cnossos*). Since tablets need a fire catastrophe to be preserved, this implied a single destruction horizon for the entire building and what was called 'a unity of archives' (already HOOKER 1964). Despite Palmer's objections, the early LM IIIA2 date was accepted by most Aegean scholars till the end of the seventies (POPHAM 1997). In 1977, however, Erik Hallager restudied the evidence for a Late Minoan IIIB occupation and fire destruction of the palace at Knossos and again challenged the early date, proposing a date around 1300 BC (early LM IIIB) (HALLAGER 1977). At about the same time, scientific analyses of stirrup jars inscribed with Linear B (cf. Chapter 8 below), mostly found in Late Helladic IIIB contexts on Mainland Greece, showed that many of these were actually produced on Crete, especially in the western regions of the island (CATLING *et alii* 1980). This implied that Linear B literacy on Crete continued during Late Minoan IIIB, even if it was clear that some of the vase inscriptions were applied by illiterate painters (BENNETT 1986; PALAIMA 1984). In 1989 a Linear B tablet dealing with chariot wheels, Sq 1, was found in Chania, ancient Kydonia in West-Crete, followed by three more tablets in 1990; all of them belonged to a clear destruction layer dated to Late Minoan IIIB1, around 1300 BC (HALLAGER – VLASAKIS – HALLAGER 1990; 1992). Palaeographic examination has shown a great similarity between at least one of these Chania tablets and the tablets by Knossos hand 115 (OLIVIER 1993). Although there do not seem to be sufficient reasons to assume that the same scribe was responsible for the records found at both sites (PALAIMA 1995; OLIVIER 1996), it should follow from this similarity that at least some of the Knossos tablets were *relatively close in date* to those found at Chania (DRIESSEN 2000). For those who accepted the 'unity of archives' hypothesis, this implied that, if one Knossos tablet was firmly dated, all Linear B records from Knossos necessarily belonged to the same period. However this hypothesis was challenged by the present author, who first showed that one of the major tablet deposits in the Knossos palace, that of the Room of the Chariot Tablets in the West Wing, was entirely isolated from the remaining tablets (DRIESSEN 1990), and next stressed the many differences within the other record collections at Knossos (DRIESSEN 1997; 1999).

The Room of the Chariot Tablets is indeed an awkward Linear B deposit (DRIESSEN 2000). Archaeologically there are some indications that the tablets were stratified before those found in the surrounding areas. Moreover, the clay sealings found together with the tablets are of a type that may have sealed

parchment, a practice quite common in earlier Minoan times, but otherwise absent from Mycenaean Knossos (DRIESSEN 1990). The palaeography of the Room of the Chariot Tablets is also quite different from that observed elsewhere at Knossos and certain signs recall Minoan Linear A examples. Some words too possibly betray Minoan influences. None of the scribes responsible for records found in the deposit worked elsewhere in the palace and none of the people mentioned can securely be linked to homonyms elsewhere in the compound. Some texts are so awkward that Chadwick once suggested that they were scribal exercises (CHADWICK 1967) but all anomalies can be explained if one accepts that the Room of the Chariot Tablets represented the remains of an earlier archive stratified on the occasion of one of the fire destructions that damaged the Knossos palace during the Late Bronze Age; as a working hypothesis, an early LM IIIA1 date was suggested (DRIESSEN 1990). A similar, interdisciplinary approach also helped to illustrate the relative isolation of the large tablet deposit found in the Northern Entrance Passage of the palace (DRIESSEN 1997; 1999). Indeed, the palaeography and epigraphical practices of the tablets found in the latter area also show a fair number of idiosyncracies but some features link the documents to texts found elsewhere in the compound (DRIESSEN 1999). Moreover, Evans had already noted that some tablets had ended up inside some walls and floors (*Scribes Cnossos*, 118-119), which clearly implies that the period at which they were recorded preceded the construction of some late elements in the palace. Together with the observation made above that some Knossos tablets are palaeographically close to the LM IIIB1 tablets from Chania, this opens the possibility that Knossos preserves tablets of different periods, from LM IIIA1 to LM IIIB. This remains an hypothesis of course, but currently it seems wiser to accept such a diachrony, especially in view of the recent developments in the chronology of Mainland tablets, as will be shown below. Incidentally, no Knossos tablet or inscribed sealing can as yet be securely dated but a complete vase with Linear B inscription comes from a LM IIIB level in the Unexplored Mansion, west of the palace (POPHAM 1969). A sherd with a possible Linear B inscription was collected by Evans from a general LM III level in the Court of the Distaffs in the East Wing of the palace and another was recently identified amongst the sherds from the South House (DRIESSEN in press).

### § 3.3. CHANIA AND THE REST OF CRETE

As mentioned above, some of the tablet fragments found at Chania come from a well-dated Late Minoan IIIB1 context (HALLAGER – VLASAKIS – HALLAGER 1992). One or two painted Linear B inscriptions (KH Z 27-28), however, were

apparently found in a Late Minoan IIIA2 layer (second half of the 14<sup>th</sup> century BC), whereas others are either LM IIIB or cannot be dated (HALLAGER 1983; DRIESSEN 1996). Only two vase inscriptions come from the floor of a house (Z 19-22). A complete inscribed Linear B stirrup jar was also found in chamber tomb 146 of the cemetery of Armenoi, likewise dated to LM IIIB and probably rather early within this period (GODART – TZEDAKIS 1989; TZEDAKIS 1996, 1124); this is also the case for half a dozen Linear B inscribed stirrup jars found in Quartier Nu at Malia, mostly on the floors of a large domestic building (FARNOUX – DRIESSEN 1991), and a Linear B graffito on a stirrup jar found at Amnisos (SCHÄFER 1992). A fragmentary inscription on a sherd from the Mamelouko cave in West Crete cannot be dated.

### § 3.4. PYLOS

The palace of Nestor yielded almost 1200 tablets and fragments as well as about 147 sealings but, apart from a single vase graffiti, no painted Linear B stirrup jars (DRIESSEN 1996). There has been some discussion on the date of the destruction layer of the palace, a discussion which is largely concerned with the stylistic attributions given to the numerous pots found in its rooms (POPHAM 1991). Opinions have wavered from early Late Helladic IIIB to Late Helladic IIIC but a recent reconsideration of this material places the final destruction and tablets firmly in the transitional Late Helladic IIIB2/Late Helladic IIIC Early phase, at the beginning of the 12<sup>th</sup> century BC (MOUNTJOY 1997; SHELMERDINE 2001). There is, however, a serious possibility that a few tablets (including Ua 994, Ae 995, Xa 1419-1420 and Xn 1449) come from an earlier destruction, dated to Late Helladic IIIA, an impression also supported by their palaeography which betrays Cretan influences (PALAIMA 1982); such an impression fits some of the earlier architectural remains at the site (Minoan type ashlar with mason's marks: DRIESSEN 2000, 155, fig. 3.34). In recent years, three more tablet fragments and a nodule were recovered from the site (SHELMERDINE 2001).

### § 3.5. MYCENAE

The *ca* 70 tablets and inscribed sealings from Mycenae come from different locations, both within and outside the citadel (DRIESSEN 1996; SHELMERDINE 2001). Within the citadel there is a fragment found in a sounding in the pithos basement of the House of the Columns in 1967, probably a palace dependency, whereas the Citadel House yielded seven tablets and a single inscribed sealing

(Wt 700). There is some discussion on its destruction date but a transitional LH IIIB/C is very likely (IAKOVIDIS 1996; MOUNTJOY 1997). From outside the citadel there is a collection of tablets and sealings from a block of houses standing on a terrace on the hillside to the southwest of the ‘Tomb of Clytaimnestra’ (*‘Ivory Houses’*). The House of the Shields only yielded one tablet fragment but the House of the Oil Merchant had 38. The House of the Sphinxes contained 7 inscribed sealings and 9 tablets, the West House 11 tablets. Inscribed stirrup jars come from most of these houses (Oil Merchant, West, Columns, Citadel). The destruction of all these houses is dated to Late Helladic IIIB1. Another Linear B fragment, X 1, was found near the terrace walls west of the Lion Tomb, in or near the so-called Petsas’s House, and it is from here that recently another Linear B tablet, apparently in a clear Late Helladic IIIA2 layer, was found in 2000 (*Ergon for 2000*). The latter discovery is quite important because it proves the existence of Linear B at Mycenae at three different moments, in LH IIIA2, IIIB1 and IIIB2.

### § 3.6. THEBES

Until the discovery of the new tablet fragments, Linear B documents were found in four different places, probably all royal dependencies. One of the most important deposits comprising more than 65 inscribed stirrup-jars, was discovered in 1921 in the so-called Kadmeion in a context which is now assumed to be Late Helladic IIIB1 (CATLING *et alii* 1980). About 27 tablets were found in a building close-by which, because of its finds, was dubbed the Armoury. Its destruction was originally placed in the Late Helladic IIIA2 period, which has recently been modified into Late Helladic IIIB1 (ARAVANTINOS 1999). About 150 m to the west of this, a deposit of 17 tablets was found and the destruction deposit in this so-called Archive room contained pottery dated to the transitional LH IIIB/IIIC Early phase (ARAVANTINOS 1999; MOUNTJOY 1997). Again about 70 m to the southeast of the Arsenal, near the Homoloïdes Gate, a deposit of 56 noduli, inscribed in Linear B, was found, apparently in a Late Helladic IIIB1 context (PITEROS – OLIVIER – MELENA 1990). From this area and elsewhere in the town there come more stirrup jar fragments with Linear B.

Some 250 newly excavated tablets and fragments from Pelopidou Street also come from the area of the Armoury and, although the area was quite disturbed by later occupation, sufficient destruction contexts were found to safely attribute the tablets to the second half of the 13<sup>th</sup> century BC, i.e. to the end of the LH IIIB2 phase (ARAVANTINOS 1999). Recently, some sealings and a tablet

were also found in the area of the Treasury and these too are said to be earlier, Late Helladic IIIB1 (ARAVANTINOS 1999).

### § 3.7. TIRYNS

All 25 tablets and fragments as well as vase inscriptions were found either in the *Unterburg* or outside the citadel altogether (GODART 1988; DRIESSEN 1996). From the *Unterburg* there is a surface find from the south-east part and another fragment was found in a Postmycenaean context. A pit in House VI of the *Unterburg* contained 18 tablet fragments and this has been attributed to the Late Helladic IIIB2 period (GODART – KILLENN – OLIVIER 1983). Outside the citadel, in the west town, a stray tablet dealing with armour was found and three tablets come from House O to the south-east, apparently in a well-stratified LH IIIB layer. The find contexts of many inscribed stirrup jar fragments is unknown and several vases were actually lost after the excavation but some seem to derive from the palace building proper (Area 52, West Staircase). In addition, a complete stirrup jar (Z 9) comes from Tomb XV (DRIESSEN 1986; SHELMERDINE 2001).

### § 3.8. MIDEA AND THE REST OF THE MAINLAND

Three inscribed nodules have so far been found within the citadel at Midea, all apparently in Late Helladic IIIB2 layers. One nodule comes from the area of the West Gate, the two others from close to the *megaron* on one of the lower terraces. Recently, a coarse ware stirrup jar (MI Z 4) decorated with octopus carrying a Linear B inscription from the citadel has also been dated to the transitional LH IIIB/LH IIIC early phase (DEMAKOPOULOU 1995; SHELMERDINE 2001). Linear B inscribed vases have also been found at Orchomenos, Kreusis, Gla and Eleusis on the Greek Mainland (SACCONI 1974).

### § 3.9. GENERAL CONSIDERATIONS

There can be no doubt that the Late Helladic IIIB period, the 13<sup>th</sup> century BC, represents the apogee of Linear B use, both for the tablets and for the vases. The discovery of some definitely earlier material, at Mycenae, Pylos and Chania, shows that the script was certainly in use during the second half of the 14<sup>th</sup> century, both on Crete and the Mainland and most of the Knossos tablets may probably be attributed to this period, i.e. to Late Helladic/Minoan IIIA. The earlier

features — of an administrative, palaeographical and linguistic nature — displayed by the records found in the Room of the Chariot Tablets at Knossos, make it very possible, however, that this latter deposit represents an even earlier Linear B collection, perhaps to be dated to the very beginning of the 14<sup>th</sup> century BC. Our next main phase is the end of Late Helladic/Minoan IIIB1, *ca* 1250 BC, when several Mainland and Cretan centres, including perhaps the palace of Knossos, suffered an earthquake destruction, accompanied by fire. All Mainland centres were again struck by a fire destruction around the beginning of the 12<sup>th</sup> century and this catastrophe signalled the demise of the palace system. It then seems reasonable to assume that Linear B was in use for at least 200 years. The question is: when and where was the script created? Here we can only speculate: on palaeographical grounds, different scenarios have been suggested with different dates (LH/LM I/II) and different places of creation (Mycenae, Knossos, Cyclades) (GODART 1979; OLIVIER 1979; PALAIMA 1982a; 1988; DRIESSEN 2000). The pebble incised with Linear B signs found in a late Middle Helladic layer at Kafkania near Olympia in the West Peloponnese suggests, to some, that the creation of the script happened as early as in the Shaft Grave Period (16<sup>th</sup> century BC), on the Mycenaean Mainland (ARAPOGIANNI – RAMBACH – GODART 1999). This pebble remains something of an enigma since neither its date, nor its context, nor its nature can be easily fitted into a general historical framework; hence I remain sceptical and await further discoveries.

**Table 3.2: Suggested relative chronology for Linear B documents**

	LM IIIA1	LM IIIA-2early	LM IIIA2-late	LH IIIB1-late	LH IIIB/C transition
KN	RCT?	NEP?	rest?	?	
KH			2 ISJ's	Tablets & ISJ	
Crete				MA ISJ; ARM ISJ	
PY			fragments?		archives
MI					sealings, ISJ
TI					House VI
TH				Kadmeion, Armoury, Treasury	'Archives', Pelopidou
MY			Petsas	houses	citadel

(ARM: Armenoi; ISJ: inscribed stirrup jars; KH: Chania; KN: Knossos; MA: Malia; MI: Midea; MY: Mycenae; NEP: Northern Entrance Passage; PY: Pylos; RCT: Room of the Chariot Tablets; TH: Thebes; TI: Tiryns).

### § 3.10. NOTE OF THE EDITORS

§ 3.5: a new tablet, MY Ui 2, was recently discovered in the ‘Petsas house’ at Mycenae. This find is important because its stratigraphical context is plainly LH IIIA 2, i.e. in the middle of the XIV<sup>th</sup> century. This document becomes then the oldest securely dated and undoubted Linear B text known on the Greek continent. See SHELTON, K.S., *Mino*s 37-38 (2002-2003), 387-396.

§ 3.6: ca 15 new tablets from Thebes are now published and discussed by ARAVANTINOS, V.L. – GODART, L. – SACCONI, A., in *Neuen Linear B-Texte*, 1-9; yet another new tablet from Thebes (Uq 434) was presented by the same authors at the 2006 Myceno-logical Colloquium in Rome.

§ 3.9: a strong case against the authenticity of the Kafkania pebble was made by PALAIMA, T.G., *Mino*s 37-38 (2002-2003), 373-385.

YD  
AMD

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## CHAPTER 4

# MYCENALEAN HISTORY\*

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### § 4.1. WHAT KIND OF 'HISTORY'?

Mycenaean civilisation flourished in Greece and the Aegean during the latter half of the second millennium BC, which corresponds to the final period of the Bronze Age.<sup>1</sup> It came into being at a time when the internal evolution of the Helladic societies had created a solid social stratification that had made the new elites receptive to the adoption of a lifestyle and a centralised power structure analogous to those present in Minoan Crete and the Near Eastern societies. From a historical perspective the Mycenaean Age corresponds essentially to the period of the formation, consolidation, and finally break-up of the Greek *palatial societies*. The existence of the palaces<sup>2</sup> as the principal political and economic centre within a given territory constitutes the most significant historical feature which, despite peculiarities and differences of scale, is the common factor that the Mycenaean kingdoms shared with those of the entire territory extending from Crete to the Mesopotamian Bronze Age countries. Of course *koinè* here does not mean uniformity. Undoubtedly pre-palatial aggregations continued to exist in Greece alongside the palaces, just as there were differences

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<sup>1</sup> For a first introduction see VERMEULE 1964; HOOKER 1976; TREUIL – DARCQUE – POURSAT – TOUCHAIS 1989; DICKINSON 1994; CULTRARO 2006. A brief outline of the Late Bronze Age Aegean chronology will be found at the end of this paragraph. All the dates mentioned in this chapter are BC.

<sup>2</sup> The term 'palace' (together with the adjective 'palatial') is used, depending on the context, in the double meaning found in recent studies on Bronze Age civilisations. On the one hand it simply indicates a large building, of particularly complex architecture (Chapter 5.2 below), which was the seat of the *wanax* (the 'lord' or 'sovereign'). On the other hand it refers, by extension, to the political and socio-economic system peculiar to Minoan Crete and Mycenaean Greece (and to the systems of the coeval Near Eastern societies). The fundamental trait of these is the existence in each kingdom of a central organism, housed in a so-called 'palatial' residence, that had military strength, administrative capacity, and above all a bureaucracy capable of using writing for the control of a given territory.

between one palatial centre and another, and overall the Mycenaean palatial societies themselves remained in various ways marginal to the great empires of the Near East.

We should clarify from the beginning that it is not possible to write a 'history' of the Mycenaean world in the traditional sense. Perhaps the Mycenaean archives included records, written on perishable materials, of royal chronicles, treaties of alliance, or the correspondence between kings and foreign states, that is to say the type of document that has made it possible to write the history, albeit in general terms, of Egypt and the Near Eastern states. All this material, if we concede that it ever existed, has been irremediably lost.<sup>3</sup> The Mycenaean kings, unlike those of the Near East, did not leave records of their enterprises carved in rock. Hence the Greek Bronze Age texts are lacking in what would enable us to trace the *events* of the period, or delineate the roles of individuals. Admittedly we have legends that have been incorporated in Hellenic heroic saga, but their material, in spite of its great interest, can only be interpreted with caution and with the appropriate techniques.

Despite their strictly limited character of inventories and accounts, the Linear B tablets, which date mostly from the last few months of the life of the palaces, offer invaluable material for an essentially synchronic analysis focussing on economic factors and the contemporary social and political structure. For the definition of the diachronic aspects some progress may still come from a greater knowledge of the relative chronology of the various deposits of the tablets. However, in the case of Bronze Age Greece, the contribution of archaeology remains essential in order to retrieve, at least in part, the dynamics of the change and just as in historiography in some instances it has now shifted the emphasis from the historical events to the *processes* that determined the change in material culture and social structure (SNODGRASS 1985. For a recent pleading in favour of 'short duration' see however MANNING 1998). A last issue of major methodological significance is represented by the Late Bronze Age Aegean chronology, a highly intriguing question not yet really solved, which arises from the

<sup>3</sup> There are, it is true, traces of the use of writing on perishable materials like papyrus and parchment by the Mycenaean bureaucracy (*Documents*<sup>2</sup>, 109–110; *World*, 27–28; HEUBECK 1979, 46–47; DUHOIX 1985, 36), and the Hittite texts show that there were epistolary exchanges (which also presuppose the use of an interpreter) between the Mycenaean and Hittite kings (below, § 4.5). However we are unable to establish to what extent, or for what type of document, writing was actually employed, beyond the ephemeral annotations that have come down to us. There are good reasons to believe that Mycenaean literacy was somewhat limited, probably more so than the preserved Minoan literacy (*Documents*<sup>2</sup>, 406; DUHOIX 1985, 37–38; PALAIMA 1987; 1988, 316; BENNET 2001; JASINK 2005). However this is not sufficient to exclude the possibility that the scribes wrote and archived documents which differed in content from the purely accounting nature of the tablets.

necessary but sometimes uneasy cooperation between traditional, archaeological and text-based historical research, and modern, scientific dating methods.

The *relative* chronology of the Aegean in the Late Bronze Age is well established and is based on the seriation of the ceramic sequences. The *absolute* chronology, however, is still under discussion. It is essentially based on the synchronisms made possible by the discovery of objects in Aegean sites of Egyptian or Near-Eastern origin and vice versa. However, the Egyptian and Near-Eastern chronologies are themselves being revised, and there is disagreement on the details of the actual contribution made by the new dating techniques: radiocarbon, dendrochronology, thermoluminescence, ice core analysis etc. The main uncertainty is above all for the initial phases of the L(ate) M(inoan) and L(ate) H(elladic) I-II, while a certain general consensus (if still relative) appears to exist for LM/LH III.

The traditional chronology, obtained through careful confrontation of the Aegean archaeological evidence with Egyptian cross references, is described in WARREN – HANKEY 1989, 119–174 (with Table 3.1 at page 169). Its dates for the Late Helladic period are: LH I 1600–1510/00; LH II A 1510/00–1440; LH II B 1440–1390; LH III A1 1390–1370/60; LH III A2 1370/60–1340/30; LH III B 1340/30–1185/80; LH III C 1185/80–1065 (see also WARREN 1996, 1998; 2000).

However, this reconstruction was seriously challenged in recent years first by a ‘high’, and subsequently by a ‘revised high’ chronology, based on the new mid-seventeenth century (dendro)radiocarbon date (*ca* 1628) of the eruption of the volcano of Thera, today’s Santorini, a catastrophic event that ceramic evidence assigns to a mature or even final phase of LM I A (HOOD 1970). The resulting approximate absolute dates from LM/LH I to LM/LH III A1 are reported in MANNING 1999, 340: LM I A/LH I *ca* 1675–1600/1580; LM I B/LH II A 1600/1580–1500/1490; LM II/LH II B 1500/1490–1440/25; LM/LH III A1 1440/25–1390/70 (see also MANNING – WENINGER 1992; MANNING 1995, 200–229 and 2002).

The gap of almost a century which separates the beginning of LM/LH I in the two rival theories would require a thorough re-examination of the scientific as well as of the archaeological and historical record, a titanic task impossible to be dealt with in a few words. It should be stressed, however, that admittedly ‘definitive proof’ for the Thera date of 1628 or mid-seventeenth century ‘is still lacking’, so that only ‘a strong circumstantial case exists from several data sources’ (MANNING 1999, 335). It is also true that the ‘revised high’ chronology betrays some difficulty when attempting to synchronise the high dates of LM I A/LH I with the inception of the 18<sup>th</sup> Egyptian Dynasty (*pace* MANNING 1999, 393–402). On the other hand, as recently stated by Stadler (in

KUTSCHERA -- STADLER 2000, 71),  $^{14}\text{C}$  dating -- because of the shape of the calibration curve at that time -- is not capable to distinguish between the high and low chronology for the Thera event'. Moreover, the present main proponent of the high chronology confirms that radiocarbon techniques alone, while excluding an eruption date lower than *ca* 1530, are not able to categorically rule out a mid-sixteenth century calibrated Thera date. This lower date had already been advocated by AITKEN 1988, and its likelihood is now increased by 'a set of new, revised, high precision radiocarbon calibration curves' (MANNING 1999, 33, 42); whereas, as far as dendrochronology is concerned, it seems advisable to wait for the final results of Anatolian tree-ring analysis, now close to completion (last notice in WIENER 2003, 245).

This state of things allows some room for a cautious and conciliatory 'middle' chronology, the most appealing to the historian in the present circumstances, starting from a conjectural Thera date of *ca* 1550:

LM I A / LH I	1625/00	1530/20
LM I B / LH II A	1530/20	1450/40
LM II / LH II B	1450/40	1420/10
LM/LH III A1	1420/10	1390/70
LM/LH III A2	1390/70	1320/00
LM/LH III B1	1320/00	1260/50
LM/LH III B2	1260/50	1190/80
LM/LH III C	1190/80	1070/60

The dates we are submitting are consistent *a*) with a time span of not much more than a century for the Shaft Graves period (from mature MH III to the very beginning of LH II; below, § 4.3 and note 8); and *b*) with the archaeological record (recently again reviewed in CLINE 1994, 5-8), which shows a rough correspondence of the periods LM I A/LH I to early LM I B/LH II A with the Hyksos Dynasty (Second Intermediate Period, 1638-1540); LM II / LH II B with the reign of Thutmosis III (1479-1425); LM/LH III A1-2 with the reigns of Thutmosis IV (1401-1391) and Amenhotep III (1391-1353); LM/LH III A2 to early LM/LH III B with the 'Amarna period' (Amenhotep IV/Akhenaten, 1353-1337, and Tutankhamon, 1336-1327, who abandoned Amarna in his third regnal year); and of most of LM/LH III B with the long reign of Ramesses II (1279-1213), following the updated chart of Egyptian regnal years as calculated by KITCHEN 2000 (for more references see below, note 28).

As for LM/LH III A2, we have accepted Malcolm Wiener's line of reasoning in favour of an extension from the 20-40 years proposed for this period by WARREN – HANKEY 1989 to *ca* 50-90 years, with a lowering of its end date to *ca* 1320/1300 (WIENER 1998 and 2003). The lowering had already been suggested by the dendrochronology date (1316, afterwards corrected to 1305) of a log of the Uluburun (Kas) shipwreck, found off the coast of southern Turkey (PULAK 1997), whose varied international cargo included Mycenaean III A2 pottery. At present, judgement on the tree-ring date of the Uluburun log is temporarily suspended (WIENER 2003, 245). But there is enough good evidence from the Mycenaean III A2 imports at Tell el-Amarna and other sites and from the Miletus sacking date in the third regnal year of Muršili II (below, § 4.5 and note 45) to support the III A2 end-date argued by Wiener — see also the LH III B1 pottery found at Qantir-Piramesse, in the Nile Delta, from a context relating to the early 19<sup>th</sup> Dynasty: MOUNTJOY – MOMMSEN 2001.

Clearly, much more hard work and much more discussion are needed on this crucial chronological matter before a final and widely shared opinion can be agreed upon. Therefore the approximate dates of the 'prepalatial' period in our Mycenaean chronology (LH I-II) are proposed in this chapter (and so should be received) only with due reserve and as a working hypothesis, bearing an open mind for the arguments put forward both by the 'low' and the 'high' chronology supporters. Fortunately, the dates of the palatial period proper (LH III A1–III B2) and of the final phase of the Mycenaean civilisation (LH III C) deserve more confidence. Here, as already mentioned, we begin to see a substantial convergence around the dates proposed above.<sup>4</sup>

#### § 4.2. THE 'COMING OF THE GREEKS'

The decipherment of Linear B, which established that the Mycenaeans spoke Greek, put an end to all the theories that the Greeks reached their historic sites only

<sup>4</sup> A good synthesis of the Thera debate, though of course 'high oriented', is in MANNING 1999, 7–45, where the reader will also find useful references to the recent interesting finds (the date is controversial) of Tell el-Dab'a (in the Nile Delta) now generally believed to be the ancient Avaris, the capital of the Hyksos (BIETAK 1996). The low chronology of the Aegean Late Bronze Age is still preferred by a good number of scholars; see for example DICKINSON 1994, 18–21; MATTHÄUS 1995; 1996; MOUNTJOY 1998, 46, etc. For further reading, and for certain arguments for and against the 'high' and the 'low' chronology, see the discussion in *Archaeometry* 29, 1987; 30, 1988, and 32, 1990; ÅSTRÖM (ed.) 1987–89; HARDY – RENFREW (eds) 1990; RANDSBORG (ed.) 1996; DRIESSEN – MACDONALD 1997; BENNET – GALATY 1997; and, most recently, BIETAK (ed.) 2000. See also SHELTERDINE 1997, 539–541 and JACOB-FELSCH 2000; CULTRARO 2006, 17–21. Cf. above, Chapter 3.

after the fall of the palaces. The tendency to postulate a causal relation between the arrival of the Greeks and the beginnings of Mycenaean civilisation is instead still rather common (DREWS 1988). However, one of the most important results of recent archaeological research has been to show that in fact, between the M(iddle) H(ellenic) period, especially in its latter stage (MH III), and the L(ate) H(ellenic) period (LH I), which conventionally marks the beginning of the Mycenaean Age, there was full cultural continuity and a slow and constant increase in material wealth that culminated in the phenomenon of the 'Shaft Graves' (see § 4.3). The last and most striking disruption in the life of the communities of the Greek continent is marked by the transition from E(arly) H(ellenic) II to EH III (*ca* 2300/2200) (MARAN 1998, espec. 450-457). It is at this stage that a considerable proportion of the inhabited areas was struck by a series of violent destructions, spread over a period of time, and by depopulations that in some cases also occurred during the following EH III. These brought to an abrupt end the civilisation of the 'Corridor Houses', and in particular the 'pre-palatial' experiment of Lerna in the Argolid, which was the first attempt at bureaucratic administration on Greek soil, as is indicated by the use of sealings and the practice of stock-keeping.<sup>5</sup> The following phase of general economic recession and stagnation lasted for a good part of MH and led to a form of general isolation as is shown by the scarcity of inter-regional contacts. To judge from the number and complexity of the factors involved, this disruption between EH II and EH III is the most convincing point for the introduction of the new and significant factor constituted by the arrival of the 'Greeks'.

This is not to say that in material culture there were not important elements of continuity, not only between the Early Helladic and Middle Helladic (are there ever total breaks in archaeological documentation?), but even from the Neolithic agrarian 'revolution' onwards. Furthermore, and most importantly, in our theoretical discussions we have become more aware that the identification of *ethnos*, language and culture, cannot be taken for granted.<sup>6</sup> The abuse

<sup>5</sup> The Lerna sealings were published in HEATH 1958; HEATH-WENTKE 1969. It has been suggested (WEINGARTEN 1997) that such administrative practices may be explained in terms of Lerna's role as a 'trading post' on a route connecting Greece with Western Anatolia. More generally on Early Helladic Lerna see RENARD 1995, 288-295, and, on the sealings, also RENARD 2001.

<sup>6</sup> In Greek the word *ethnos* has a wide range of meanings. Here we have used it in the sense of 'ethnic group' or 'ethnic community', accepting Jonathan Hall's correct observations: 'Current research... stresses that the ethnic group is not a biological group but a social group...; it rejects the nineteenth-century view of ethnic groups as static, monolithic categories... for a less restrictive model which recognises the dynamic, negotiable and situationally constructed nature of ethnicity. Finally, it questions the notion that ethnic identity is primarily constituted by either genetic traits, language, religion or even common cultural forms. While all of these attributes may act as important symbols of ethnic identity, they really only serve to bolster an identity that is ultimately constructed through written and spoken discourse' (HALL 1997, 2; see also HALL 2002, 17-18).

that all too recently has been made of this identification has generated a counter-reaction against the attempts to explain cultural change through invasions. Thus, from the perspective of the main interpretative approaches now prevalent, the question of the 'coming of the Greeks' ought to be considered outdated (MORRIS 1990, 63–64; DICKINSON 1994, 298). But there is no reason to reject everything. We know of many tribal migrations of more or less traumatic scale in the past. The dispersal of Indo-European dialects actually *took* place, and we may even hope that at some stage linguistics will provide us with an indication, however generic, of the period at which the ancestral dialects of Greek split from their closest Indo-European cognates. But in principle positing this separation at the beginning of the Neolithic period, or around 2300/2200, changes nothing. The really significant fact is that, both from the ethnic and linguistic point of view, and from the point of view of culture in the widest sense, the Greeks (and even more so the Mycenaeans) did not 'come', but 'were formed' in Greece only, through a process of gradual amalgamation with the local pre-Hellenic populations and their culture (DICKINSON 1999; HOOKER 1999; HALL 2002, 38–55) — a culture which was in some aspects more advanced in terms of customs and beliefs.

#### § 4.3. THE ORIGINS (LH I – II)

The first traces of Mycenaean civilisation are discernible in the new indices of prosperity and the incipient social differentiation, which in the last phase of the Middle Helladic (MH III) in particular characterised two pilot territories of the Peloponnese: Messenia and Argolid; but also Thebes, Attica (Marathon), Laconia (Vaphiò) and Aigina (DICKINSON 1977; DIETZ 1991). During this period it is the graves that almost exclusively testify by their style (*tumuli*<sup>7</sup> and often 'family tombs') and the opulence of some funeral gifts, to the formation of lineages, some of which possessed considerable wealth.

The most striking and best-known phenomenon is certainly that represented by the Shaft Graves (see below) of Mycenae that are joined in two circles, A and B, and date from the late MH III to the beginning of LH II A

<sup>7</sup> The *tumuli* (burial mounds) are graves that are quite common in the Middle Helladic, especially in the western part of Greece. They have a circular base of varying diameter (many being between 12 and 20 metres across) and were covered by a mound of earth. They could be used for single or multiple burials, or for whole families. They sometimes contained rich grave goods, suggesting that they were reserved for persons of rank, perhaps local chieftains (PELON 1976). It is debated whether the circles of the shaft graves at Mycenae were originally in the form of *tumuli*.

(ca 1650-1520).<sup>8</sup> Circle A, which was discovered by Schliemann, was the first to be excavated, but is the most recent and outlasted Circle B. It consists of six large shaft (or pit) graves, that are marked on the surface by one or more stelae. Each contained several burials, almost all of which belong to LH I (only one burial dating from the beginning of LH II A). Circle B, excavated by Mylonas at around the middle of the twentieth century, is the oldest of the two, but also the least impressive in terms of the range of riches. It consists of nearly thirty graves, which also contain often multiple burials and are frequently covered by stelae, and range between the last middle Helladic period (MH III) and LH I. Thus, for a period during LH I both circles were in use at the same time. Circle A, as well as being of more recent origin, is also, as we have said, the one with the most opulent grave gifts, while there is evidently a gradual impoverishment of the funeral gifts in Circle B. In the mid-thirteenth century (LH III B1), in an initiative with the clear stamp of political propaganda and almost a proclamation of dynastic continuity, the area occupied by the graves of Circle A underwent a cleaning and restoration of the stelae (this was not done for Circle B, which was definitively obliterated). These facts, taken together, support the impression that the increase in wealth and social stratification had been accompanied by a change in the political order, perhaps corresponding to the emergence of a (new) reigning dynasty that had displaced the old aristocracy (or the preceding dynasty) (DICKINSON 1977, 40, 56-57).

The distinctive feature of the Shaft Graves is the extraordinary quantity and quality of the gifts, especially those in the graves of Circle A, where in some cases the expense becomes ostentatious waste. Alongside the famous gold ornaments such as headbands, masks and a sceptre, which is tempting to interpret as royalty symbols, there is a profusion of jewels, arms, pots in clay and often precious metals, amber and other exotic trade items, and ritual objects like rhytons and sacred knots.<sup>9</sup>

<sup>8</sup> DICKINSON (1977, 51) allows a range of not much more than two generations (perhaps fifty years) to Circle A, and a range of not much more than a century (or about five generations) to the whole sequence. On the Shaft Graves of Mycenae see DICKINSON 1977, 39-57; HILLER 1989, and especially the recent work by GRAZIADIO 1991; and more generally, on the conclusions inferable from the mortuary practices of the Mycenaean age, MEE – CAVANAGH 1984; WRIGHT 1987; VOUTSAKI 1995; CAVANAGH – MEE 1998.

<sup>9</sup> The rhyton is a vessel used for libations, often conical or piriform in shape, or in the form of an animal's head. The famous Silver Siege rhyton from Circle A (Grave IV) is one of the first examples of narrative art found in a Mycenaean context. Sacred knots are representations of knots painted or wrought in precious materials, such as ivory or faience, whose magic or ritual significance resides in the symbolism of tying or untying. Rhytons and sacred knots are some of the indicators of the strong relations of Mycenae with Minoan Crete during the era of the Shaft Graves (on this more in the present paragraph).

Apart from the evidence for a form of social stratification that employed wealth to affirm status and social prestige, it is worth noting the marked warlike connotations of this aristocracy, and the clear signs of the existence of a hierarchy within it. In spite of the abundance of arms in the funeral gifts, only in the richest graves is the full range of offensive equipment represented, in particular by the sword, which embodied the highest symbolical value. Arrowheads by contrast are rare, as are weapons in the form of a single javelin.<sup>10</sup> These grave-goods are matched by an iconography, found on the blades of swords and daggers and on seals, that takes delight in the portrayal of battle and hunting scenes, either on foot or chariot, and reflects a phenomenon that was already influenced by those heroic epic ideals that survived until the archaic period at least (LAFFINEUR 1992). Another significant element is represented by long distance exchanges dating from this period, above all in contexts such as Messenia, the Argolid, and Aigina. This was especially the case for imports from Crete, where at the time the Minoan civilisation of the Second Palaces was flourishing.<sup>11</sup>

In addition to these imports, that probably reached the Peloponnese via Kythera, the Cyclades and Aigina,<sup>12</sup> we must also consider the local craft production, that in some cases took inspiration from Cretan clay and metal produce, suggesting the presence of Cretan craftsmen (who seem to have been also active in other contexts in the Aegean and Mediterranean).<sup>13</sup> In this period there

<sup>10</sup> KILIAN DIRLMEIER 1988; see also DEGER-JALKOTZY 1999 and HILLER 1999. The sword was used for close combat and was *par excellence* the weapon of the strong. The persistence of the chivalrous mentality is further documented by the agreement engraved on the stele from the temple of Artemis at Amarynthos, in Euboea (cited in Strabo, X 1, 12 C 448), in which the aristocracies of Chalcis and Eretria agreed not to use the hurled weapons, the *tellebola*, during their battles for the plain of Lelanton. The same custom is hinted at in Archilocus, frg. 3D, and so goes back at least to the 7<sup>th</sup> century BC (BREICH 1961, 9-21).

<sup>11</sup> A proto-palatial phase of civilisation (before the First Palaces) had flourished in Crete between M(iddle) M(inoan) I and MM II. After the destructions at the end of MM II the palaces had been rebuilt, and L(ate) M(inoan) I A-B represents the apogee of Minoan palatial civilisation and its expansion in the Aegean (the Second Palaces). It terminated with the devastation and disappearance (with the sole exception of Knossos) of all the Minoan palatial sites at the end of LM I B (ca 1450/40). Whether these destructions were the direct consequences of the invasion of Crete by the Mycenaeans is a subject of debate (see § 4.4). On the chronology relating to Late Minoan, which runs roughly parallel to Late Helladic, we refer to the time-table given above, at the end of § 4.1.

<sup>12</sup> The direct Minoan route that led from Crete to the Peloponnese is also marked by two epigraphic Linear A documents. One is the inscribed clay weight of Kythera (KY Zg 1) and the other is the inscribed stone weight of Hagios Stephanos, in Laconia (HS Zg 1). From the Cyclades come several Linear A inscriptions on clay vessels, from Thera (THE Zb 1, 2, 3, 4), Milos (MI Zb 1), and Kea (KE Zb 3, 5; KE Zb 4 is engraved on the rim of a clay lamp). On the trade-routes linking Crete to Mainland Greece see GRAZIADIO 1998.

<sup>13</sup> On the frescoes of Alalakh, Tel Kabri (Galilea) and Tell el Dab'a (the capital of the Hyksos in the Egyptian Delta) see the recent in-depth discussion by NIEMEIER – NIEMEIER 1998. See also CLINE 1998, and BIETAK 2000. On fresco paintings see the following note.

were also exchanges with the Balkans and central and northern Europe in order to acquire amber and metals. Moreover the Mycenaean pottery of LH I-II had an early distribution in the Western Mediterranean (the Phleorean islands in the Gulf of Naples, the Aeolian islands, and south-eastern Sicily), where it travelled along routes different from the main Minoan ones that in general had pointed towards the Aegean and East Mediterranean.

Given the coexistence of the two phenomena, social ranking and international trade, we should consider the possibility of a link between the two. This is plausible for at least two reasons. First, through long distance exchange it was possible to obtain materials that, due to their beauty and rarity, became distinguishing marks of excellence (especially gold and tin, amber, ivory and lapis lazuli, which were not found on Greek soil, or silver and copper, that were only available in insufficient quantities); second, it was precisely through the domination of the trade routes that the emerging groups, of essentially agricultural and pastoral origin, may have found the means to increase their riches to an influential level.

There remains the question of Minoan influence during this crucial period for the formation of Mycenaean civilisation. While Evans' theory of a Cretan conquest of the Greek continent now seems untenable, it is undeniable that in addition to the objects and the people that transmitted the fascination for art and culture, and in some cases for the Minoan rituals, there must have been an attraction for the political and socio-economic organisation that these derived from. In fact the main question raised by this phase of the origins is: to what extent is it worthwhile to talk of chiefdoms (a still essentially tribal organisation based on clans and extended family groupings), rather than of already established polities or pre-palatial formations, at least for some of the major Mycenaean sites? The retrieval of a number of seals, scale-pans and weights among the funeral gifts seems to point to a mentality already concerned with the marks of ownership, with the quantification of goods and perhaps with their careful administration. These facts are not in themselves incompatible with a structure based on individual *oikoi* ('households'), i.e. on self-sufficient estates along Homeric lines. In fact in our data it is possible to discern contrasting factors that are typical of an age of transition. On the one hand the period is characterised by groups of *aristoi* (the 'best') still in intense competition and, in keeping with this, by a somewhat fragmented territorial situation. On the other hand we begin to see the signs of a royal ideology together with aristocratic dwellings, already adorned with some frescoes,<sup>14</sup> and the start of 'urban' settlements, which in

<sup>14</sup> In the technique for painting frescoes (from the Italian *a fresco*), used by Minoan and Mycenaean artists for wall decoration, 'the lighter, water-based colors are applied to wet lime plaster, which bonds the pigments chemically, and the artist must work rapidly before the plaster dries'.

part prefigure the palatial centres known from the following period (KILIAN 1988; MARAN 1995; WRIGHT 1995). Hence the situation is a varied one made up of microcosms developing at different paces, with some centres, especially Mycenae and Pylos, acting as models.

#### § 4.4. THE PALATIAL PERIOD

The period of full maturity of the Mycenaean civilisation runs from LH III A1 to the end of LH III B1 (*ca* 1420/10-1250). Its main centres in the Argolid are Mycenae, Argos, Tiryns, Midea and Asine, while in Boeotia they are Thebes and Orchomenos. Elsewhere we find Pylos in Messenia; and also Athens, Iolkos, Gla, and numerous minor centres in mainland Greece and in the Aegean. We now see the top development of palatial architecture in the typical *megaron*<sup>15</sup> style inherited from the Helladic tradition, with its splendid frescoes and its iconography which exalted a form of royal power steeped in the sacred. For the burial of the members of the royal dynasty and of the aristocracy, there is a consolidation of the use of *tholoi* ('beehive tombs', already present in the preceding LH II) and of chamber tombs<sup>16</sup> that invariably included multiple, 'family' burials. The development of specialised craftsmanship, for the most part employed to show the prestige of the elites, reaches its maximum expression. Over these two centuries we witness the development of a palatial system in the full sense of the word and the tablets of the palace administration offer us many insights into the territorial organisation of the Mycenaean kingdoms, their bureaucratic structure, the workings of their productive and administrative systems, and their social organisation (see below, Chapters 5 and 6).

Mycenaean clay pots are scattered over the entire Mediterranean basin: in the west from Spain to Sardinia and Sicily, in peninsular Italy (especially in the Gulf of Taranto) and some ports of the Adriatic; in the eastern Mediterranean over

It is therefore different from *tempera*, used in the Near East, where 'the pigments are mixed with glue or a binding material and are applied on dry gesso (plaster of Paris mixed with glue) undercoat, often on a wooden panel' (IMMERWAHR 1990, 14). From this one can see the importance of the adoption of this technique (over and above that of stylistic similarities) as a sign of the presence of Minoan craftsmen.

<sup>15</sup> The *megaron* is a rectangular hall with a large central hearth surrounded by four columns, and fronted by a porch area (for more details see Chapter 5.2 below). This was the state hall of the palace, and finds a continuation in the typical plan of the Greek temple of the archaic and classical period.

<sup>16</sup> Underground burial chambers, cut in the soft rock of a hillside, and approached by an open passage (*dromos*).

the whole of the Aegean (especially the Dodecanese), in the Black Sea, along the Anatolian coast from Troy to Tarsus (especially Caria), in Cyprus, on the Syro-Palestinian coast (especially at Ugarit), and as far as Egypt (especially at El-Amarna during the reign of Akhenaten).<sup>17</sup> Oil and probably wine too, perfumed essences, special woollen fabrics, great decorated craters for the wine ceremonial drinking were among the products exported, very probably in exchange for metals and luxuries. The hypothesis that this long distance traffic involved the elites, and could in some cases take on the ritual forms of the exchange of gifts is highly likely. It is difficult to establish, however, how far this trade was controlled and administered directly by the palaces, or whether it was open to private initiative. We do not know whether it was exclusively in Mycenaean hands (which is in itself rather unlikely), or also in those of foreign intermediaries like the Levantine and Cypriot traders, and to what extent the terms 'private' and 'foreigner' were synonymous. In any case in this period the Mycenaeans not only increasingly took the place of the Minoans in their visits to all the landings or ports of trade that had previously constituted their sphere of influence, but established themselves in actual colonies, like Miletus on the Carian coast,<sup>18</sup> Ialyssos on the island of Rhodes, Kos, Iasos and Müsgebi (Halicarnassus).

The exit from the scene of the Minoans as the protagonists of international trade is one of the most striking features of this period and certainly needs to be linked to the end of the Second Palaces, which took place after a series of destructions which brought LM I B to a close in Crete (*ca* 1450/40). Occupation continued, it would seem, only at the palace of Knossos,<sup>19</sup> which was, however, subsequently affected by two destructions of devastating impact: the first during the transition between LM/LH III A1 to III A2 (*ca* 1375); and the second (and last one) during LM/LH III B. Several thousand intact or broken Linear B tablets discovered in several deposits, both inside the palatial site and in adjacent buildings, demonstrate that at Knossos a Mycenaean dynasty had for some time been established, and through a bureaucratic and military system had dominated the island, especially the large central part, as well as parts of the western regions.

<sup>17</sup> Akhenaten (Amenhotep IV) reigned between 1353 and 1337. On Egyptian chronology see below, note 28. For more details concerning Mycenaean trade, see HARDING 1984; MARAZZI - TUSA - VAGNETTI (eds) 1986; GALE (ed.) 1991; ZERNER - ZERNER - WINDER (eds) 1993; VAGNETTI 1996; LAFFINEUR - GRECO (eds) 2005.

<sup>18</sup> The existence of a Minoan settlement at Miletus, of an earlier date than the Mycenaean one, has been confirmed by the recent discovery of several Linear A inscriptions, inscribed before firing on sherds made of local clay (NIEMEIER 1996; NIEMEIER - NIEMEIER 1997, 240; NIEMEIER - NIEMEIER 1998, 553).

<sup>19</sup> It is still debated (see below) whether this was an occupation marked by continuity (and therefore Minoan) or whether the Mycenaeans had got hold of Crete already at this stage.

Here we should at least mention that the texts of Knossos, in spite of their fragmentary nature, reveal something of the superimposition of the Mycenaean forms of production and administration on the Minoan ones. The study of names further indicates a degree of ethnic mixture, and also the establishment of a hierarchy of functions between Greeks and the preceding Minoan population. The use of Greek names may, of course, in some cases reflect other phenomena, not in themselves insignificant, of cultural assimilation, or more simply, may point to forms of interaction, which were certainly more accentuated among the higher levels of the local population.<sup>20</sup> In fact one of the main interests of the Knossos texts in Linear B and of the archaeological documentation of Mycenaean Crete lies precisely in the evidence that they offer for this process of fusion between the two main Aegean cultures of the late Bronze Age.

The problems begin when one tries to establish the importance and nature of the Mycenaean occupation of Knossos and its dates. Methodologically we are reminded of the controversy about the coming of the Greeks.<sup>21</sup> In this instance, however, the problem is complicated by the different opinions on the dating of the texts, which constitute the strongest clue indicating the existence of a palatial structure *stricto sensu*. Thus the 'coming of the Mycenaeans' in Crete has been related alternatively to each of the great breaks represented by the destructions at the end of LM I B and at the transition from LM/LH III A1 to LM/LH III A2: while their definitive exit from the scene has been again alternatively attributed to the destruction of LM/LH III A1/2, and that of LM/LH III B.<sup>22</sup>

The prevalent opinion among scholars places the arrival of the Mycenaeans in Crete at around the time of the great destructions at the end of LM I B (*ca* 1450/40) (DRIESSEN – MACDONALD 1997, 105–115, espec. 106–108).<sup>23</sup> These

<sup>20</sup> It is interesting that the linguistic analysis of personal names in the Knossos records should reveal a noticeably lower level of hellenisation, in comparison to those of Pylos (MORPURGO DAVIES 1999), or those at Mycenae (VARIAS GARCIA 1998). On the higher percentage at Knossos of Greek names relating to individuals of a rank higher than that of lower status individuals such as simple shepherds, see esp. ILIEVSKI 1992; FIRTH 1992–93; DRIESSEN 2000, 188–194.

<sup>21</sup> A synthetic reference to the theoretical aspects of the problem of the Mycenaeans at Knossos is to be found in FARNOUX – DRIESSEN 1997, 3–6.

<sup>22</sup> For absolute dates see above, note 11.

<sup>23</sup> It is no longer possible, as was sometimes done in the past, to correlate the end of the Minoan civilisation of the Second Palaces to the volcanic eruption of Thera. The pottery of the level of the destruction recovered during the excavations at Thera belongs to 'mature' LM I A and is thus several decades earlier than the destruction of the Cretan palaces (TREUIL, in TREUIL – DARQUE – POURSAT – TOUCHAIS 1989, 368–374 and above, § 4.1). Among the possible natural causes for the catastrophe there remains only the possibility of a disastrous earthquake (see, for instance, NIEMEIER 1985, 230).

destructions were accompanied by sackings and frequently by fire, and brought about the end of all the Minoan palaces and 'villas' (residences of minor status), which were not subsequently re-occupied on a regular basis, except for the palace at Knossos and its surrounding area (villas of Tylissos and Nirou Chani). Together with the palaces, writing in Linear A also vanished (except for some sporadic survivals), a fact whose historical implications require attention. A sign of the Mycenaean occupation of Knossos during the course of LM II, in particular, has been seen in the appearance of 'warrior graves' in the burial grounds in the area of Knossos (Zafer Papoura, Sellopoulos, Gypsiades); this occurred during the course of LM III A also at Archanes, Phaistos and Chania.<sup>24</sup> This phenomenon, which finds its counterpart in the predilection for 'warrior motifs' in certain vase paintings of LM II, appears as typical during LM II and LM III A1 and then disappears in subsequent eras. The scholars who adhere to this opinion maintain, on the whole, that the end of the Mycenaean domination of Knossos coincided with the great destruction of the palace around 1375 BC.<sup>25</sup> Therefore the fire that accompanied the destruction would have caused the firing, and thus the preservation of the clay tablets in the palatial archives.

Other scholars (HALLAGER 1978; NIEMEIER 1982; 1985, 217-231; HILLER 1987), maintain instead that the changes perceptible in the funeral customs, the different emphasis placed on war and the 'palatial style' typical of the pottery of LM II, might be explained in terms of an essential continuation of Minoan culture throughout the period that runs to the end of LM III A1 (*ca* 1375), and hence after the destructions at the end of LM I B. The seventy years or so of LM II and LM III A1 would then correspond, in this view, to the last great flourish of *Minoan* 'palatial' civilisation and to the hegemony of Knossos over the rest of the island. The 'warrior tombs' would thus be seen as graves

<sup>24</sup> The 'warrior graves' are certainly the expression of a military and economic elite (it is harder to say whether it was also a political one), which was, nevertheless, not without its own hierarchical distinctions. They are distinguished by deposits which differ in terms of riches and bronze objects. They contain not only arms, such as swords, daggers, spears, arrowheads and corselets, but also jewellery, mirrors, razors and vases made of precious metals, as well as of bronze (KILIAN DIRLMAYER 1985). That this does not testify to a change in the Minoans' attitudes to war, or a simple fashion, but to the actual presence of newcomers from the continent, may receive confirmation through recent research (ALBERTI 1999) on the spread, during the same period in Crete, of the custom of placing rounded or squat *alabastra* among the grave gifts. This type of *alabastron* is a small vase with a squat outline and a narrow lip, that was probably used for perfumed oil; its presence in the tombs corresponds to a funeral custom originating from and typical of the Mycenaean mainland.

<sup>25</sup> This now widely accepted date (a quarter of a century later than 1400 BC, which had been accepted from Evans onwards), is due to POPHAM 1970.

reserved for the aristocracy of *Minoan* Knossos and of *Minoan* Crete, and their disappearance from the archaeological records after LM/LH III A1/2 would be one of the major indications of the Mycenaean takeover of the island. Thus the Mycenaean domination of Knossos should be dated, according to this perspective, as starting from the great destruction of 1375, and would have lasted until the final phase of LM/LH III B. It is to this final destruction of the palace, which was also accompanied by fire (HALLAGER 1977, 91-93), that the dating of the tablets of the archives should be ascribed.<sup>26</sup>

But clearly, one cannot exclude other explanations. For example, there are those (HALLAGER 1977, 94) who admit the presence of the Mycenaeans at Knossos for the entire period running from the beginning of LM II till the end of LM III B (irrespective of whether one explains the destruction of 1375 by natural causes and/or a traumatic change in dynasty). If one enters into this logic of continuity, however, one must bear in mind that the functioning of the palace was severely compromised by the preceding disruptions. A weakening also took place, which can be read in the archaeological documentation of LM/LH III A2 – III B, in the hegemony of Knossos over the rest of Crete (for a general study on this period of great cultural vitality in Crete see KANTA 1980; *Crète mycénienne*). The decline of Knossos is accompanied by the progressive growth in the economic importance of Chania in the western region of the island.

And it is in fact Chania that has supplied new fuel for the debate over the last two decades. From the joint Greek-Swedish excavations of Kastelli, at Chania (*Myc. ku-do-ni-ja, Kudōniā*), come a small group of tablets and fragments in Linear B (for references see above, Chapter 3.3) that can be dated to LH III B and appear to be associated with a *megaron*-type structure. In addition, it now seems certain that a good proportion of the stirrup jars found at palatial sites on the Greek mainland (especially at Thebes, Mycenae and Tiryns; see below, Chapter 8), which date from the same period and bear inscriptions painted in Linear B, originated from this same area of western

<sup>26</sup> It would thus correspond to what Evans defined as the 'reoccupation period', to which however he denied all claim to the title 'palatial'. In point of fact the large quantities of fragments of stirrup jars and undecorated pottery dating from LH III B found scattered around the area of the palace at Knossos, far from suggesting an occupation by 'squatters', lead us to think that at that time the palace structure was still functioning (HALLAGER 1977, espec. 89-94). One should also consider the enormous number of stirrup jars (a type of vessel common in LM/LH III B, but rare in the preceding period), listed in two Knossos tablets, KN K 700.1.2 (1800 \*210<sup>rec</sup>+KA, where KA is an abbreviation for *ka-ra-re-we, khlārēwes*: name of an oil jar, probably 'stirrup jar', see *Documents*<sup>2</sup>, 494, 551; *Idéogrammes*, 266-267), and KN K 778.1 (*ka-ra-re-we* \*210<sup>rec</sup> 180) (NIEMEIER 1982, 259-261; HILLER 1987, 394).

Crete. In the Knossos tablets the *ku-do-ni-ja* (Chania) region is recorded as being under the administration of Knossos. Thus we need to ascertain whether the tablets from Chania should or should not be treated as evidence for a properly autonomous *palatial* structure (that is, independent of Knossos). The first hypothesis would be in agreement with the dating for the end of Mycenaean domination of Knossos at 1375, independently of whether we look at it from the perspective of a transfer of ruling authority from Knossos to Chania (GODART 1983; 1985); or from one of a 'regionalisation' of the island during the course of LM/LH III A2 – III B, through the creation of small independent states (PALAIMA 1984). The hypothesis that the tablets from Chania are due to administrators who worked in a non-central seat but were at the service of, and obeyed, the Knossos king, would be in agreement with the lower dating of the main Knossos archive (see below). Only through further excavations may we hope to learn the answers to these questions.

It is now clear how important it is to adopt the correct approach to the written texts, not only in order to establish the right chronology, but also to define their proper function in what was a strictly 'palatial' archive. The element of greatest novelty, and no doubt of greatest interest that enlivened the debate in recent years, is the end of the dogma on the 'unity of the Knossos archives'. In his studies of the texts from the 'Room of the Chariot Tablets', Jan Driessen has presented valid arguments in support of the hypothesis of their earlier redaction, compared with the rest of the archive. There would thus be (at least) two distinct redactions of the Knossos texts, which may be referred to different horizons of destruction (DRIESSEN 1990; 1997; 2000; see also above, Chapter 3.2). This view certainly opens the way to more flexible solutions, even though there remains a margin of uncertainty about the precise chronology to which we should relate the two (principal) groups of texts.<sup>27</sup>

#### § 4.5. INTERNATIONAL RELATIONS

The international standing and prosperity of the Mycenaean kingdoms from the second half of the 15<sup>th</sup> century find an echo in some of the contemporary documents from the Near Eastern states, which were the protagonists of the history of the Bronze Age. This seems to be the case of Egypt. Egyptian objects

<sup>27</sup> In any case, for the dating of the 'main archive' of the final phase, the fact that the tablets of 'Hand CXV' at Chania and those of 'Hand 115' at Knossos may belong to the same palaeographic tradition could prove decisive, if conclusively confirmed (for references see Chapter 3.2 above).

dating from the reign of Thutmosis III to that of Amenhotep III<sup>28</sup> have been found in sites of Crete and mainland Greece, with a particularly close relationship between Amenhotep III and Mycenae.<sup>29</sup>

Some of these items are of a ceremonial character and presuppose exchange relations at a high level. An exemplary instance of diplomatic gifts is perhaps recorded in the *Annals* of Thutmosis III, the great pharaoh of the XVIII<sup>th</sup> Dynasty, when in the 42<sup>nd</sup> year of his reign (1438) there is an annotation of the receipt of a *shawabti* silver jug of 'Cretan (Kefiu) workmanship' and of four copper (?) beakers with silver handles, weighing a total of 5 kgs, that had been sent by [the prince of] *Tj-n3-jj* (BREASTED 1906, § 537; BLUMENTHAL – MÜLLER – REINEKE 1984, 223). As was suggested for the first time by Faure with reference to the inscription of Kom el-Hetan (see below; FAURE 1968, 145–147) and generally agreed afterwards, *Tj-n3-jj* probably corresponds to '*Ta-na-ja*' (*Da-na-ja*), the 'land of the Danaans'. *Danaoi* is one of the collective designations for the Greeks in the epics, while the myth of Danae refers back to the dynasty of the Perseids (LEHMANN 1991, 109), and thus specifically to Mycenae and the Argolid. The gift, which the pharaoh would certainly have accepted as a tribute to his power, would therefore have been considered by the Mycenaean sovereign (in all likelihood the sovereign of Mycenae itself) as an homage due to the victor of innumerable battles, but at the same time as an affirmation of his own rank.<sup>30</sup>

That '*Tanaja*' refers to Greece is made very likely by the discovery in 1965 of the list of Kom el-Hetan, engraved on the base of one of the statues in the front courtyard of the funeral shrine of Amenhotep III, in the western necropolis of Thebes (EDEL 1966, list E<sub>N</sub>; WACHSMANN 1987, 95–99, 124). It has been regularly interpreted as roughly following the outline of an itinerary (trade route and/or diplomatic mission) in the context of two quite distinct records. One refers to the countries of Kefiu (Crete, cf. *Kaptara/Kaphtor* of the biblical

<sup>28</sup> For the dating of Thutmosis' III (1479–1425) and Amenhotep's III (1391–1353) reigns, and in general on the chronology of the pharaohs of the XVIII<sup>th</sup> Dynasty (from Amosis to Horemheb, ca 1550/40–1296) we refer to BECKERATH 1994, 93–116; 1997, 108–119; KITCHEN 1987; 1989 and especially KITCHEN 2000.

<sup>29</sup> CLINE 1987. For a wider survey see LAMBOU PHILLIPSON 1990 and CLINE 1994. Both volumes also contain a synopsis of the Egyptian and Hittite texts relating to the Minoans and Mycenaeans. A summary of the references to contacts between the Mycenaean world and the Near-East in the lexicon and onomastics of the Linear B tablets is to be found in SHELMERDINE 1998.

<sup>30</sup> Unfortunately the word which defined the nature of the gift was lost in the small initial lacuna which precedes the place-name *Tj-n3-jj*. The restoration *invw*, literally 'supply', is suggested because of the context in which the quotation is inserted. The term *invw* may correspond, depending on the circumstances, and especially who uses it, to both the idea of 'tribute' and that of 'gift' (LIVERANI 1990, 255–266).

texts and of Mari), and the other to the countries of *Tj-n3-jj-w*, which included in order (apart from those less certainly identifiable), the Cretan localities of Knossos, Amnisos, Phaistos and Lyktos, and on the Greek mainland and Peloponnesian those of Mycenae, Thebes, Mezana (Messenia), Nauplia, together with the island of Kythera.

The interpretation of '*Tanaja*' as the 'land of the Danaans' thus rests mainly on the identification of the toponyms in the list of Kom el-Hetan with localities on Crete and the Greek mainland, and on the association between Keftiu and '*Tanaja*' in the title of the list.<sup>31</sup> However, we should mention that the transcription of the so-called syllabic orthography of hieroglyphic script is always problematic.<sup>32</sup> Thus there have been those who have recognised in '*Tanaja*' the name of the Cilician city of Adana, Luwian *Adanawa* (already known to us in Hittite cuneiform as *Adanija/Atanija*).<sup>33</sup> Furthermore, the identification of the country of Keftiu with Crete, though now widely accepted, is not unanimous.<sup>34</sup>

<sup>31</sup> The possession of a valuable object such as the silver jug of *Cretan* workmanship offered to the pharaoh by the lord of '*Tanaja*' is perhaps less significant in itself. It is true that the jug may be indicative of more than occasional relations between '*Tanaja*' and Crete, as documented, for instance, for Mycenae in the Shaft Graves period and afterwards (above, § 4.3). But one must also bear in mind that such luxury goods often entered into the circuit of ceremonial gift exchange between sovereigns, as is shown by this same passage of Thutmosis' *Annals*. The prince of '*Tanaja*' may in fact not have been the first owner of the jug, just as the pharaoh need not have been the last.

<sup>32</sup> Notice, moreover, that the place-name is attested a third time, in addition to Thutmosis' *Annals* and to the list of Kom el-Hetan. It appears in the List XII (*a 14*) of Horemheb's temple at Karnak (SIMONS 1937, 135–136), in a catalogue which includes Asiatic place-names – 'though not entirely' (SIMONS 1937, 52). The context, as a result, is not sufficient by itself to define the geographical position of the individual place-names. In addition, particularly in writing systems based on the rendering of consonants only, it is far from certain that terms written in the same way (homographs) also had the same pronunciation, i.e. were also homophones and consequently, in this particular case, indicated the same place-name. Finally, in this third example from the *Annals* we must notice, in contrast with the two other attestations, the absence of the final hieroglyph, *w* (EDEL 1966, 37), though these alternations are common. For a more detailed discussion of the problems which concern the 'dossier *t-n-j*' I refer to DUHOUX 2003. I am grateful to Yves Duhoux who allowed me to read the relevant chapter of his work before publication.

<sup>33</sup> As did VERCOUTTER 1956, 55–56; STRANGE 1980, 22; K.-H. PRIESE, in BLUMENTHAL – MÜLLER – REINEKE 1984, 223; VANDERSLEYEN 1985, 47–53, 195–196; VANSCHOONWINKEL 1990, 196–196. Adana was in the south-eastern Cilicia, between Tarsus and Mopsuestia, and here, as in the bordering areas of northern Syria, lived the *DNNYM*, Semitic form of the name of the *Danuna* mentioned in the Egyptian texts, and related to the Semitic form '*DN*' of the city of 'Adana' (in any case it would seem that the possibility of the ethnic *DNNYM* as an equivalent for the Greek *Danaoi* should be rejected: LAROCHE 1958). On Cilicia see also below.

<sup>34</sup> See e.g. STRANGE 1980, 147–184, who thought it was Cyprus; or WAINWRIGHT 1931, 36, who proposed 'the neighborhood of Cilicia and the borders of Cappadocia'; or VANDERSLEYEN 1985, 53, who proposed the Gulf of Alessandretta.

In the absence of further proof the decision on whether the data presented constitutes a convincing cluster of evidence, as has usually been assumed, or on the contrary, a vicious circle (as maintained for instance by VANDERSLEYEN 1985, 49), cannot be made without a certain measure of arbitrariness.

Of no less interest are the documents of the Hittite archives which preserve records of the sometimes stormy relations between the kings of Hatti and the country of *Ahhiyawa* between the second half of the 15<sup>th</sup> century and the middle of the 13<sup>th</sup> century. The direct exchange relations between the Mycenaeans and the Hittites had always been occasional and episodic. However the great Hittite kingdom, that had its centre on the high plain of central Anatolia, had pushed its claims to sovereignty not only south, but also towards the western coastal strip, where from north to south there were the kingdoms of *Wilusa* in the Troad, the country of *Šeha* in the Hermus valley, *Arzawa* with its capital *Apasa* (Ephesus) in the Meander valley. This influence extended as far as the southern regions that included the enclave of Miletus in Caria (the *Millawanda* of Hittite texts). In this sphere of Hittite influence it seems that from time to time Greek interests had encroached, and were represented primarily by the Mycenaean settlement of Miletus. The texts of Pylos with their records of female labour groups of *mi-ra-ti-ja* (*Milätiai*, Milesians), *ki-ni-di-ja* (*Knidiai*, Knidians), *a-\*64-ja* (*Aswiai*, Lydians?), *ra-mi-ni-ja* (*Lämniai*, Lemnians), *ze-pu<sub>2</sub>-ra<sub>3</sub>* (*Zephuriai*, prob. Halicarnassians; cf. Strabo XIV 2, 16 C 656) lend some support to the hypothesis that these were, also, areas that supplied slaves.<sup>35</sup> An abundance of pottery of LH III A/B style also shows the frequency and continuity of Greek contacts with Troy (to be perhaps identified with *Wilusa*), a fortified citadel strategically positioned to control the straits of the Black Sea and the traffic, especially in metals, that passed through them.<sup>36</sup>

In the royal archives of Boğazköy twenty or so documents (annals, epistles, treatises, and oracular texts), written in different circumstances and at different

<sup>35</sup> CHADWICK 1988, 91-92. We frequently find more or less casual homonyms in Greek toponyms, hence one cannot be certain that these localities are to be sought outside the kingdom of Pylos. It is rather the remarkable frequency of these correspondences that induces us to assume that they are not due to chance.

<sup>36</sup> We shall not even attempt to summarise the discussions on the 'historical' nature of the Trojan War. An entire chapter would not suffice for this. It is often assumed that there is some truth in the story of the expedition (or expeditions?) against the city and its sacking by a Greek contingent, but there are still very contrasting opinions on the dating and 'historical setting' of this event, as well as on the economic and political importance of the site. The lively debate that recently has opposed EASTON – HAWKINS – SHERRATT – SHERRATT 2002 to HERTEL – KOLB 2003 offers a good idea of the current *status quaestionis* and provides rich bibliographical information.

times, make mention of *Ahhiyawa*. That *Ahhiyawa* is the Hittite form of the Greek *Akhaiw(i)a*, the land of the *Akhaioi* (another, more frequent collective name for the Greeks in Homer), despite residual resistance on the part of certain scholars, no longer seems to be seriously at issue.<sup>37</sup> To what Mycenaean kingdom *Ahhiyawa* refers, however, is still unclear; Mycenae, Rhodes and Thebes are only some of the possibilities that have so far been suggested. The only certain thing is that *Ahhiyawa*, seen from the perspective of Hatti, was a country across the sea, and cannot be identified in Anatolia.<sup>38</sup>

On this subject it is worth mentioning a bilingual inscription, redacted in Luwian hieroglyphs (Luwian text) and in the Phoenician alphabet (Canaanite text) that was discovered in 1997 at Çineköy in south-eastern Cilicia, thirty kilometres south of Adana (TEKOĞLU – LEMAIRE 2000). This is a royal inscription from the second half of the 8<sup>th</sup> century, and concerns Warikas (Assyrian Urikki, ca 738–709), the king of *Que* (the Assyrian name for Cilicia).

Urikki was already known from the neo-Assyrian cuneiform texts of the age of Tiglath Pileser III (ca 738–727) and of Sargon II (721–705), and (as Awarikus) from the famous bilingual text of Karatepe written both in Hieroglyphic Luwian and Phoenician.<sup>39</sup> The main interest of the new inscription of Çineköy, at least in the context of the present discussion, resides in the name *Hijawa* (URBS), 'land of *Hiyawa*', which in the Luwian text designates the kingdom

<sup>37</sup> On linguistic issues and for a history of the question see SZEMERÉNYI 1988, esp. 265–267 and 276–285. On the passage *ay(i)* > *iya* (cf. *wainu-* > hitt. *wiyana-* 'wine') see KRETSCHMER 1930, 163; cf. LAROCHE 1961, 61–62 (the attempt by FINKELBERG 1988 to show an inverse influence of the Hittites on the Greeks, on the contrary, seems unconvincing). On the historical aspects, among the most recent contributions see GÜTERBOCK 1983, 133–138; HOUWINK TEN KATE 1983–84; BRYCE 1989a; 1989b; NIEMEIER 1999. On the archaeological aspects see MEE 1998.

<sup>38</sup> HAWKINS 1998, esp. 1–2. On the hypothesis that the denomination may have referred to different geographical and political situations in various contexts, see MARAZZI 1992 (and already HUXLEY 1960, 17). The equation Ahhiyawa – Rhodes is very tempting indeed (note that in IG XII 1, 677 and Athenaeus VIII 360e *Akhaia polis* is attested as an ancient name of lalysos, the island's principal centre in Mycenaean times) and has found many supporters, from HROZNÝ 1929 and PUGLIESE CARRATELLI 1950 to BENZI 1996, 967–969 and 2002, 367–368. That 'Ahhiyawa was a maritime kingdom stretching from Miletus down to Rhodes including coastal Anatolia and the offshore islands' has been argued by MOUNTJOY 1998, 51. For the Thebes hypothesis see recently NIEMEIER 2005, 203. However, a good case for identifying Ahhiyawa with the kingdom of Mycenae itself was recently made by HOPE SIMPSON 2003.

<sup>39</sup> For a translation of both the Luwian and Phoenician Karatepe text see HAWKINS – MORPURGO DAVIES 1978; HAWKINS 2000, I, 48–58. The Cilician royal dynasty claimed descent from the 'House' of Mopsos. This name is also known in Mycenaean onomastics in its still labiovelar form, *mo-ko-so* (KN X 1497; PY Sa 774), and is expressed in Hittite/Luwian with the velar (*Mukša*, in the *Indictment of Madduwatta* and in the bilingual of Karatepe; cf. the Anatolian toponym Moxoupolis), in Phoenician with the labial, *Mpš* (cf. Greek *Mopsos*, and the Anatolian toponyms *Mopsouestia*, *Mopsoukrene* etc.). On the figure of Mopsos see BARNETT 1953; 1975; PUGLIESE CARRATELLI 1971, 400–405; VANSCHOONWINKEL 1990; HAWKINS 1993–97.

of Warikas (§ vii, cf. § ii). The possibility that *Hiyawa* may correspond, with an apheresis of the initial *a*, to \**Ah(h)iyawa* (TEKOĞLU, in TEKOĞLU – LEMAIRE 2000, 982–983) is a highly intriguing hypothesis, which appears to be supported by the designation of *Hypakhaioi* ('Sub-Achaeans') attributed by Herodotus (VII 91) to the ancient inhabitants of Cilicia (the association of *Ahhiyawa* with *Hypakhaioi* was first suggested by KRETSCHMER 1933). If this were the case, the two denominations from the 8<sup>th</sup> and 5<sup>th</sup> centuries, Luwian *Hiyawa* and Greek *Hypakhaioi*, both referring to the same geographical area of Cilicia, would furnish a valid confirmation (albeit indirect) for the historical and linguistic identification of the name *Ahhiyawa* with *Akhaiwia*.<sup>40</sup> At the same time this would demonstrate the extraordinary retentiveness of ethnically-based memories handed down by certain local traditions.<sup>41</sup>

Particularly intriguing is the most ancient *Ahhiyawa* text, *The Indictment of Madduwatta* (KUB XIV.1), written by Arnuwanda I, which restores to us the striking figure and the deeds of an adventurous knight between 1450 and 1400.<sup>42</sup> It speaks of Attarissiya, the man of *Ahhiya* (this seems to be the most ancient form of the later *Ahhiyawa*), who in the time of Arnuwanda's father, Tudhaliya II, had driven Madduwatta, lord of Zippasla, from his country. Madduwatta obtained the protection of the king, but nonetheless Attarissiya continued to be hostile to him, and did not hesitate, some time after, to go into battle with the impressive force of a hundred chariots against the army sent by Tudhaliya in defence of his rival. Years later, in the time of Arnuwanda, Attarissiya reappears, but this time at the side of Madduwatta himself, as the author of an incursion against Cyprus, which was claimed by the Hittite king to be a vassal state. This text thus shows a member of the Mycenaean warlike aristocracy in action and says much about the modus operandi which, in some instances at

<sup>40</sup> One should also note that the Assyrian name for Cilicia, *Que*, *Qaue*, seems to be a rendering of *Hiyawa/Ahhiyawa* (KRETSCHMER 1933, 233).

<sup>41</sup> It is as well here to specify, to avoid misunderstandings, that the Cilicia of the Bronze Age satisfies none of the prerequisites for identification with the kingdom of *Ahhiyawa* mentioned in the Hittite texts (as had been proposed by SOMMER 1932, 327, in reference to the treaty with Šaušgamuwa). It is not beyond the sea; to this day it shows no trace of Mycenaean settlements; Mycenaean pottery is present (at Tarsus) in significant quantities, but only dating from LH III C, that is from the post-palatial period (MEE 1998, 145; SHERRATT – CROUWEL 1987, 342–344. See also the pertinent observations of HELCK 1987, 225). It would therefore seem possible that the sources just referred to should be related to the arrival in this area of Akhaean peoples during the turbulent period that followed the collapse of the Hittite empire and the Mycenaean kingdoms (see § 4.6) around the end of the 13<sup>th</sup> century.

<sup>42</sup> GOETZE 1927; SOMMER 1932, 329–349; BRYCE 1986. This text, previously attributed to the reign of Tudhaliya IV (the second half of the 13<sup>th</sup> century), forms part of a group of documents that have been re-dated for linguistic reasons at the second half of the 15<sup>th</sup> century (OTTEN 1969; GURNEY 1973, 677–683; GÜTERBOCK 1983, 133; BRYCE 1989, 98).

least, must have characterised Mycenaean expansionism in the decades during which the eclipse of the Minoans in the Aegean took place.<sup>43</sup>

The *Tawagalawa Letter* (*KUB XIV.3*) has been preserved only in part and probably belongs to the time of Hattušili III (the middle of the 13<sup>th</sup> century). In it the Hittite king addresses a king of *Ahhiyawa* with the courtesy forms 'My Brother', 'Great King', and 'My Equal'. The document gives witness of the great bond between Miletus and the Akhaean king, who had subjects there and authority to intervene in the internal affairs of the Carian city, while influencing to a certain extent its political relations with Hattušili (GÜTERBOCK 1983, 135-137).

The last piece of evidence for the relations between the Hittite kings and the Greeks belongs to the time of Tudhaliya IV (second half of the 13<sup>th</sup> century). We learn that the Hittite king is forbidding his vassal Šaušgamuwa of Amurru (in Syria) to allow the transit of goods which were going from *Ahhiyawa* towards the Assyria of Tukulti Ninurta I during a period of war (*KUB XXIII.1*, col. IV; KÜHNE – OTTEN 1971, 14-17). The reference to the king of *Ahhiyawa* as one of the Great Kings whom Tudhaliya treated as his peers (Egypt, Babylon and Assyria), has been erased. Thus, if on the one hand this embargo still testifies, albeit negatively, to long-distance trade relations between Mycenaeans and the Near East,<sup>44</sup> on the other it also shows the definitive deterioration of relations between *Ahhiyawa* and the Hittite kingdom, which, previously, in the third year of the reign of Muršili II (ca 1319-1315), had attacked and put Miletus to fire and sword, forcing her to return under its authority.<sup>45</sup>

The fact that the Egyptian and Hittite texts leave their protagonists anonymous is disappointing. Partly for that reason at present it seems better simply to state that the sporadic nature of the texts and the anonymity of the Mycenaean princes seems to indicate the absence of fully formalised and regular relations between the states.

<sup>43</sup> On the role of Attarissiya see now CATAUDELLA 2006, with references to previous studies. In this context we should mention the Aegean type sword found at Boğazköy (ancient Hattuša), probably a piece of war booty coming from the victorious Aššuwa campaign of king Tudhaliya I/II, who dedicated it to the Storm-God (BUCHHOLZ 1994; SALVINI – VAGNETTI 1994; CLINE 1996).

<sup>44</sup> Tukulti Ninurta I himself sent to Thebes in Boeotia, perhaps as a gift, a set of Cassite lapis lazuli seals weighing in total about one mina, that came from the sack of Babylon (PORADA 1981-82, esp. 69-70).

<sup>45</sup> WILHELM – BOESE 1987, 108; BRYCE 1998, 209-210. To this event we should probably link the archaeological traces of the fire that destroyed the Mycenaean settlement of Miletus in the so-called 'second phase', at the end of LH III A (on the related indication of a low dating of the transition from LH III A2 to LH III B1, see NIEMEIER – NIEMEIER 1997, 202 and esp. 247, followed by WIENER 2003, 246-247, with further references). 'Mycenaean' Miletus survived the sacking and ended only ca 1185 (MOUNTJOY 2004). The links between Hittite and Aegean chronology are examined by MORABITO 2004.

#### § 4.6. THE CRISIS OF THE MYCENAEAN WORLD

Starting from about the middle of the 13<sup>th</sup> century (LH III B2) there begins a progressive contraction of the Mycenaean exchanges with the eastern Mediterranean, and the West seems now to be privileged.<sup>46</sup> Above all one notices signs that seem to denote a situation of danger. In some cases the fortified walls are built or reinforced (Mycenae and Tiryns); provisions are made to ensure water supplies in the citadels (Mycenae, Athens and Tiryns); an attempt is made to protect the Peloponnese with a wall built to block the Isthmus. Despite these precautions, a series of destructions struck the palaces, at times repeatedly, during the course of LH III B2, and above all around the end of this period. There followed a period of general instability and of innovations, with reactions that were also very different in the various territories.

In some instances there was a drastic depopulation, as in the case of Messenia which was abandoned by 90% of its inhabitants, and of Laconia, which also saw a sharp drop in its inhabited sites. In the Argolid, even if under a new political form, normal life patterns were reestablished without major upheavals until the end of LH III C, and even flourished, as was the case also in the Aegean islands and in regions that had till then remained marginal, like Akhaia, Arcadia and Phokis. The general type of settlement changed, and processes were started that in the course of LH III C and during the Protogeometric period (*ca* 1050-900) were destined to change the map of Greek settlement, not only in mainland Greece, but in the Mediterranean in general. Mycenaean culture in its material aspects decreased only gradually and can be said to have terminated only at the end of LH III C (*ca* 1050), on the wave of a new series of destructions and a new demographic regression.

Historically far more significant is the dwindling, since the end of LH III B, well before the decline in material culture, of what had been the dominant feature of the golden centuries, namely the palatial centres as the fulcrum of economic and political life. This is shown by the absence of archives and administration, with the related loss of literacy; by the marked regionalisation of pottery styles, which indicate a new phase of political fragmentation and the reduction of external contacts; and finally by the fact that, together with the loss of the palaces and their administrative and political structure, those technical skills that had distinguished the tenor of life of the palatial aristocracy began to disappear. This radical change translated itself into the disappearance from

<sup>46</sup> On this period in general see KILIAN 1985; DEGER-JALKOTZY 1991; MUSTI *et al.* (eds) 1991; VANSCHOONWINKEL 1991; WARD – JOUKOWSKY (eds) 1992 (with some caution); DREWS 1993; SHELMERDINE 1997, 580–584; EDER 1998, with further bibliographical references.

the Greek lexicon of the following period of a good part of the terminology which referred to that political and social reality (MORPURGO DAVIES 1979).

Any discussion of what caused the fall of the palaces has to begin with an observation. The same time span that brought destructions to Greek soil also brought destructions to Anatolia, to the Syrian area and to the Aegean, with repercussions that extended as far as the western Mediterranean. That there might be a link between these events and the invasions by the 'Sea Peoples', who on two occasions threatened Egypt between the end of the 13<sup>th</sup> and the beginning of the 12<sup>th</sup> century, seems to be highly likely (LEHMANN 1985; SANDARS 1985). But in good method again we need to distinguish between the external causes and internal weaknesses that brought about the crisis. In the recent discussions an entire range of possible solutions has been prospected. The external causes range from invasions to natural calamity (climatic changes, famines, epidemics and earthquakes). The internal ones have for the most part been connected to an excessive exploitation of human resources and of the territory (with the obvious consequences: exhaustion of agricultural land, or revolts and internecine struggles, or the rural population's flight from the countryside).<sup>47</sup>

Now, the defense preparations that we have hinted at and the generalised character of the destructions within and outside Greece do indeed seem to indicate the concourse of external forces, even though not necessarily the same ones in all cases. However, no external cause, whether human or natural, can possibly account for such a dramatic, and above all irreversible, change of the Bronze Age political and socio-economic order — a change which brought about the collapse not only of the Mycenaean palatial system, but also of the Hittite, Ugaritic and Syrian systems, and which even marked a temporary halting point for the Egypt of the pharaohs (LIVERANI 1988, 629-660). The external causes acted probably as a detonator, setting off a process rooted in long-term structural causes, that were themselves intrinsic to the weaknesses of the palatial system (at least in its final phase), and were primarily social and economic in nature. In the Pylos texts one sees traces of the difficulties encountered by the palace in the collection of tributes in the final years, together with what may be indications of an abandonment of the countryside (DE FIDIO 1987; DEGER-JALKOTZY 1996).

Thus it is understandable that critical pressure on the territory, added to the unreliability, and eventually the interruption of the supply routes for metals and other luxuries that had constituted the material and ideal support for the political power structure, may have contributed to the vulnerability of the palatial

<sup>47</sup> A good synthesis of the various hypotheses can be found in DEGER-JALKOTZY 1991, esp. 127-145.

system, and undermined its essential capacity to react and recover (TAINTER 1988, 201-202). Wars and natural disasters often have the effect of re-animating the spirit of cohesion and solidarity among the populations struck by them. The failure to rebuild the palaces and the definitive disappearance of the palatial political power structure demonstrate that what came to be lacking, in the final resort, was the support of the subjects for the political authority, and the efficacy of the ritual element that had constituted the ideological bonding for the power of the Mycenaean lords.

To the Greeks of the classical age nothing seemed more distant than the form of government and moral attitudes of the Asiatic peoples. This difference was perceived as the opposition between masses of men prostrate before the will of a despot, and an ordered body of citizens who recognised sovereignty in the law alone, the *nomos*.<sup>48</sup> In the bards' transfiguration of the Mycenaean world and its identification with the heroic age, some awareness of its profound affinities with the barbaric elements of its past transpires in the huge stature of the heroes. It is a scintillating world, made up of superhuman deeds, courage and riches, but also of wanton violence (*hybris*). Its limit is to ignore the leveling power of the law. Long before us the Greeks had fully understood the impassable break between that world and the ideal of the egalitarian city.

#### § 4.7. REFERENCES FOR CHAPTER 4

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<sup>48</sup> Pindar, frg. 152B = 169 Schr.: νόμος δὲ πάντων βασιλεὺς θυατῶν τε καὶ ἀθανάτων...; cf. Herodotus, VII 101-104.

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## CHAPTER 5

# MYCENAEAN SOCIETY\*

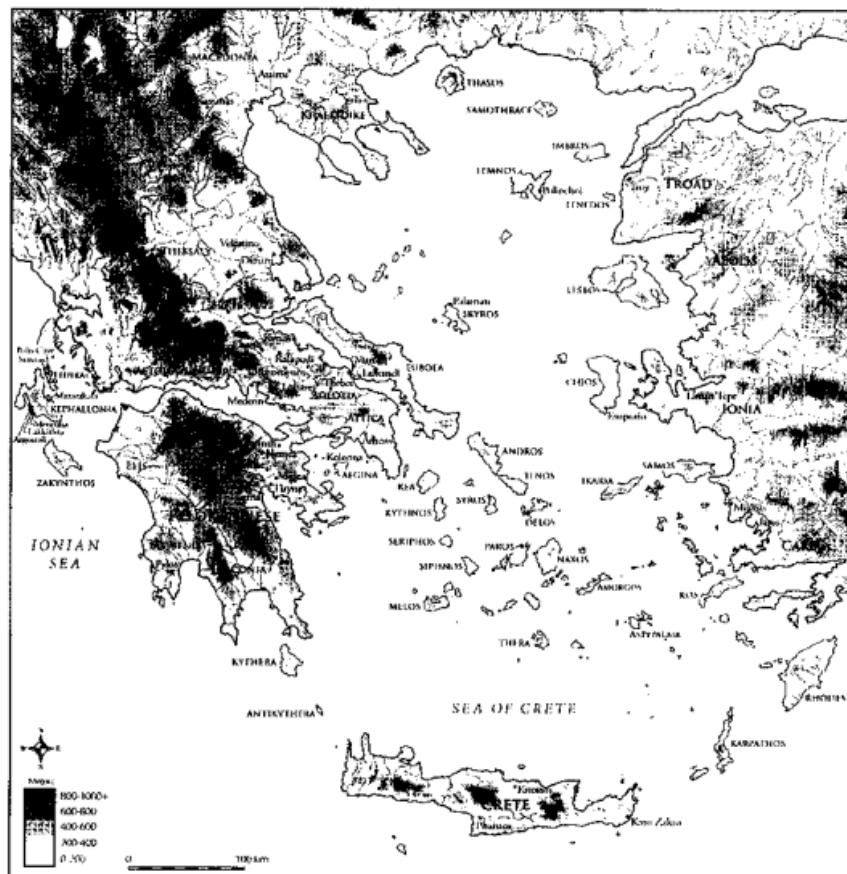
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### § 5.1. INTRODUCTION

The *raison d'être* of the Linear B tablets is not society but economy. Mycenaean administrators were interested in tracking the movement of goods in and out of their centres, the status of land and animal holdings, the manufacture and repair of various kinds of equipment, and the personnel needed to carry out all the business of a Mycenaean state. Establishing the political structure of the states and the social hierarchy and relationships of their inhabitants is not a straightforward process, therefore, but a detective job: making the most of details recorded for other purposes, and using archaeological data to augment and verify the textual information which has survived.

To date almost all the inscribed *tablets* (though not all the inscribed material) at our disposal come from sites where palatial structures have also been found. Each is the administrative centre of a Mycenaean state: Thebes in Boeotia, Pylos in Messenia, Mycenae and Tiryns in the Argolid, Knossos in north-central Crete (Fig. 5.1). A few more tablets come from Khania in western Crete; the partial excavations there have not yet unearthed a palace, but as at Knossos, Mycenaean administrators may have adopted existing Minoan structures rather than building a palace of mainland type. Conversely, other significant sites have not so far yielded any tablets. Palatial structures and other types of inscriptions at Midea in the Argolid and Dimini in Thessaly (plus the burning destruction necessary to fire and preserve clay tablets) suggest that such documents could still be found there. At other sites prospects are not so good. Gla in Boeotia is a large fortified stronghold but likely a barracks or administrative outpost, though if it was a collection and storage point for grain tablets might have been kept there. At Athens the problem is

\* The editors received the first version of this chapter in April, 2002.



**Fig. 5.1.** Map of the Aegean (by Dan Davis)

preservation: a long and rich building history has left only scant traces of Mycenaean fortification walls and buildings on the acropolis. The geographical setting and the administrative reach of each centre were different. The same is true of the centres themselves.

### § 5.2. THE PALATIAL CENTRES

Further reading and references: IAKOVIDES 1983; KILIAN 1987a; KILIAN 1987b; MYLONAS 1966

Tablet references make it clear that a Mycenaean state was ruled by a king. By the same token, the building complex that dominated each Mycenaean administrative centre is still often called a palace, even though scholars have moved away from early excavators' assumption that such terms as *king*, *kingdom* and *palace* meant the same in the Late Bronze Age as they did in the Homeric epics, let alone in Arthurian legend or later history. On the Greek mainland enough palaces share certain common elements that we now regard them as canonical: A) A monumental *propylon* provided the main entrance; that is, a double porch with a doorway in the dividing wall, each roof supported by one or two columns. B) An open courtyard inside the propylon led in turn to C) the core of the palace, the *megaron* unit. This consisted of a large rectangular room, the *megaron*, whose long walls projected to form a vestibule and a porch, with two columns supporting the porch roof. In the centre of the *megaron* was a large hearth; four columns around the hearth supported a second-story balcony, and at Pylos and Tiryns evidence confirms that a throne stood against the centre of the right hand wall. D) Rooms and corridors surrounded the court and the *megaron* unit to complete the central building; these included storage, administrative and residential areas. Pylos and Tiryns are the best-preserved examples of this layout (Fig. 5.2, 5.4); but each centre combined the common elements with its own distinctive features. Square cut and smoothed stone blocks were the norm for the outside walls of these palaces, and they were surrounded by other buildings which served various storage, industrial, religious or other purposes. At most centres a substantial circuit wall surrounded the complex, and the town extended beyond the wall for some distance (on the relative sizes of these palatial settlements see § 5.6). In their extant form the palatial remains are LH IIIB (13<sup>th</sup> century BC), but Mycenae, Tiryns, Pylos, and Thebes all had monumental structures in LH IIIA (14<sup>th</sup> century BC) as well; the evidence for still earlier palaces is ambiguous and debated (BARBER 1992; KILIAN 1987a).

### § 5.2.1. Pylos

Further reading and references: site: BLEGEN – RAWSON 1966; BLEGEN – RAWSON – TAYLOR – DONOVAN 1973; BLEGEN – RAWSON – DAVIS – SHELTERDINE 2001 — tablets: PTT

On the end of a long ridge at Ano Englianos in western Messenia is the site of Mycenaean Pylos (Fig. 5.2); its identity is confirmed by the heading *pu-ro*, *Pylos* written on some tablets from the site. To the southwest the visitor looks across low hills to the Bay of Navarino and the island of Sphacteria; to the northwest the Aigaleon mountain range forms a barrier that served as the provincial border of the Mycenaean state of Pylos. Alone of the palatial centres, Pylos has so far provided no evidence of a circuit wall in LH IIIA-B (14<sup>th</sup>-13<sup>th</sup> century BC), though the excavators found a gateway and traces of an encircling wall dating to late MH-LH II (roughly 1700-1400 BC).<sup>1</sup> The Main Building shows all the canonical features; the propylon entrance (1,2) leads through an open court (3) to the megaron unit (4-6). In a small bathroom (43) next to this entrance a tub still stands, its interior stuccoed and decorated with painted spirals. The adjacent Room 46 was originally dubbed the 'Queen's Megaron' because it had a hearth and frescoes, but it does not have the canonical vestibule and porch. Remarkable at Pylos is the amount of ground floor space given over to storage. Hundreds of drinking and eating vessels stood on shelves in the pantries; storerooms housed olive oil, some of it perfumed, as tablets found with the storage jars make clear. More oil tablets fell from above when the building burnt down ca 1200 BC, so another such storeroom must have stood on the upper storey. Other objects that fell from above include jewellery, ivory inlays from furniture, and tablets dealing with linen textiles. These finds suggest that the upstairs too was a mix of private quarters, storage and business areas. Deposits of tablets relevant to the contexts where they were found are common at all palatial centres, but Pylos so far is unique in having also an Archive Complex (Rooms 7-8), beside the main entrance, in which 80% of the roughly 1000 Pylos tablets were stored.

The Main Building was surrounded by several other structures. The South-western Building is not well preserved and all its functions are not known, though it contained a megaron and administrative offices. On the other side, the Northeast Building yielded tablets which suggest it was either an actual

<sup>1</sup> The Pylos Regional Archaeological Project identified by geophysical prospection a possible section of circuit wall 50-70 m northwest of the Main Building (ZANGGER – TIMPSON – YAZVENKO – KUHNKE – KNAUSS 1997, 610-613). It was thus overlooked by the excavators, who were looking for a wall much nearer the palace. Excavation will be necessary to ascertain its true identity, and of course its date.

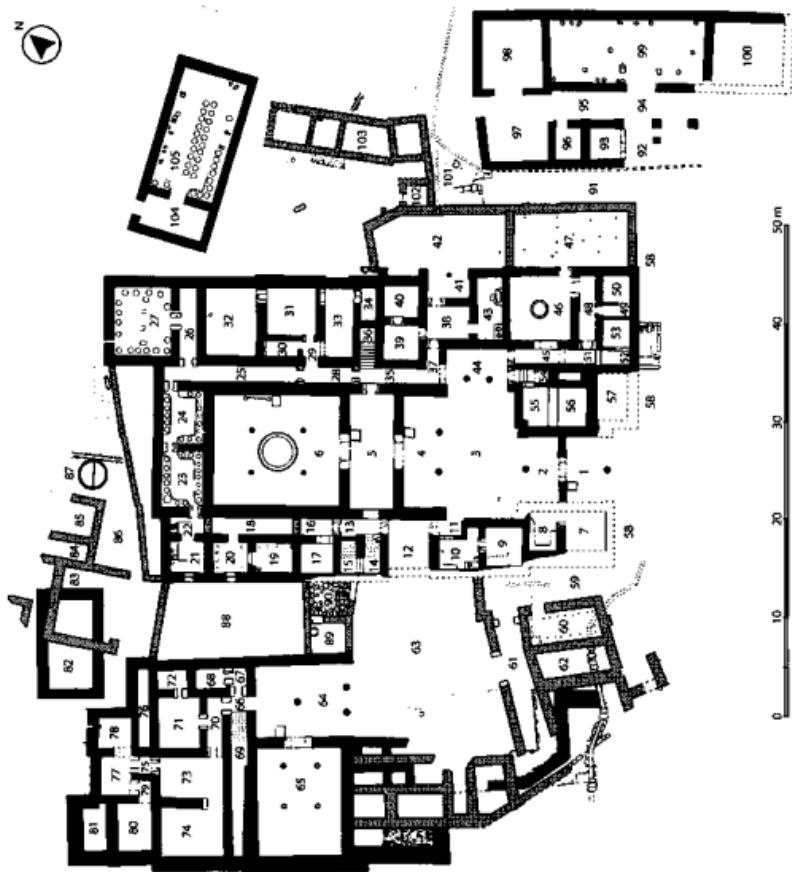


Fig. 5.2. Plan of the palace at Pylos, after WRIGHT 1984, fig. 2 (by Dan Davis)

workshop, or an administrative office concerned with chariot repair and other craft activities (BENDALL 2002; HOFSTRA 2000). Finally the Wine Magazine (104–105) is so called because of a number of large storage jars set into the floor of Room 105, and sealings, four inscribed with the WINE ideogram, discarded there. The complex as a whole went through a number of modifications during the course of LH IIIB (the 13<sup>th</sup> century BC), designed to increase storage and work space and decrease easy access to the Main Building (SHELMERDINE 1987; WRIGHT 1984), signs perhaps of the troubles that befell all of Mycenaean Greece in the late 13<sup>th</sup> century BC (see above, Chapter 4.6). The town surrounding this palatial complex stretched for a kilometer along the Englianos ridge, covering an area of about 36 acres or 15 hectares (1 ha = 10,000 m<sup>2</sup>).

### § 5.2.2. *Mycenae*

Further reading and references: site: FRENCH 2002; MYLONAS 1983 — tablets: *Tithemy*

Mycenae lies on a low hill in the northeast corner of the Argolid plain, its back against taller mountains. Its location was never forgotten, for parts of the site were always visible, notably the mound of the tholos tomb which Pausanias [2.16.6] misidentified as the Treasury of Atreus, legendary father of Agamemnon, and the Lion Gate, a monumental entrance gate topped with a relief carving of two lions. The site commands a long view across the plain to the hill of Argos, and southward toward the Gulf of Argos. It is, however, also strategically located to control the Dervenaki Pass which leads north into the Corinthia, where some at least of Mycenae's Bronze Age territory may have lain.

The palatial complex crowns the hill, which was surrounded by a massive circuit wall of roughly shaped and placed stones (Fig. 5.3). Buildings visible within the citadel range from the Grave Circle of LH I (1700–1600 BC, incorporated within the citadel in the later 13<sup>th</sup> century BC) to Hellenistic structures of the third and second centuries BC. As a result much of the Mycenaean palatial complex and surrounding buildings are obscured, but some elements can still be clearly seen. A ramp led up the hill from the Lion Gate; the main access to the palace area was from the northwest through the propylon-like Western Portal (45). As at Pylos and Tiryns an open court lay in front of the megaron unit, which had the canonical form with vestibule and porch, hearth and columns. The southern part of the megaron itself has fallen away down the steep south slope, but likely a throne stood on this side as at Pylos and Tiryns. West across the court was a large room (52) with a plastered and painted hearth

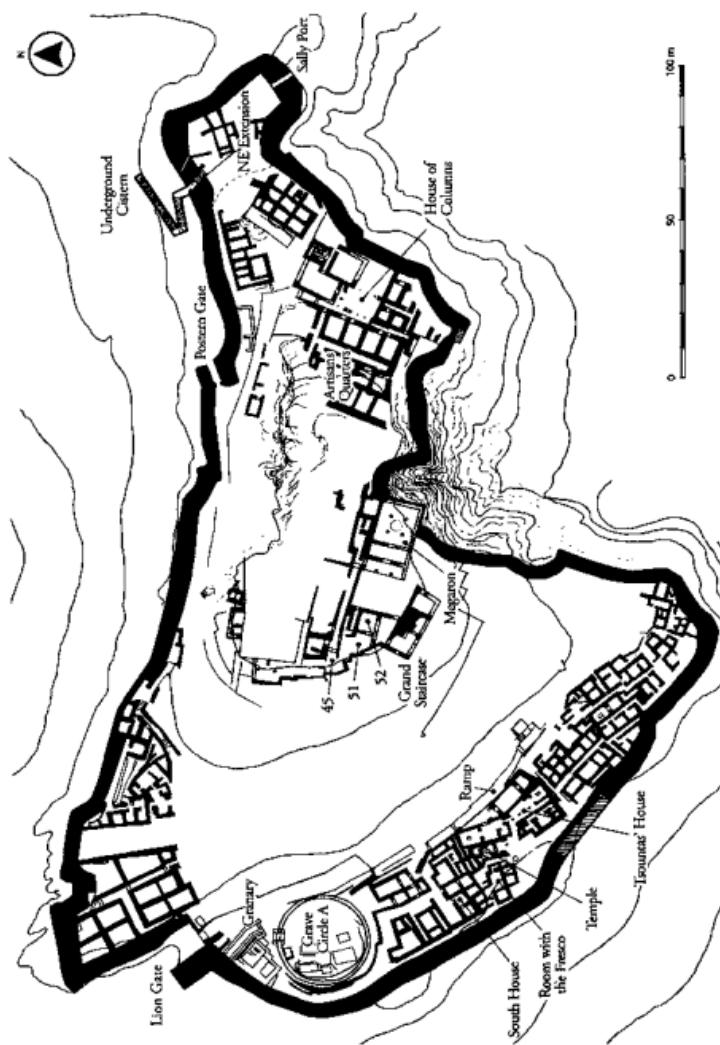


Fig. 5.3. Plan of the citadel at Mycenae, after LAKOVIDIS 1983, 25 fig. 4 (by Dan Davis)

against the north wall, and a small bathroom (51) to the west. This may have been a guest suite, raising the possibility that Room 46 at Pylos, with its hearth and adjacent (though not communicating) bathroom 43 may have served a similar purpose (MYLONAS 1966, 64-65). Many other buildings also stood inside the citadel. Some were houses, but during LH IIIB (the 13<sup>th</sup> century BC), as at Pylos, storage and work areas were constructed on the hilltop. Downslope at the west end of the citadel, just inside the wall, were a number of private houses and a religious complex (TAYLOUR 1981). The few tablets found inside the citadel date to the end of LH IIIB (*ca* 1200 BC): L 710, from the House of Columns on the hilltop, and the small *Ui* series, fallen from the ramp area into the Cult Centre.

Outside the citadel, chiefly to the west, lay an extensive town, 79 acres (32 hectares) in area during LH IIIA-B. Some of the structures are ordinary houses, but the West House group (also known as the Ivory Houses from the quantity of ivory fragments found there) was an administrative complex ('Ivory Houses'; VARIAS GARCÍA 1999). A burning destruction around the middle of LH IIIB (*ca* 1250 BC) preserved tablets in each of the four houses. They deal with a variety of subjects: assessments and contributions of various spices, distributions of oil and wool, lists of workers, allocations of grain rations and bedding, and inventories of pottery and banquet supplies. All these topics are covered at other palatial sites, too, and some of the same workers' names appear on tablets from two of the houses. The administrative links show that the West House group was an administrative unit, best regarded as part of the palatial administration, not as an independent enterprise ('Ivory Houses', e.g. 298; VARIAS GARCÍA 1999).

### § 5.2.3. Tiryns

Further reading and references: JANTZEN 1975; KAISERLICH DEUTSCHES ARCHAEOLOGISCHES INSTITUT IN ATHEN 1912; KILIAN 1988 — tablets: *Tithemy*

At the southern end of the Argolid plain sits Tiryns, on a low outcropping of bedrock. In the Late Bronze Age it was about 1 km from the coast, a little nearer than it is today, and much different in situation from the inland and upland sites of Mycenae and Pylos. The dominant impression of the citadel (Fig. 5.4) is made by massive fortification walls, more than 25 feet (8 m) thick; to Pausanias (9.36.5) they were as impressive as the Egyptian pyramids. As at Mycenae the walls were extended and strengthened in later LH IIIB (the later 13<sup>th</sup> century BC); a new addition was a set of galleries on the south and east sides to provide extra storage room.

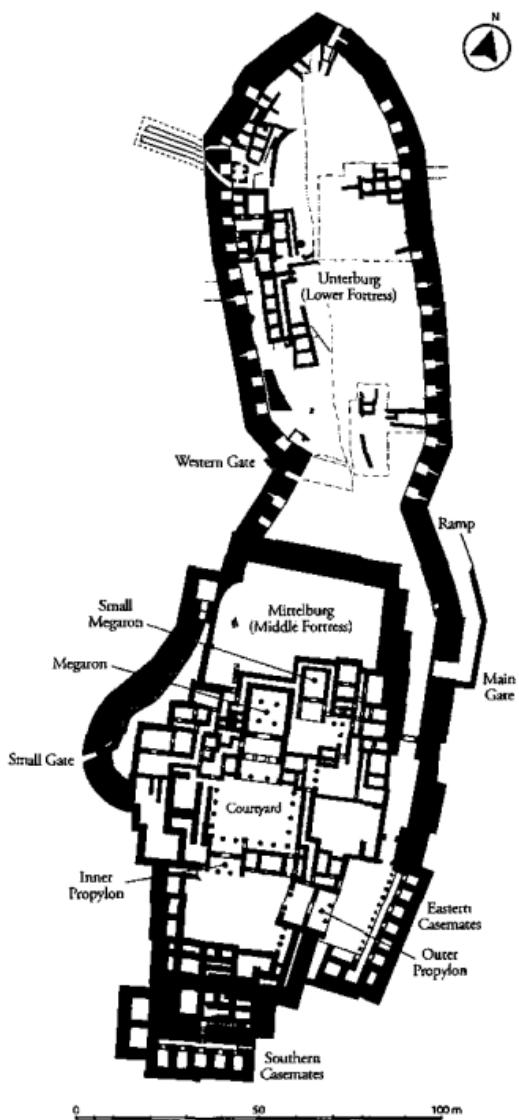


Fig. 5.4. Plan of the citadel at Tiryns, after IAKOVIDIS 1983, 4 fig. 1 (by Dan Davis)

To enter the upper citadel one had to pass up a ramp, through several gateways in a corridor between the inner and outer walls. A right turn through the propylon entrance led to a forecourt; another right turn and another propylon brought the visitor at last to a colonnaded court outside the main megaron unit (V-VII). The latter takes the usual form, except that three doors instead of the usual one led into the vestibule, and in the megaron itself the place of the throne was marked by a stone dais carved with spirals, and by a painted surround. A corridor from the main propylon led directly to a subsidiary megaron (XXI-XXII). Storage, religious, residential and work areas surround these quarters, including a bathroom whose floor is an unusually large slab of grey limestone ( $13 \times 10$  feet;  $4 \times 3$  m). The lower citadel too was fully occupied, both before and after the destruction at the end of LH IIIB (*ca* 1200 BC). It included cult areas as well as houses and other buildings. Outside the walls lay an extensive lower town, so that the site in LH IIIB and IIIC (13<sup>th</sup>-12<sup>th</sup> century BC) covered 60.5 acres (24.5 hectares) (ZANGGER 1994, 197).

Only 24 tablets have been recovered from Tiryns, and they are fragmentary, but the topics are familiar: lists of men (including a group of 128 on Al 7), wheels and armour, animals, and land. A number of these documents come from an LH IIIB2 context (later 13<sup>th</sup> century BC) in the Lower Citadel, the land-tenure records (Ef) from the Upper Citadel.

#### § 5.2.4. *Thebes*

Further reading and references: DEMAKOPOULOU 1990; SYMEONOGLOU 1985 — tablets: *Tithemy; TOP*

Mycenaean Thebes is mostly covered by the modern town, so no complete plan has been recovered, and no megaron unit has yet been found. Instead, excavations for roads and buildings have revealed disparate parts of the Late Bronze Age town (DEMAKOPOULOU 1990). The site was fortified at least from LH IIIA (the 14<sup>th</sup> century BC), and two successive palaces appear to have stood here, though excavated portions are quite limited (DAKOURI-HILD 2001). These include an ivory workshop, an arsenal, and a clearing house for wool.

Tablets were found at Thebes in several locations, dating to several different phases within the LH IIIB period. A burning destruction near the end of LH IIIB1 (*ca* 1250 BC) in a small room preserved 56 sealings, the Wu series, recording a variety of animals and other foodstuffs sent to the palace from outlying areas, probably for a state banquet (KILLEN 1994; PITEROS — MELENA — OLIVIER 1990). Of similar date are the Ug tablets from the arsenal. A recently

excavated and important group of 238 tablets comes from a destruction level of very late LH IIIB date (*near the end of the 13<sup>th</sup> century BC*) (*TOP*). They appear to deal chiefly with rations and divine offerings, especially grain and wine, so despite the size of the group and the number of scribes represented (12), they do not seem to represent the wide range of topics that would constitute a true archive like that at Pylos. Also to the end of LH IIIB belong the Of tablets, which help to identify the wool clearing house, since they document the allotment of wool to textile workers at various locations, some at least at other towns (SPYROPOULOS – CHADWICK 1975).

### § 5.2.5. Knossos

Further reading and references: general: EVANS 1921-36; PALMER 1969 and PENDLEBURY 1954 (contradictory views on some points); RAISON 1988; RAISON 1993 — Mycenaean Knossos: various papers in *Crète mycénienne* — tablets: CoMIK; KT<sup>5</sup>

The site of Knossos was occupied from Early Neolithic times (the 7<sup>th</sup> millennium BC), but the principal remains visible today make up the Minoan palace of the Neopalatial Period (Middle Minoan III-Late Minoan II, ca 1700-1450 BC): Fig. 5.5. Mycenaean administrators subsequently made use of this existing palace, rather than building one of their own, so the site gives us no further information about Mycenaean palatial architecture and planning. The site was heavily restored by its excavator, Sir Arthur Evans, and the visitor can move up and down stairs, and in and out of doors as at no other Aegean Bronze Age site except Akrotiri on Thera. A Minoan road leads through the town to a theatrical area with stepped seating at the northwest corner of the main palace complex, and to a west court just outside the west wing. As at other Minoan palaces, the focal point of the main complex is a large (50 × 25 m) open-air central court, oriented north-south. It can be reached via a monumental columnar gateway at the south end, and by a smaller rampway from the north. On the west side are storerooms, a shrine, and a throne room; on the floor above these were larger public rooms. East of the central court is a wing of four or five stories, two of them reached by a staircase leading down from the court. Domestic quarters occupied the southern part of these lower stories; the northern part consisted of workshops and more storerooms.

Many other buildings surround this central complex. Most of the town proper has not yet been excavated, but several residences have been revealed which are thought to have belonged to palace officials, as well as an arsenal and a built tomb of curious design known as the temple tomb.



**Fig. 5.5.** Plan of the palace at Knossos, after G. CADOGAN, *Palaces of Minoan Crete*, London – New York, Methuen, 1980, 56-57 fig. 6 (by Dan Davis)

It is not entirely clear how much of the Minoan complex was occupied by Mycenaeans in LM III, and the dates of their arrival and of the final destruction are in dispute (see above, Chapters 3.2 and 4.4). The earliest sign of Mycenaean administration may be a group of tablets from the Room of the Chariot Tablets in the west wing, if they date to LM II/IIIA1 (1425-1375 BC; DRIESSEN 1990; for a different view, see POPHAM 1993). The reach of Mycenaean administration that these documents reveal, and their administrative preoccupations, are the same as those seen in the rest of Knossian documents, with the exception that some place names are missing from this group (DRIESSEN 2001). Thus, if they do represent an earlier phase, it would seem that most of the administrative interests and principles remained unchanged later on. As for the main bulk of tablets, several areas of the palace yielded Linear B inscriptions, not always in situ. Many fell from upper stories into the western storerooms, the rooms near the northern entrance passage, and other areas. Some scholars assign them to LH IIIB (the 13<sup>th</sup> century BC), even the end of that period (HALLAGER 1977; NIEMEIER 1982 with references), others to a burning destruction of early LH IIIA2 date (1375-1350 BC; HASKELL 1997; POPHAM 1997 with references). The tablets define a number of scribal offices, both in the main building and in outlying structures like the Arsenal. Most are simple deposits, relevant to the context in which they were found, though there are also some specialised and non-specialised departments (*Scribes Cnossos*). These include an office dealing with aromatics, honey and offerings in the west wing of the palace, a specialised office for sheep records in the east wing, and an ensemble of texts on a variety of subjects near the Northern Entrance Passage. It has been suggested that this last involves enough scribes and topics to constitute a true archive (DRIESSEN 1999), though it is still not as wide-ranging as the Pylos Archives Complex.

### § 5.3. STATE ORGANISATION

Further reading and references: CARLIER 1984; DEGER-JALKOTZY 1983; LINDGREN 1973  
(for specific titles); *World*

#### § 5.3.1. *Wanax*

Further reading and references: CARLIER 1998; PALAIMA 1995

Mycenaean state bureaucracy was highly centralised, and authority rested in the hands of a hierarchy of officials, several described as having groups of

personnel in their charge (LINDGREN 1973). At the top was a single ruler, the *wa-na-ka*, *wanax*, a word for 'lord, master' still used in the Homeric epics. His status is reflected in superior land holdings on PY Er 312, where his temenos, or plot of land, is three times as big as those of other officials listed there; another holding is exempted from contributing flax (Na 334). His superior rank and his title make it easy to see him as the political and administrative head of state, and the throne in the main megaron was no doubt reserved for him, but other archaeological evidence for kingship is almost non-existent: the Mycenaeans, like the Minoans, lacked the impulse to depict their ruler in frescoes or other arts. The limited focus of the tablets, in turn, means that it is hard to discern the full range of his functions. We never see the king acting directly as a military leader, a lawgiver, or an international statesman. Indeed, the noun *wanax* appears fewer than 20 times in the whole Linear B corpus of some 4500 tablets, and only two texts show the king actually doing anything. PY Ta 711 refers to an occasion 'when the king appointed Augewas to the position of *dāmo-kor-os*', probably a provincial official (see § 5.3.4). On PY Un 2 he is involved in a ceremony at the sanctuary site of *pa-ki-ja-na* (*Sphagiana*, 'place of sacrifice'?); the most plausible interpretation of the heading is 'upon the initiation of the king....' (CARLIER 1984, 91-94). This is one of several texts now recognised as lists of ceremonial banquet supplies, including barley, honey, figs, olives, a bull/ox and other animals, wine, and cloth (GODART 1999; KILLEEN 1994; WRIGHT 2004). An illustration of just such a ceremonial feast may appear on the northeast wall of the Pylos megaron, against which the throne stood; it is the culmination of a procession of men, women and an ox or bull in vestibule 5 (LANG 1969, 38-40, 192-193, pl. 119). A lyre-player entertains at least two pairs of seated men, though restudy of the frescoes has removed the bull once restored there (STOCKER - DAVIS 2004, 70). The association of bulls/oxen and feasting with the elite is confirmed by the tablets as well (GODART 1999; PALAIMA 1989; 1992), and taken together with other features of the megaron — an offering table found near the hearth, and a libation channel beside the throne — the fresco further associates the king with ritual feasting. As a religious leader he also receives obligatory gifts along with divinities. This is the likeliest interpretation, for example, of several Pylos tablets where like the deities Poseidon and Potnia he receives perfumed oil, and one from Knossos where he receives coriander. Since other human officials are clearly attested as recipients along with deities (PY Es series and Un 219; see § 5.3.2 and 5.3.3), nothing compels the alternative view (CARLIER 1998, 414) that *wanax* could refer to a god as well as the king, or that the king himself was regarded as divine like the Egyptian pharaoh.

Much clearer is the role of the *wanax* as an economic administrator. The adjective *wa-na-ka-te-ro*, *wanakteros*, 'royal' is applied to craftsmen (a potter,

a fuller and an armourer at Pylos, a textile worker at Thebes, and purple dye workers at Knossos) and to various commodities (wool and cloth at Knossos, javelin shafts at Pylos). The word or its abbreviation also appears on oil jars from Thebes, Tiryns, Eleusis and Khania, suggesting that olive oil designated as 'royal' (in quality or origin) circulated widely through the Mycenaean world. Significant, too, is the form of the word used to designate things as 'royal'. Its suffix, *-teros*, indicates a binary opposition: things belonging to the king's domain are *wanakteros*, and everything else is not. By contrast an ordinary possessive adjective in *-ios* is used to describe people, land and commodities belonging to other officials, even the *läwägetās*, who seems to rank second in importance behind the king (see § 5.3.2). Thus the *wanax* has a special and exclusive position, contrasted with the rest of the world. The range of people and commodities designated as 'royal' shows that as chief political authority he controlled at least part of the religious, economic and military life of the Mycenaean state (CARLIER 1996).<sup>2</sup>

Some scholars believe that we also find at Pylos the name of the *wanax* of that state, *e-ke-ra<sub>2</sub>-wo* (PALAIMA 1995, 129-135 *passim*; contra, CARLIER 1998, 413). The transcription and etymology of the name are both problematic, though linguistic objections to the simplest rendering, *Ekheläwōn*, '[up-?]holder of the people' have been countered (LEUKART 1992; on *läwos*, 'people' see § 5.3.2). This important individual has an administrative profile similar to that of the *wanax*. He controls rowers at Pylos, and thus has some degree of military authority, if only the obligation to supply men for military service. He is also a major contributor of foodstuffs to Poseidon (PY Un 718). His gifts include an ox, recalling the procession and banquet frescoes from Pylos, and confirming his elite, if not royal status. A restoration on PY Er 880 also gives him substantial land holdings, including a plot the same size as that of the *wanax* on Er 312. Even if this individual is the king, however, a distinction is clearly maintained between activities ascribed to him by name and those recorded against the title.

### § 5.3.2. *Läwägetās*

Further reading and references: WYATT 1994-95

Second in importance to the *wanax* was the *ra-wa-ke-ta*, *läwägetās*, whose title suggests that he leads (*agetās*, cf. Classical ἄγω, 'lead'; less likely *agertās*,

<sup>2</sup> A proposed association between the Knossos Vc and Vd texts, where the *wanax* appears along with other named men, with inventories of armour (Sc series) would provide another military link (DRIESSEN 1990).

cf. Classical ἀγείρω, 'assemble') the people (*lāwos*, cf. Classical λαός). Just what this meant, though, is not clear. Many have wanted to give a military significance to *lāwos* in Homer, and thus in Mycenaean Greek, and to regard the *lāwāgetās* as the chief military commander (WYATT 1994-95, with references; PALAIMA 1995, 129). This assumption is by no means universal, however (CARLIER 1984, 102-107 with references; NIKOLOUDIS forthcoming), and it would be unwise to build an interpretation solely on etymological theory. Looked at objectively, the texts themselves give little specific information about the role of this official, but there remains a clear impression of his high social and political position. Pylos and Knossos have a single *lāwāgetās* each, and groups of personnel under his control. He and the *wanax* appear in parallel contexts, though his position is always subordinate, and some have wondered if the subsidiary megaron units at Pylos and Tiryns (see § 5.2.1, 5.2.3) were reserved for this official (KILIAN 1987b, 32). He is listed after the *wanax* on PY Er 312, but his temenos is only one-third as large, and equal to that of three other officials called *telestai* (see § 5.3.4). A plot very similar in size to that of the Pylian *lāwāgetās* is ascribed to this official at Knossos (E 1569). He also holds flax-producing land (PY Na 856, 1041), but unlike that of the *wanax* this is not exempt from assessment. He gives obligatory gifts to Poseidon with Ekhelawon (PY Un 718), and along with the *wanax* and several deities he also receives gifts (PY Un 219). Like the *wanax* too he is in charge of certain working groups and individuals, including a group of 31 men on KN As 1516. Further land holdings for him and for individuals under his charge are recorded at Pylos and at Knossos; the evidence suggests that the land grants are directly tied to their service. His control over rowers on PY An 724 shows that he also had some authority over military personnel, though this does not amount to evidence that he was the commander in chief.

The *lāwāgetās* of the Pylos tablets may have been a man named *we-da-ne-u*, *we-da-neus*. This individual receives obligatory gifts along with other mortals and the god Poseidon, whose priest he may be (PY Es series), just as the *lāwāgetās* does on PY Un 219 (LINDGREN 1973, 134-136, 186-187). He owns slaves, and has in his charge flax contributors and perhaps hunters (PY Un 1193). Like the *lāwāgetās*, too, he contributes rowers (PY An 610), though only half as many as Ekhelawon on the same tablet. The relative numbers (40 and 20) would be in keeping with their relative status as *wanax* and *lāwāgetās*, though still larger groups are also listed. *we-da-neus* is also one of four high palace officials (dubbed 'Collectors' by scholars, after one obvious function they perform) at Pylos whose duties include control of flocks (PY Cn series; on the 'Collectors' see § 5.3.3 and below, Chapter 6).

The importance of the *wanax* and the *lāwāgetās* and the technical nature of these titles is confirmed by an extraordinary form of terminological survival.

In a Phrygian inscription of the sixth century BC we find a dedication to *midai lavagtaei vanaktei*. It is difficult to avoid the assumption that we are dealing with a very early borrowing of Mycenaean terminology by the Phrygians which became part of the official royal titles (LEJEUNE 1968).

### § 5.3.3. *Officials of the central administration*

Further reading and references: *e-qe-ta*: DEGER-JALKOTZY 1978 — 'Collectors': BENNET 1992; CARLIER 1992; DRIESSEN 1992; GODART 1992; OLIVIER 2001

We know the titles of several other officials, but little about the role they played in the state. Within the central administration a group called *e-qe-ta*, *hek"etai*, 'Followers' stands out. Although in its one Classical attestation (Pindar P. 5) this word means merely 'attendant', these officials clearly have an aristocratic status in Mycenaean society, and function as representatives of the central administration. One indication of their high standing is the appearance of the Follower Alektryon, together with high religious officials, in the landholding records of Pylos. Another is that several Followers are cited with patronymics, itself a sign of elite status; interestingly most of the sons' and fathers' names are transparently Greek: *a-re-ku-tu-ru-wa e-te-wo-ke-re-we-i-jo*, *Alektryōn son of Eteoklēs*; *di-ko-na-ro a-da-ra-ti-jo* and *ai-ko-ta a-da-ra-ti-jo*, *Dikonaros (?) and Aigotas (?) sons of Adrastos*).<sup>3</sup> An Aigotas also appears in another elite group at Knossos, associated with the *lāwāgetās*. The use of patronymics to designate these high-status individuals may imply their positions were hereditary, though another man called son of *Eteoklēs* is not a Follower. A total of 13 Followers may be restored on KN B 1055, in charge of 213 men (DEGER-JALKOTZY 1978, 94–97). At Pylos, Followers accompany some of the military contingents (ranging from 10 to 110 men) sent to guard the Pylian coastline, and receive slave women (An 607; see § 5.4.2.2). Chariots and chariot wheels of 'follower type' (*e-qe-si-ja*, *hek"esia*) at Pylos (Sa 787, 790, Wa 1148) enhance their elite military associations, but their role need not be seen as exclusively military. There are textiles of 'follower-type' at Knossos (Lc 646, Ld *passim*, L 871), as well. Indeed one of the Pylian Followers is very likely a man named *di-wi-je-u*, *Diwijeus*, 'Zeus-priest', who like the 'Collector' *we-da-neus* receives obligatory gifts along with Poseidon in the Pylos Es series

<sup>3</sup> Strictly speaking the patronymic may identify clan heritage rather than the literal father. It should be noted that Greek names and elite status are not exclusively linked; Greek names appear in both high and low levels of the society even in the earliest Knossos tablets (Room of the Chariot Tablets), as well as at Pylos (BAUMBACH 1992, with references).

(see § 5.3.2), and collects bulls/oxen for sacrifice (PY Cn 3) from the same kinds of contingents that appear in the coastguard tablets. Several Followers also appear in the company of a priest at Knossos (Am 821). It thus appears that they move in the highest official circles and can have religious as well as military duties.

An array of other officials passes through the surviving documents, sometimes in conjunction with land held in return for their service, sometimes in other contexts; but little can be discerned about their activities or degree of authority. Worth mentioning among them are the 'Collectors', briefly referred to above (see § 5.3.2). This is a modern name given to individuals who seem to stand in parallel to the palace as controllers of flocks and other commodities. There are four at Pylos and at least 25 at Knossos, as well as others at Thebes and perhaps Mycenae and Tiryns as well (OLIVIER 2001). At Pylos the 'Collectors' are more closely tied to the palatial centre than at Knossos, and they have a variety of functions. This is particularly clear in the case of *we-da-neus* (see § 5.3.2), who may have been both the *lāwāgetās* and a priest of Poseidon. Whether 'Collectors' actually owned the flocks in their charge or were given the benefit of them by the *wanax* is still debated, and with it the related question whether these elite individuals were local officials or state functionaries. The names of 'Collectors' recur at different sites, with a frequency which makes coincidence unlikely. It has been suggested, therefore, that they were of noble, if not actually royal status, and possibly members of a dynasty that used the same names repeatedly over some five generations, from LM II/IIIA1 (*ca* 1400 BC), if this is the date of the Room of the Chariot Tablets at Knossos, to the end of LH IIIB (*ca* 1200 BC), when the Mycenaean palatial system collapsed (KILLEN 1979, 176-179; OLIVIER 2001; a note of caution sounded however by ROUGEMONT 2001, 135-137).

A word should be said about the scribes themselves, who provide us with all the information about these other officials. They will be discussed in full elsewhere (see volume 2), but it is worth noting here that they owe their existence to the central administration, and not to any local or pre-existing institution. Record-keeping on tablets was restricted in the Mycenaean world to palatial centres, so far as current evidence goes, and the need to record information was generated by and dependent on palatial administration. The status of scribes is not clear, but it seems plausible that they were not merely low-level inscribers of information, but elite administrators responsible for supervising the activities they recorded. If so, they may in fact appear occasionally in the tablets, among the officials named as gathering or disbursing goods and information; identifications of two such officials at Pylos with two prominent scribes have recently been suggested (BENNET 2001, 29-31; KYRIAKIDIS 1996-97, 219-224).

#### § 5.3.4. Other officials and the *dāmos*

Further reading and references: general: DE FIDIO 1987; *Diccionario — dāmos*: LEJEUNE 1965 — *gʷasileus*: CARLIER 1995 — *telestās*: CARLIER 1987

Moving down the chain of authority we encounter officials who function at a more local level throughout the Mycenaean state. Best attested is the state of Pylos, which is divided into two provinces, commonly referred to as Hither and Further to reflect their Mycenaean Greek descriptions as *de-we-ro-ai-kō-ra-i-ja*, *deuro-aigolaiā* and *pe-raj-ko-ra-i-ja*, *pera-aigolaiā*, 'this side of' and 'beyond' Aigolaion, likely the mountain range known to Strabo as Aigaleon. The nine principal centres of the Hither Province and the seven of the Further Province each fall under control of a *ko-re-te*, *ko-re-tēr*, something like a 'mayor', and a *po-ro-ko-re-te*, *pro-ko-re-tēr*, 'vice-mayor'. These individuals are listed in the heading of PY Jn 829 with various other officials, including both the transparent but puzzling *ka-ra-wi-po-ro*, *klāwiphoroi* (or -os), 'Key-bearer(s)' (in other contexts a religious figure) and *o-pi-su-ko*, *opisukoi*, 'Fig-overseer(s)', and the *da-ma-te/du-ma-te*, *damarthes/dumartes*, 'superintendents' (the two spellings seem to mean the same thing) and their subordinates the *po-ro-du-ma-te*, *produmartes*. A list of bronze contributions follows, all attributed to the mayors and vice-mayors; this may mean that the other officials' donations are subsumed under the mayor's authority.<sup>4</sup> At Knossos the *ko-re-tēr*, *pro-ko-re-tēr* and *dumar* (singular of *dumartes*) all appear, though infrequently. The former are listed with sacrificial bulls/oxen (C 902), and the elite association adds to our sense of their importance.

Overseeing each province as a whole is the *da-mo-ko-ro*, *dāmo-ko-r-os*, plausibly identified as a provincial governor (CARLIER 1984, 98–99). The title is attested at Knossos, but its significance is clearer at Pylos, where on On 300 a *dāmo-ko-r-os* heads the list of district centres in the Further Province, and is probably to be restored at the head of the Hither Province list on the same tablet. The post is evidently important, since the appointment of one *au-ke-wa*, *Augewas* to this post is made directly by the king (see § 5.3.1). Was the *dāmo-ko-r-os* drawn from the ranks of local officials, however, or from the central elite? We do not know, but Augewas appears elsewhere among *dumartes* and *ko-re-tēres* (An 192, Jo 438), suggesting he could have risen through the ranks

<sup>4</sup> An alternative suggestion that the titles are functionally equivalent, *dumar* to *ko-re-tēr* and the rest to *pro-ko-re-tēr*, just as the heads of universities may be called 'president', 'chancellor', 'rector' and so on (*Documents*<sup>2</sup>, 511–512) is less likely. Key-bearers are female, and other information about the status of women suggest that they hold positions of authority only within the religious sphere (§ 5.4.3).

of the local administration. The meaning of the second element *-ko-r-os* is not known, but the resemblance to the root of *ko-re-tēr* may be significant. The first element of the title, *da-mo-*, clearly corresponds to the Classical Greek *dāmos/dēmos*, a collective word for 'people', 'body politic'. This entity contributes banquet supplies to Poseidon at Pylos (Un 718) along with Ekhelawon and the *lāwāgetās*, so it constitutes an important element of Mycenaean society. It is the *da-mo*, *dāmos* too which regulates the allocation of 'communal' land (PY Eb/Ep series, *ke-ke-me-no* land) to important religious and other personnel at Sphagiana in the state of Pylos. That the plot allocated carries with it an obligation to 'work' (the land?) is clear from a dispute on PY Ep 704.5-6 (and cf. PY Eb 297), in which the *dāmos* complains that a priestess is failing in this obligation, while she claims exemption as holding the plot on a different basis 'for the god'. Sphagiana is one of the nine district centres of the Hither Province as well as a religious community, and the *dāmos* must be the local body politic (DEGER-JALKOTZY 1983, 90-91, 95-97) for each of these districts. Its power is land-based, and its constituent members are referred to as 'plot-holders' (*ko-to-no-o-ko, ktoinookhōi*). We see on PY An 830 that communal land can belong to a *ko-re-tēr* as well as to more important personnel, and the same tablet refers to 60 oxherds 'of the *dāmos*' at another district centre. The importance of oxen to the elite reinforces the conclusion that the *dāmos* and its officials serve the needs of the central administration, though they derive their power locally. They are likely to be a vestige of the power structure of the Early Mycenaean period, when the distribution of both settlements and elite tholos tombs suggests there were a number of competing centres in Messenia (BENNET 1998, 125-128; SHELTERDINE 2001, esp. 125-128). Demoted to secondary status in the palatial period of centralised administration, these village community bodies nevertheless retain some of their former authority, especially in their control over land (DE FIDIO 1987; LEJEUNE 1965).

Among the holders of communal land at Pylos are the *te-re-ta, telestai*, 'Service-men', another important group. They also have private land holdings (PY En/Eo series, *ki-ti-me-no* land; see below, Chapter 9.28), apparently in return for their service (*tēlos*) to the *wanax* (though *telestai*, 'doers', 'performers' is another possible rendering), but what service was meant is not clear. Some *telestai* have other official jobs as well, including religious offices, and their land holdings are chiefly at Sphagiana, which is among other things a religious centre, but their functions may not be exclusively religious. Indeed, it seems generally true that the authority of officials, particularly at the higher levels, took both secular and religious forms, as we saw above with the *wanax*, the *lāwāgetās*, the Followers, and the 'Collectors' (see § 5.3.1-3).

Still another official is the *qa-si-re-u*, *gʷasileus* (Classical *basileus*), whose title in the Homeric epics and later means 'king'. His Mycenaean rank is clearly less exalted, however; the term seems to describe the head of some groups of bronze-smiths at Pylos, and of a group (called *qa-si-re-wi-ja*, *gʷasilēwiā* after him), which receives rations in return for unspecified duties.<sup>5</sup> A *gʷasileus* associated with smiths reappears as one of four people in charge of another type of personnel group, the *ke-ro-si-ja*, *geronsiā* (Classical *gerousia*). The Classical term, meaning 'council of elders', describes one of the governing bodies of Classical Sparta; the function of the Mycenaean group is not entirely clear. The authority of a *gʷasileus* over a work group was at a higher administrative level than that of a foreman, however. Knossos tablet As 1516 is of some help in determining his status; here two such groups (*gʷasilewai*) at Phaistos and Setoia, of 23 and 17 people respectively, are listed along with a *lāwāgesian* group of 31 at Knossos. The association and relative numbers could indicate that the *gʷasileus* stands not far below the *lāwāgetās* in the administrative hierarchy, though it does not clarify whether he is a local official or one imposed from the centre. A restoration on PY Aq 64, if correct, would show a *ko-re-tēr* and other local authorities functioning as *gʷasilēwes*. It is likely, therefore, that these officials really derived their power from local communities, one part of a non-palatial hierarchy partly assimilated and used by the central administration (DE FIDIO 1992, 180-181 with references), like the *dāmos*. This would account both for their survival and their increased status after the palatial system collapsed.

## § 5.4. SOCIAL STRUCTURE

### § 5.4.1. Demography and population

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Further reading and references: CAROTHERS – McDONALD 1979; FIRTH 1994-95

Little demographic information exists for the Mycenaean period. Estimating population from survey data like site, size and frequency is a risky business, though it has been attempted for the state of Pylos, where both textual and archaeological data are sufficient to make a start. Mycenaean Messenia probably extended north roughly to the Neda River and east to the Taygetos mountain range, with the Nedon River in the southeast corner. The Minnesota Messenia Expedition survey yielded a population estimate for this area, in LH IIIA-B (14<sup>th</sup>-13<sup>th</sup> century BC), of 40,000-50,000 (CAROTHERS – McDONALD 1979).

<sup>5</sup> For the alternative that they represent a retinue assigned to a *gʷasileus* because of his high status, see CARLIER 1984, 113.

More intensive survey by the Pylos Regional Archaeological Project has recovered many more smaller sites than the earlier extensive survey, but has not significantly changed this picture; a recent study still calculates 'a regional population of ca. 50,000 individuals, distributed in *ca* 150 communities' (WHITELAW 2001, 63-64). This estimate is based on the number of recoverable LH IIIB sites, but the number of settlements may have been closer to 200 or more, since we must assume that some sites have been obliterated by erosion and other factors (BENNET 2001, 32). About 220 place names are recorded on the Pylos tablets, but these range all the way from major district centres down to small lookout points. The work force at Pylos itself included 1,000 fully dependent women and children, implying a total population of at least 2,500 (*World*, 67-68). For the work force statewide, some 4,000 members of varying degrees of independence are attested (HILLER 1988, 59-60). By a similar combination of site statistics and Linear B evidence, the population of Crete during LM IIIA-B (14<sup>th</sup>-13<sup>th</sup> century BC) has been estimated in the range of 80,000-140,000 people (FIRTH 1994-95). Mortuary data can also tell us something about population size, though here too only rough estimates can be achieved. The chamber tomb cemetery at Prosymna in the Argolid (see § 5.4.2.1), for example, has been used to estimate a population for LH IIIA of 200-300; but we cannot generalise to other places — or to other periods, since practices may change over time and good comparative data are as yet lacking (CAVANAGH – MEE 1998, 78).

### § 5.4.2. Social ranking

#### § 5.4.2.1. Mortuary evidence

Further reading and references: BRANIGAN 1998; CAVANAGH 1987; CAVANAGH – MEE 1984; CAVANAGH – MEE 1998; LEWARTOWSKI 2000

Mortuary data is more reliable as a reflection of social ranking. The tholos tomb always marks elite status. This is a round subterranean chamber dug into a hillside; the interior is vaulted and lined with stones, and the whole covered with a mound of earth. It has an entrance passage, usually longer and wider than that of a chamber tomb, whose chamber is simply cut into the rock. During LH IIIA-B (14<sup>th</sup>-13<sup>th</sup> century BC), the tholos was the elite tomb par excellence in the Argolid. Indeed, at this time new tholos tombs were built only at the palatial centres of Mycenae and Tiryns, suggesting that in this period and region they were restricted to royal families. Generalisations are impossible, however, since customs vary over both time and region. Six of the nine tholos

tombs at Mycenae were built in LH II (15<sup>th</sup> century BC); not all of these can be royal! Conversely, at the palatial centre of Thebes in Central Greece no tholos tombs have been found; rather a large and elaborately painted chamber tomb of the palatial period (LH IIIA2-IIIB, mid-14<sup>th</sup> to 13<sup>th</sup> century BC) may have been for royalty (CAVANAGH – MEE 1998, 68, 78; HOPE SIMPSON – DICKINSON 1979, 246). This type is smaller and simpler than the tholos: stone-lined chambers of irregular shape are dug into a hillside, and reached by a narrow entrance path. In Messenia tholos tombs were widespread in Early Mycenaean times, probably a sign that power was rather widely dispersed during LH I-II (1650-1400 BC). It is significant that they went out of use at sites near Pylos in LH IIIA, but continued at the centre itself. This change we think coincided with the expansion of Pylos' control over its surrounding region. New tholos tombs were then built at a few places further afield within the Pylian state during LH IIIA-B; these may mark the political and social status of elite families associated with the central administration (CAVANAGH – MEE 1998, 77-78).

The chamber tomb was used throughout Mycenaean Greece for both richer and poorer burials; ranking distinctions are tied to grave size and the quality of grave goods, not to tomb type (CAVANAGH 1987). Indeed, chamber tombs increase in number while decreasing in quality at the start of LH IIIA (soon after 1400 BC), and it appears that most people during the palatial period were buried in chamber tombs. These were often grouped together in cemeteries, like the one at Prosymna near Mycenae, which was in use from LH I-LH IIIB (1650-1200 BC). Statistical analysis here revealed four wealth groups based on tomb size and contents; poorer tombs increased in proportion over time (CAVANAGH – MEE 1990, 56-59). Clusters of tombs suggest kin groupings, but rich and poor tombs cluster together, which may imply alliances between families in different wealth groups. It has been suggested that the proliferation of chamber tombs during the palatial period may be directly related to the rise of central administrations: one result may have been a rise in population, another an increase in cultural uniformity (borne out in artistic expression also). Political stability would plausibly have fostered the investment in fixed tombs for use by successive generations of families, and ultimately a decline in the value of grave goods as the need for such display lessened and the focus shifted to consumption by the living (CAVANAGH – MEE 1984, 56-57, 62).

Further down the scale of complexity, in architectural terms, are simple pit graves (pits dug in the ground or cut down into rock and covered with stones or stone slabs) and cist graves (pits lined with stones or stone slabs and covered with stone slabs). Burial assemblages in cist and chamber tombs are not very different; statistically the latter are richer overall, as well as more common, but

some cist burials contain more wealth than some chamber tomb burials. Thus we can find no firm distinction in status between the two (LEWARTOWSKI 2000, 51), and regional preferences also vary (CAVANAGH – MEE 1998, 70; LEWARTOWSKI 2000, 62). Grave goods in pit burials, like the tombs themselves, are generally much simpler; these are eloquent evidence for the existence of a lower class (CAVANAGH – MEE 1998, 77-78; LEWARTOWSKI 2000, 62). Tomb evidence, then, demonstrates that there were different levels of wealth and status within Mycenaean society, indicated most often by the size of the grave and wealth of its contents, only occasionally by tomb type.

#### § 5.4.2.2. Tablet evidence

Further reading and references: general: HILLER 1988 — slavery: LENCMAN 1966; MELE 1976

The tablets reinforce the view provided by the mortuary evidence, although their emphasis is largely on the administrative concerns of the central authority, and thus on two kinds of people: the social/political/economic elite, and those who do their work and supply their particular needs. The texts thus present an array of different craftsmen and herdsmen, who must have occupied the middle levels of society, as well as fully dependent workers housed and fed by the palace (see § 5.4.4). Some of the latter, both men and women, are specifically called by the Greek word for 'slave', *do-e-ro, doelos* (Classical δοῦλος) (LENCMAN 1966; MELE 1976), but we do not know enough to assume that a slave's status was the same as in Classical Greece, or any other society for that matter. A distinction may be possible between individuals designated as *te-o-jo do-e-ro/do-e-ra, theoio doelos/doelā* (Classical θεοῦ δοῦλος/δούλη) male and female slaves of a deity, and secular slaves. The former (and once, a *i-je-re-ja do-e-ra*, slave of a priestess) are regularly called by name on the tablets, the latter seldom are, and never at Pylos. Typical is the formulation on the Pylos bronze (Jn) tablets, where slaves are listed by the possessive form of a smith's name, never by their own names. Both religious and secular slaves, however, can control plots of land (slaves of deities and a priestess, Pylos Eb/Ep, En/Eo series; slaves of a Follower, Pylos Ed 847). A slave is among those who make obligatory gifts to Poseidon and to human officials in the PY Es series, like people of free status, but as usual with secular slaves he is referred to only as belonging to *we-da-neus*; his own name is not recorded. That this 'belonging' is in fact ownership is clear at Knossos, where the buying of slaves is attested (Ai 1037 etc., B 822, B 988; OLIVIER 1987; Chapter 9.3 below). On the two B tablets the individual slaves' names may be given, as well as those of the old and new owners. On Ai 1037 the restored word for female slave is followed

by a word which, if complete, could be translated 'willing'. To record that a slave acquiesced in her own sale would be remarkable, however, at least from the modern perspective. The tablet is broken immediately to the right, and the signs preserved may instead be part of the name of the slave, or of the buyer (LEJEUNE 1959, 67 and n. 13). At Pylos, An 607 probably records slave women who are assigned to Followers, perhaps in connection with ceremonial banquets (DEGER-JALKOTZY 1972).<sup>6</sup>

In addition to individuals actually called 'slaves', groups of fully dependent textile workers at Pylos probably also have this status, as a comparable group on Knossos Ai 824 explicitly does (see § 5.4.3; CHADWICK 1988, 90-93). One of these Pylian work groups is called 'captives' (*ra-wi-ja-ja, lāwiaiat*) while others are identified by ethnic adjectives: Milesians, Knidians, Lemnians, Lydians and so on. Were these women in fact acquired from Anatolia and neighboring islands, through trade or warfare (CHADWICK 1988, 91-92)? They (and their children) were kept together, and their origin continued to serve an identifying purpose even though we see them assimilated into the Pylian work force. Slave status is suggested for these women because they are fully supported with rations by the palace, appear in groups rather than as individuals, and are not named. Individuals as well as groups can also be identified by ethnics; no evidence suggests that they are slaves. Among them are men identified by an ethnic, or an ethnic turned proper name, as 'the Cypriot' or 'Mr. Cypriot' (*a-ra-si-jo, Alasios; ku-pi-ri-jo, Kyprios*). Others thus designated are a Lydian (*a-si-wi-jo, Aswios*) at Knossos, Pylos and Mycenae, two Egyptians (*ai-ku-pi-ti-jo, Aigyptios, mi-sa-ra-jo, Misraios*) at Knossos, and a Milesian (*mi-ra-ti-jo, Milatiōs*) several times at Thebes. Where occupations can be determined, these men are working personnel (bronze-smiths, herdsmen, a tailor). There are eligible to hold land like comparable native workers (PY Ea 56), and the Lydian, Aswios, may be a *telestās* (PY Eq 146), and thus of high status (see § 5.3.4).

#### § 5.4.3. *The family*

Further reading and references: general: CARLIER 1999; HILLER 1989 — women: BILIGMEIER — TURNER 1983; CARLIER 1983

The tablets give little information about clan or family matters. As we saw (§ 5.3.3), patronymics are part of the reference for some elite members of

<sup>6</sup> The women are described as *do-qe-ja*, perhaps derived from a word \**dork*"on for 'banquet' (cf. Classical δόρπον). For the alternative that *do-qe-ja* is the name of a goddess, see *Dictionario*, I, 189 s.v. with n. 1.

society, but the only other people whose parents are referred to are menial workers. The sons of women textile workers on PY Ad 684 are also identified as the sons of rowers (see also § 5.5.1). The other mention of parentage concerns the slave women of PY An 607 (see § 5.4.2.2). Here mothers and fathers are both identified, not by name but as slaves or as bronze-smiths. The issue seems to be their status. If the smiths are slaves, there is no evidence that slaves and free people could intermarry (DEGER-JALKOTZY 1972). This point is debated, however. The Jn bronze tablets do not suggest that smiths are of slave status; indeed, on the contrary, some have one or two slaves belonging to them (see § 5.4.2.2).

References to children feature in the texts more frequently than those to parents. Some male workers at Knossos, Pylos and Mycenae are designated by or paired with their fathers, as 'son of X' or 'X and his son', and the mother-daughter relationship is similarly indicated at Mycenae and Knossos. Working groups (mainly in the textile industry, and predominantly female) are also recorded with the words *ko-wa* and *ko-wa*, *korwoi* and *korwai*, 'boys' and 'girls' at both Knossos and Pylos (CHADWICK 1988). One purpose of such record-keeping is to determine the rations needed to support the groups. Often the children are likely to be sons and daughters of the workers, though entries like a group of 12 men and one boy (PY An 199) show this is not always so. Even a record like KN Ag 88, which seems to record a model family (a man's name followed by MAN 1 WOMAN 1 GIRLS 2 BOY 1) must be seen in the context of regular personnel records. Another tablet of the same series lists just a man and a boy, while on still another a man appears with two women, a girl and a boy. This is hardly evidence for bigamy and broken homes, but rather the normal practice of distinguishing members of work groups who may do different amounts of work, or need different amounts of food.

Textile workers and their children are specifically distinguished as older (*me-zo-e*) and younger (*me-wi-jo-e*) at Knossos (Ai, Ak, Ap series). Similar evidence of age distinctions comes from the A- records of textile personnel at Pylos, though without the explicit labels. Here it appears that boys moved away from their mothers, for work purposes, at an earlier age than girls. In the Aa series, younger children are grouped (and thus recorded) with their mothers, and designated as 'boys' and 'girls'. About 450 girls are recorded, but just 350 boys, although one would have expected roughly equal numbers. The corresponding Ad series lists only males, 100 designated as boys, and 350 with the ideogram MAN. Because the two sets correspond, we can infer that the 100 boys on the Ad tablets are those 'missing' from the Aa set. That is, these boys were presumably removed from their mother's group and integrated into a group of men, at an age (perhaps 11 or 12?) when the girls, on the other

hand, continued to work and be recorded with their mothers (CARLIER 1983, 18; *World*, 81). As they grew up and separated from the groups of younger children, these older boys and young men continued as fully dependent workers; those on Ad 697 are identified as rowers, and such individuals may have made up a good part of the Pylian military. Their sisters remained in the textile industry, and were eventually recorded with the WOMAN ideogram. An increase in the size of certain work groups from their Aa tablets to the Ab entries that list their rations may reflect the coming of age of some of these girls (CARLIER 1983, 18-19). Further evidence that children worked alongside adults comes from the palmprints left on some tablets. Study of these indicates that the scribes did not, or not always, make their own tablets, but were assisted by others who shaped and flattened the clay for them. At Knossos children, as well as adults, worked as tablet shapers, perhaps in an apprenticeship system which would lead them into scribal careers (SJÖKVIST – ÅSTRÖM 1991, 25-33).<sup>7</sup>

We can infer from the appearance of young children with the textile-working women that mothers provided much of the child care, but not that Mycenaean society was matriarchal, in terms of either heredity or authority. There are patronymics but no matronymics, and as noted above when parentage is specified for dependent workers, both fathers and mothers are mentioned. As to degrees of authority, women did the basic textile manufacturing work, but men were in charge of 'finishing' workshops where some textiles received their final decoration (see below, Chapter 7.7.6). Some of the Knossian groups are listed against a man's name, presumably under his authority, and one is specifically described as slave women. There are, unsurprisingly, no mentions of women in the central administration. Indeed they appear in only two capacities: as workers and as religious personnel. Some of the latter were clearly of higher status, holding land grants on a par with male elites. But for the most part women were unremarkable and unremarked by Mycenaean scribes.

#### § 5.4.4. *Occupations and specialisation*

Further reading and references: general: *Aspects*; DE FIDIO 2001 (and in general *Economy*); MORPURGO DAVIES 1979, 99-105 — potters: GALATY 1999; KNAPPETT 2001; WHITELAW 2001 — textile workers: KILLEEN 1984 — bronze-smiths: SMITH 1992-93; UCHITEL 1990-91

<sup>7</sup> OLIVIER (in SJÖKVIST – ÅSTRÖM 1991, 123) expresses doubt that child tablet shapers would grow up to be scribes. A very small palmprint found on some Pylos tablets (SJÖKVIST – ÅSTRÖM 1985) led to the descriptive name Mikros ('Small') for the tablet shaper, but it is not known whether he was himself small like his palmprint, or if so whether his small size is connected to his age.

Palace records mention workers from a wide range of occupations. Because the tablets focus on enterprises of direct interest to the central administration, most of the occupations attested offer goods or services of direct benefit to the elite, and it should also be noted that the occupational terminology is quite specialised. For example, military-related craftsmen include *ka-ke-we*, *khalkēwes*, 'bronze-smiths', *ka-si-ko-no*, *kasikonoi*, 'sword-makers', *to-ko-so-wo-ko*, *toxoworgoi*, 'bow-makers' and *e-te-do-mo*, *entesdomoi*, 'armourers', *ra-pte-re*, *raptēres*, 'leather stitchers', and those involved in the production and repair of chariots and wheels. Other specialists are makers of prestige goods, with such titles as *ku-wa-no-wo-ko*, *kuwanoworgos*, 'blue glass worker', *a-re-po-zo-o*, *aleiphozoos*, 'perfumer', *ku-ru-so-wo-ko*, *khrusoworgos*, 'goldsmith', and a variety of textile workers (*i-te-we*, *histēwei*, 'male weaver', *i-te-ja-o*, *histeiāhōn*, 'female weavers', *ka-na-pe-u*, *knapheus*, 'fuller', *a-pu-ko-wo-ko*, *ampukworgoi*, 'headband makers', *a-ke-te-re*, *asketēres*, 'finishers', etc). Among essential service providers are wood workers (*du-ru-to-mo*, *drutomoi*, 'wood-cutters', *na-u-do-mo*, *naudomoi*, 'ship builders', *te-ko-to-ne*, *tektones*, 'carpenters'), and those in other humble occupations: *de-ku-tu-wo-ko*, *deiktuworgos*, 'net maker', *ke-ra-me-u*, *kerameus*, 'potter', *a-to-po-qo*, *artopok<sup>w</sup>oi*, 'bakers', *pu-ka-wo*, *purkawoi*, 'fire kindlers', *re-wo-to-ro-ko-wo*, *lewotrakhowoi*, 'bath attendants'. Also mentioned are *ka-ru-ke*, *kārukēs*, 'heralds', *ku-na-ke-ta-i*, *kunāgetāhi*, 'hunters', *me-ri-te-wo*, *melitēwos*, a 'bee keeper' and herdsmen of various kinds.

One interesting aspect of this list is that the various occupations attract widely disparate amounts of administrative attention. The chief distinction is between trades indirectly attested by occasional reference to those who practiced them, and those which are themselves directly documented. Most of the craftsmen mentioned above appear only once or rarely in the extant records, and not always in connection with their jobs. Other trades, however, are the focus of extensive record-keeping. Textile production is emphasised at all sites where tablets are preserved, particularly Knossos (wool) and Pylos (linen). From the number of sheep attested in the Knossos records (over 35,000 on the Dn tablets alone), and from the extensive records of textiles at that site and of textile workers at Pylos, we can see that cloth was an important economic asset, no doubt among the commodities (perfumed oil was another) traded abroad for precious metals and other luxury goods. It has been estimated that at Knossos (Ak series) the centre controlled over 1000 fully dependent women textile workers, and at Pylos (Aa, Ab series) about 750 (KILLEN 2001, 172). Bronze-smiths (*ka-ke-we*, *khalkēwes*, singular *ka-ke-u*, *khalkeus*) are another group to whom considerable attention is paid in extant tablets. They are attested at Knossos and Mycenae, and at Pylos an entire set of tablets (Jn series) is

devoted to them, concerned chiefly with allocations of bronze.<sup>8</sup> Some 280 names are preserved in the surviving tablets; this may represent as little as 2/3 of the full series (LEJEUNE 1961, 425), or nearly 100% (SMITH 2001, 172 n. 4), depending whether one ties the extant total of Jn bronze to a larger amount (commodity not specified) on Ja 749. Bronze is allotted to some of the smiths, in quantities ranging from 1.5 kg. (enough to make 1,000 arrowheads or 4 swords) to 12 kg. (*Documents*<sup>2</sup>, 356; MICHAILIDOU 2001b, 92). It is unclear, of course, how regular were such allocations (though a reference to wheels 'owing from last year' on Knossos tablet So 4442 suggests an annual basis), and how representative are the preserved amounts. But the total, though not small, would not occupy a labour force of smiths full time through the year. This is one indication that they may have plied their trade only part time (UCHITTEL 1990-91), and likely had other customers as well as the palace. Many people would need metal tools, for example, and hooks for fishing (attested archaeologically by the hooks themselves and by fish bones found in settlement contexts).

The case of the smiths is part of a larger issue, not completely understood, of how independent were different categories of people who did work for the palace. Some workers were fully dependent, as is clear, for example, from lists of monthly rations allotted to menial women workers in the Pylos textile industry (see § 5.4.2.2). The smiths receive raw materials from the centre under the normal allotment system (*ta-ra-si-ja, talansiā*) used by the palaces to regulate production; this system is also seen in the Knossos textile industry and in the production of chariot wheels (see below, Chapter 6.11; *Aspects*, 69-115), yet as noted they may not have worked for the palace full time. Other craftsmen were certainly independent, at least to some degree, and received for their services either land holdings or a benefit (*o-no, onon*) paid in kind (see below, Chapter 6, Appendix III; *Aspects*, 130-134; GREGERSEN 1997a, 1997b). Mycenaean society was essentially agricultural, and it can be assumed that many people spent at least some of their time raising subsistence crops for themselves, and tax goods for the centre.<sup>9</sup> But the very specific occupational terminology noted above implies in turn a high degree of specialisation on the part of those workers tied particularly to palatial enterprises. The question is to what degree they were spared the necessity of earning their own livelihood. Bronze-smiths are specifically noted as being exempted from certain taxes at

<sup>8</sup> It is not certain whether the word and logogram for 'bronze' mean bronze or its major component copper, or both (DIALISMAS 2001, 121-126; MICHAILIDOU 2001b, 87-88).

<sup>9</sup> We do not have much evidence, however, for craftsmen holding more than one job. Occasionally, however, the same personal name may be associated with two different occupations. Although in most cases it is assumed that two different people are meant, this may not be the case. It is not unreasonable to imagine, for example, that a smith might also be a shepherd.

Pylos (Ma, Na series). The more time one regards such workers as spending in their particular jobs, and exempted from agricultural pursuits, the more essential is the role of the palace as a redistributive centre, capable of supporting its labour force (see below, Chapter 6; DE FIDIO 2001).

Also worth considering in this connection is how little reference is made to some occupations which must have been important to society. The tablets mention bakers and potters just a few times, although these must have been among the busiest of routine trades, serving the entire state community and not just those at the centre. Can we infer, then, that these industries were not centrally run? If the centre did not need to supply materials for an industry (as it did in the case of bronze working) or to support the workers (as it did in the textile trade), the tablets focus only on the products of direct interest to the palace. Inventories of pottery have been found at both Knossos and Mycenae. At Knossos these include stirrup jars (so named from the shape of their handles), which were used to store and transport the olive oil which was an important trading commodity for the Mycenaean. One tablet alone (K 700) lists at least 1800 of these; yet no indication survives that even this production was actually organised by the palace, though palatial demand undoubtedly kept it going.<sup>10</sup> Similarly at Pylos, where annual 'consumption' of pottery at the centre has recently been estimated at ca 12,000 vessels (WHITELAW 2001, 62), records relating to pottery production are entirely absent. The same can be said of stone tool manufacture; such objects are well attested archaeologically, but the tablets are silent both about them and about the people who made them. Just as there are archaeologically attested crops, like legumes, which the texts do not mention, there is clearly a sector of Mycenaean economy used but not directly organised by the central administration (HALSTEAD 1992; several articles in *Economy*). The tablets themselves present an interesting puzzle. No reference is made to the scribes who wrote them,<sup>11</sup> though over thirty are distinguished by their handwriting at Pylos, and some 65 at Knossos. Yet since this skilled trade is apparently restricted to the centres, it can hardly be said to fall outside the palatial sphere of control. A possible explanation is that the scribes themselves were part of the administrative elite, not part of the ordinary work force (BENNET 2001).

<sup>10</sup> A large potters' area at Gouves on Crete could have produced pottery on the scale required: VALLIANOU 1997.

<sup>11</sup> Or minimal reference, if *di-pte-ra-po-ro* means 'scribe' (*Diccionario*, I, 176-177 s.v. with n. 4).

## § 5.5. RELATIONS BETWEEN THE CENTRE AND THE REST OF THE STATE

Through a century of Bronze Age archaeology, the efforts of excavators have been directed mainly toward palatial centres and tombs, so we do not yet have a very clear archaeological sense of the towns which came under the authority of Mycenaean states. A few excavated settlements, like Tsoungiza in the Corinthia and Nichoria in Messenia, and the settlement patterns revealed by surveys, are beginning to fill this gap in our knowledge. For the most part, though, we have little to help us round out the picture of town-centre relations at which the tablets merely hint. It was plainly an unequal, if reciprocal relationship. The populace of a state was obligated to provide land, commodities and service of various kinds to the centre. The regularity and long-established basis of this support are clear from the detailed administrative structure created to monitor it. In return for their role in keeping the system going, local elites were rewarded with access to the kind of prestige goods found in the tholos tomb at Nichoria (like bronze vessels, jewellery in blue glass, gold and other imported materials; McDONALD – WILKIE 1992, 260–284), and with land. Some others also received control of land holdings, but most could expect to benefit only from exemptions from one obligation in return for executing another, and from the stability and security which a strong central authority can guarantee. On the other hand, the imposition of central control did not wipe out a strong degree of self-sufficiency; plenty of agricultural resources and craft work fall outside the spotlight cast by the tablets on palatial concerns (HALSTEAD 1992; several papers in GALATY – PARKINSON 1999). This is why many such settlements could survive the collapse of centralised bureaucracy at the end of LH IIIB (end 13<sup>th</sup> century BC) (though the state of Pylos was severely affected), and why some areas marginal to the palatial system actually thrived during LH IIC (12<sup>th</sup> century BC) (see above, Chapter 4.6). But during the heyday of the palaces, the two clearest obligations imposed by the centre on its dependencies were taxation and military service.

### § 5.5.1. *Taxation*

Further reading and references: DE FIDIO 1982; KILLEN 1996; SHELMERDINE 1989

Taxation was a construct devised by the central administration. It is chiefly of economic interest (see below, Chapter 6), but it does reflect the kind of administrative structure that a palatial centre could impose on the society it came to control. In the premonetary economy of the Mycenaean Greeks, the

commodities paid as taxes were mostly raw materials, such as olives and olive oil, honey, flax and animal hides; also included was a locally made kind of textile (known by its uninterpreted logogram \*146, probably a garment; see below, Chapter 6.10). Some items, like flax, were required from particular land-holdings, which were perhaps tied also to military obligations (DE FIDIO 1987, 130-132; HALSTEAD 2001, 44-46). At Pylos, however, other commodities are contributed by each of the main districts of the state, and the assessments, payments and exemptions are carefully tracked at the centre (Ma series). These commodities have not all been identified, but they include the garment \*146, linen fiber or fabric, and ox-hides. In this case the amount of tax required was apparently calculated first for the state as a whole, rather than on individual people or towns; the amount was then divided equally between the two provinces of the state. The main districts in each province, being of different sizes and degrees of wealth, may have been combined into small groups capable of contributing comparable totals (KILLEN 1996; for a different view, see Perna 1995). Certain groups are stated to be exempted from tax, presumably in return for some other contribution, for example in service (among them are bronze-smiths; see § 5.4.4). This system was apparently widespread; it applied for instance to the distribution of wine (Vn 20) as well as to collection. This does not mean, however, that the 'top-down' nature of the tax system had no organic connection to pre-existing political realities. The main district centres of the two provinces were probably the important autonomous centres before palatial control was imposed, powerful enough to retain some authority even as they were subsumed into the larger state bureaucracy. From this reality, as I have suggested (see § 5.3.4), derives the local power of the *dāmos* and its mayor, the *ko-re-tēr*; both maintain a recognisable, if diminished, degree of status and authority.

### § 5.5.2. *Military service*

Further reading and references: general: CHADWICK 1988; GODART 1987; GSCHNITZER 1999; KILLEN 1983 — *o-ka* tablets: LANG 1990; MÜHLESTEIN 1983; PALMER 1977

The other obligation highly visible in the tablets is military service. Given the detail provided on some topics, it is rather remarkable that we do not have more records pertaining to military personnel: troop strengths, rations, deployments are largely missing from the extant evidence. Groups of men under a hierarchy of leaders are deployed to watch the coast at Pylos (the *o-ka*, *orkhā*,

'military command' tablets in the An series), but this information is not tied to any records of rations or equipment. Further information can be put together from various references to rowers at Pylos. Thirty are deployed on tablet An 1 to Pleuron, perhaps the Aetolian (northwest Peloponnesian) town of this name mentioned in the *Iliad* (2.639). They are identified by the five towns from which they come, suggesting that this is a conscription, partly fulfilling the obligation of these towns to the centre. Four of the five towns, in the same order, recur on another list of rowers (An 610). The numbers are roughly five times those on An 1, and may represent the pool from which a conscription could be drawn, a small fleet's worth of about 600 men. The tablet also includes rowers listed against other towns and individuals, including Ekhe-lawon (see § 5.3.1) and *we-da-neus* (see § 5.3.2). The total must have been around 600 men. Some are listed as *ki-ti-ta*, *ktitai*, 'land-holders', and it seems clear that there is a direct connection between their land grants and the military service required of them (CHADWICK 1987; KILLEN 1983). It is interesting that rowers from two towns on An 610, *a-po-ne-we* and *da-mi-ni-ja*, are among the husbands and sons of women textile workers (Ad 684, 697). Those women were fully dependent menial workers, if not slaves (see § 5.4.3), and there is no indication that these particular rowers held land. The few references to rowers at Knossos include C 902, where one or more of them appear in the company of mayors and other officials of unknown rank; each is required to provide an ox and other animals, perhaps for a sacrificial ceremony. This does not necessarily imply a higher status for rowers, however, since people of different social ranks are liable elsewhere even for such elite contributions.

References to land-based troops in the tablets focus particularly on equipment. Knossos and Pylos both have records of body armour (PY Sh, KN Sk series) and of chariots or chariot parts in various states of repair, while allocations of a chariot, horse and corselet are among the possibly early tablets from the Room of the Chariot Tablets at Knossos. These are for elite troops; an estimated 500-600 chariots at Knossos and 120 at Pylos suggest that they were limited in number (GSCHNITZER 1999, 258). Of less exalted status are the estimated 800 men of the Pylos coastguard tablets (see § 5.3.3), listed in contingents of 10 to 110 men and assigned to various coastal locations. Nothing here indicates whether this precaution was exceptional or a normal manoeuvre, but similar contingent names also appear at Knossos, once (B 164) in an inventory of several hundred men. These must have been drawn at least in part from the local population, though it has been suggested that some contingents were mercenaries or military colonists from outside the state (GSCHNITZER 1999, 259-260 with references).

### § 5.6. DIFFERENCES AMONG STATES

Further reading and references: DRIESSEN 2001; OLIVIER 1984; SHELMERDINE 1999

Archaeological evidence demonstrates that different parts of Mycenaean Greece were autonomous yet in communication. Pottery shapes and decoration are generally similar, especially in LH IIIB (13<sup>th</sup> century BC), but regional styles can be discerned (MOUNTJOY 1999). Tomb types too are limited in number, but certain ones are favored in different areas, particularly for aristocratic families (see § 5.4.2.1; CAVANAGH – MEE 1998, 134–135). Thus, although the LH IIIA-B periods (14<sup>th</sup>-13<sup>th</sup> century BC) are often referred to as a Mycenaean *koinē*, a time of shared culture, some regional variation does exist in material terms, and this extends to the Mycenaean states as well. The sizes of the mainland palatial centres are only roughly comparable (Fig. 5.6), with a town of 15 hectares at Pylos, 24.5 hectares at Tiryns and 32 hectares at Mycenae; the position of Pylos on a narrow ridge perhaps accounts for its somewhat smaller area.<sup>12</sup> Yet differences in the size of the state controlled from each centre are to be expected, given variations in the history and geography of each region (SHELMERDINE 1999, 555–563). The same pattern of general similarity with differences in detail applies to administration as well. The prevailing system is quite uniform from state to state, sharing technical terms, and focussing on similar economic matters. Even the fragmentary remains from Tiryns conform: Ef 3 seems to refer to communal (*ke-ke-me-no*) land, a category also known at Pylos and Knossos (see § 5.3.4), and Ef 2 gives an amount of land in terms of the amount of seed-grain that would be needed to sow it, also the convention elsewhere. Yet in this context too some individual responses are required by different histories and environments. Thus at Knossos, where Mycenaeans moved in on a pre-existing Minoan palace and administrative system, yet expanded the region controlled from this one centre, geography and tradition dictated that workers and administrators be based in towns which might be far from Knossos itself (DRIESSEN 2001). By contrast administration in the state of Pylos, despite its larger size, was far more centralised. Knossian textile workers are found at a number of different places, and some cloth only comes into the centre at the end of the decorating process. At Pylos the centre dominates the picture, with most of the textile women concentrated there, and at a limited number of other towns (KILLEN 1984). ‘Collectors’, too, are fewer at Pylos, more numerous and more dispersed at Knossos, though the institution is common to various states (see § 5.4.2.2).

<sup>12</sup> Minoan Knossos was rather larger, at about 40 hectares, but it is not clear how big the inhabited area was in the Mycenaean period.

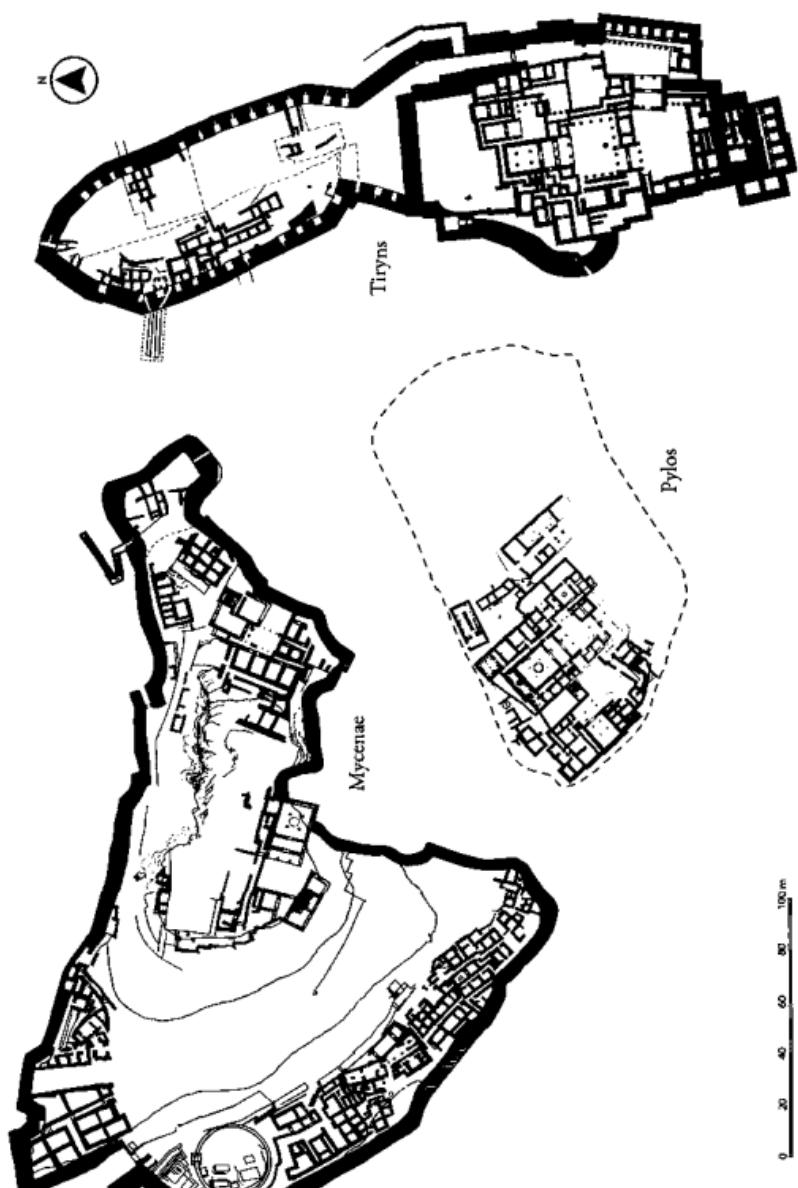


Fig. 5.6. Plans of the palaces at Mycenae, Tiryns and Pylos, scale 1:2000 (by Dan Davis)

Other aspects of administration also seem to show some variation, though the evidence is inadequate to explain them. For example, the well-documented tax system at Pylos (see § 5.5.1) has hints of parallels at Knossos, but with a difference. The Knossos Mc tablets use a similar proportional system among taxable commodities to that seen at Pylos, but the commodities themselves are not the same. Another tablet, KN Nc 5100, lists four of the commodities taxed at Pylos, but in different proportions. Even patterns of scribal record-keeping differ from site to site, in ways that reflect their different environments (OLIVIER 1984). The Knossos tablets were found clustered in offices or departments of various sizes, while at Pylos the great majority came from a two-room Archives Complex (see § 5.2.1, 5.2.5). Two-thirds of the 65 scribes identified at Knossos are fully specialised, in that they have left tablets confined to a single branch of a single topic — for example, in the textile industry, a certain type of cloth, or a certain phase of production. Alongside them are fourteen semi-specialised scribes who monitor several phases of production, or several different aspects of a topic, usually within a department. Rarest are the four non-specialised scribes, whose work covers unrelated topics in several different departments. By contrast, only 26 scribal hands have been securely identified at Pylos, yet eleven of these are non-specialised; six each are fully and semi-specialised. Whereas at Knossos the scribal department seems to be the chief organising principle of record-keeping, and semi-specialised scribes often record several aspects of industrial production, such tasks are differently divided among scribes at Pylos. Allocations of raw materials to perfumers are written by different scribes than those monitoring the finished product, and the two types of records are not stored together. Similarly personnel records in the Northeast Building are handled by a different scribe from records of the tasks to which the personnel are assigned. Further variation is seen at Mycenae, where scribal departments in the West House Group outside the citadel are only partly linked to one another (for more information about scribes and how their responsibilities and organisation vary from centre to centre, see SHELMERDINE 1999, 564–573).

### § 5.7. CONTACTS BETWEEN STATES

Records of foreign political and economic relations are lacking among the extant tablets, though people and goods from elsewhere do appear (see § 5.4.2.2, and Chapters 4, 5, 6). Just so we can find little written record of contact between one state and another, though as noted above (see § 5.6) communication among different parts of Mycenaean Greece is clear archaeologically. State to state

contact is also confirmed by the circulation of inscribed oil jars, some marked as 'royal' (see § 5.3.1; below, Chapter 8). Chemical and petrographical analysis of the clays from which these jars were made show, for instance, that some jars from Thebes and Mycenae came from west or south-central Crete (DAY – HASKELL 1995; '*Ivory Houses*', 301–320). Even if the jars were recycled, the circulation of goods among different states is discernible here. More indicative still, to my mind, is the word *te-qa-de*, *Thēgʷans-de* on tablet X 508 from Mycenae. The toponym *Thēgʷans*, 'Thebes' is combined here with a postposition meaning 'to', 'toward', so the translation is 'to Thebes'. Scholars were originally reluctant to assume that the reference was to Boeotian Thebes instead of to a lesser-known place in the state of Mycenae itself (e.g. *Documents*<sup>2</sup>, glossary), but the equation can now be made with confidence. The tablet refers to textiles, and to a 'Collector' (less likely a god; see KILLEN 1979, 176–178) named *ma-ri-ne-u*, *Mallineus* (as an attractive possibility) or to his personnel; textile workers in the service of *ma-ri-ne-u* also appear in textile tablets from Thebes itself. Furthermore, the same word 'to Thebes' appears on three Theban sealings (Wu 51, 65, 96), indicating deliveries to the centre. Thus the textiles on MY X 508 are being sent from Mycenae to Boeotian Thebes. In this light it is significant that the ethnic *te-qa-jo*, *Thēgʷaioς*, 'Theban', also found at Thebes (Wu 47 and the new tablet Gp 178), recurs once each at Pylos and Knossos. The presence in one state of an individual (or family) from (or someway linked with) another is not implausible in a culture where goods circulated as they did, and where foreign ethnics are also found (see § 5.4.2.2). A similar instance is provided by the group of tablets recently excavated at Thebes, several of which contain the name *ra-ke-da-mo-ni-jo*, *Lakedaimonios*, clearly based on the ethnic 'Lacedaemonian' (Fq series, Gp 227; TOP, 214–215). Apart from these few instances, however, contacts between states were 'off the record' as far as Mycenaean scribes were concerned.

## § 5.8. REFERENCES FOR CHAPTER 5

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## CHAPTER 6

# MYCENALEAN ECONOMY\*

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§ 6.1. It has long been clear that the closest parallels for the type of economy<sup>1</sup> which is revealed by the Linear B tablets are to be found, not in the later Graeco-Roman world, but in the contemporary and earlier ancient Near East (and in comparable societies in other areas and periods).<sup>2</sup> As VENTRIS and CHADWICK were among the first to point out, there are often striking resemblances between the contents of the tablets and those of records in contemporary Near Eastern societies;<sup>3</sup> and as early as 1957 M.I. FINLEY convincingly demonstrated that what lay behind these resemblances was similar economic systems: economies, in the two areas, in which the key role in the movement of goods and the employment of labour was played, not by a market or money, but by a central redistributive agency: in the Near East, by a central palace or temple; in the

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\*\* This is a revised and updated version of my chapter, *The Linear B tablets and the Mycenaean economy*, in the *Linear B* volume, omitting Section II (see n. 4 below). The structure and much of the narrative of the original remain unchanged; but I have substantially revised a few passages, most notably those on land-tenure (where I have been much helped in formulating my revised version by the excellent studies of Pia de Fidio) and on evidence for areas of the economy in which the palaces may well not have had a direct (or any) involvement (in writing on this topic I have been able to draw with profit on the many recent studies by scholars seeking to combine archaeological evidence with the textual data). I have also made more minor changes in the Appendices on Trade and 'Industrial' Production; and I have added or expanded a number of notes, some to mention recent literature, and others to clarify points made in the original discussion which some readers appear to have misunderstood, or to respond to criticisms of the original paper. I am most grateful to John Bennet for his comments on a draft of the paper, and to Lisa Bendall, Pia de Fidio, Paul Halstead and Sofia Voutsaki for discussion of many of the matters discussed in it: none of whom, of course, must be held responsible for any of its (many) shortcomings.

<sup>1</sup> On the validity of the use of the term 'economy' in this context, see FINLEY 1970, 19, who quotes POLANYI's observation that in early societies 'only the concept of the economy, not the economy itself, is in abeyance'.

<sup>2</sup> On the centrally-directed, non-money economies of Ancient Egypt, Imperial China and Mogul India, see HICKS 1969, 17ff. On the similar economy of the Inca state, see the admirable study by J.V. MURRA (MURRA 1980).

<sup>3</sup> *Documents*<sup>1</sup>, 106 'These contemporary records present the most useful and significant analogies with the Mycenaean tablets and will often be found quoted in our commentary'.

Mycenaean world, by a central palace.<sup>4</sup> Since Finley's discussion, continuing work on the tablets and discoveries of new documents have provided us with a number of fresh insights into the detailed workings of the Mycenaean economy,<sup>5</sup> and in particular into the workings of the taxation system and the organisation of 'industrial' production. But nothing that has emerged as a result of these investigations and new discoveries has suggested that we need alter his basic conclusions about the nature of the society: that this is a redistributive (or command) economy of the Near Eastern (or 'Asiatic') type.<sup>6</sup>

<sup>4</sup> FINLEY 1957. For subsequent comparisons between the Mycenaean economy and the Near East, some in general, others on points of detail, see e.g. POLANYI 1960; LENCMAN 1966; RENFREW 1972, 368; SARKADY 1975; GELB 1976; DE FIDIO 1977; MARAZZI 1979; FOSTER 1981; KILLEN 1983; MELENA 1984; UCHITEL 1984; id. 1990-91; DE FIDIO 1992; ead. 2001 (two excellent general discussions, which rightly stress the point that the Near East 'should ... be interpreted not as a homogeneous entity but with all its variants and local specificities' [2001, 17]). For a similar emphasis on the differences between the bureaucratic systems in operation at different periods in the Near East, with particular reference to the Ur III kingdom [2100-2000 BC], the First Dynasty of Babylon [1800-1550 BC] and the Middle Assyrian kingdom in the 13<sup>th</sup> century BC, see POSTGATE 2001). In Section II of my *Linear B* chapter (1985, 256-261) I set out reasons, based on Sir John HICKS' distinction between a 'classical bureaucracy' and a 'limited bureaucracy' (HICKS 1969, 17ff.), for following FINLEY in rejecting medieval feudal society as an appropriate comparator for the Mycenaean economy. This now seems generally accepted: see DE FIDIO 1992, 174. S. DEGER-JALKOTZY, however, in a thoughtful and stimulating paper in *Studies Chadwick* (DEGER-JALKOTZY 1987), has criticised some aspects of my discussion, and has suggested that there is more in common between some forms of feudal society and the Mycenaean world than I am prepared to allow for (though I do allow for some similarities: *op. cit.* 258f.). See, however, also DE FIDIO 1992, 194-196 for some reservations about the applicability to the Mycenaean (or ancient Near Eastern) situation of the Weberian model of the *oikos* on which DEGER-JALKOTZY's conclusions are ultimately based.

<sup>5</sup> Throughout this essay I use the expression 'Mycenaean economy' as a short-hand way of referring to the economies of the Mycenaean palace states, taken as a whole. This is not to suggest that there were not some differences in detail between the economic activities of the various states: for instance, there appears to have been a greater centralisation, in terms of its location, of the state-controlled textile workforce at Pylos than at Knossos: see KILLEN 1984. But not only are the economies revealed by the records from the various centres of an identical non-market, non-money, redistributive type: there are astonishing similarities between the centres in terms of their taxation procedures, their methods of organising centrally-controlled 'industrial' production, and the technical vocabulary they use (the terms for different categories of land-holding; the titles of local officials; etc., etc.). See further KILLEN 1999(b), 87f. One must of course always be on one's guard about imputing a phenomenon found at one site only to 'the Mycenaean economy' as a whole; nonetheless, such are the undoubted similarities between the economies of the various states that a synthetic approach of the kind I attempt here does seem warranted (just as it seems legitimate to speak of 'the Mycenaean dialect' or 'Mycenaean Greek' as a whole, given the great similarity between all the sites in terms of the variety of Greek used by the scribes, despite the existence of certain minor differences e.g. as between Knossos and the mainland and between individual scribes at Pylos).

<sup>6</sup> In using the term 'Asiatic', as FINLEY also does, I do not of course intend to endorse the now outmoded Marxist concept of 'the Asiatic mode of production' (on which see e.g. DE FIDIO 1992, 175).

As a brief description of the essential characteristics of the Near Eastern redistributive economies, it is difficult to improve on the following, to which we are again indebted to M.I. FINLEY (though it would nowadays be recognised that his description fits better with the picture of economy revealed by the palace archives of Ur III Mesopotamia [2100–2000 BC] than with that attested by the Bau temple archive at Girsu in the pre-Sargonic period [3000–2350 BC] and by some other archives in other periods, which reveal less — in some cases much less — central intervention in the workings of the economy):<sup>7</sup>

The Near Eastern economies were dominated by large palace — or temple — complexes, who owned the greater part of the arable, virtually monopolized anything that can be called 'industrial production' as well as foreign trade (which includes inter-city trade, not merely trade with foreign parts), and organized the economic, military, political and religious life of the society through a single complicated, bureaucratic, record-keeping operation for which the word 'rationing', taken very broadly, is as good a one-word description as I can think of. None of this is relevant to the Graeco-Roman world until the conquests of Alexander the Great and later of the Romans incorporated large Near Eastern territories. I do not wish to over-simplify. There were private holdings of land in the Near East, privately worked; there were 'independent' craftsmen and pedlars in the towns. Our evidence does not permit quantification, but I do not believe it is possible to elevate these people to the prevailing pattern of economy, whereas the Graeco-Roman world was essentially and precisely one of private ownership, whether of a few acres or of the enormous domains of Roman senators and emperors, a world of *private trade, private manufacture* (FINLEY 1973, 28f.).

The aim of this chapter is to provide a brief summary of how far this picture of the Near Eastern economies tallies with the picture we obtain from the tablets of the workings of the Mycenaean economy. Before we begin this comparison, however, it will perhaps be useful to say a brief word about the nature of the evidence for economy that the documents provide us with.

<sup>7</sup> On the Ur III period (2100–2000), and particularly the reign of Šulgi, under whom strong central, bureaucratic control was established over a large kingdom, see e.g. POSTGATE 1992, 41–43. For comparisons between Ur III records dealing with the state-controlled textile industry (admirably elucidated in WAETZOLDT 1972) and Knossos records dealing with the same subject, see KILLEN 1979(a). For the modern view of the extent of temple control over the economy of Lagas in the pre-Sargonic period (that it was less complete than was argued in the 1920s and 30s by DEMEL and SCHNEIDER) see POSTGATE 1992, 109, 186: though note POSTGATE's statement (*op. cit.* 186) that 'although we no longer think that the temples of Lagas controlled the entire territory, they did undoubtedly constitute a major component of the economy and society'. Finally, on the wide differences in 'administrative reach' revealed by the records of different ancient Near Eastern economies (by which he means 'the extent to which the central administration controlled the economic transactions in which it was involved') see POSTGATE 2001, 183. As POSTGATE notes, 'some regimes extended their administrative reach to all corners of society, others were content to draw in their horns and allow production and commercial activities to take place in what today we might call the private sector'.

§ 6.2. Although the tablets give us invaluable contemporary evidence for the detailed day-to-day workings of Mycenaean palace bureaucracies, they are far from representing a full record of an economy. First, they are merely *temporary records*: *aides-mémoire*, often of an extremely laconic character, which relate, with few possible exceptions, only to the single, last year before the destruction of the particular palace that contained the archive.<sup>8</sup> As a result, they allow us little or no insight into economic *trends* in the individual kingdoms. Nor do the documents provide us with anything approaching a complete record even of the single years that they do (mainly) cover. They contain virtually no information, for example, about the external relations of the palaces, whether with other Mycenaean centres or with the world beyond these; and one consequence of this is that we know nothing for certain about the mechanisms of the external trade of the kingdoms.<sup>9</sup> Nor, again, are the documents always sufficiently specific to enable us to answer important questions about aspects of the internal economy, such as who ultimately owned the land in the state. Finally, the tablets may well provide us with an *unbalanced* picture of the Mycenaean economy. These are the records of a central bureaucracy; and it is common for records of this type to provide us with a one-sided view of the kingdom or state to which they relate. As records of the central authority, they will naturally concentrate on matters which are of concern to the centre; and they may well in so doing give an exaggerated impression of the importance of the centre in the workings of the economy, taken as a whole.

§ 6.3.1.1. In spite of the difficulties, however, it is often possible to make reasonably secure comparisons between the Near Eastern redistributive economies and the world of the tablets; and where such comparisons are possible, the parallels between the two normally prove close. I begin with the key question of the ownership and tenure of *land*.

As we have noted earlier, it is still not possible to say for certain who ultimately owned the land in Mycenaean kingdoms; but there is a good deal of evidence to suggest that, just as palaces and temples in the Near East were often significant owners of land, so the central institutions in the Mycenaean world had an effective control over — even if they did not technically own — substantial tracts of the arable. Our main evidence for land-holding is provided by the records in the E- series at Pylos; and it seems reasonable to infer that

<sup>8</sup> For two possible exceptions, see DRIESSEN 1990 (*re* the tablets from the Room of the Chariot Tablets at Knossos); *Scribes Pylos*, 18, 111-113, 171f. (*re* the tablets in Hand 91 at Pylos).

<sup>9</sup> Though see further Appendix I below.

these records would not have been compiled by the centre if the palace itself did not have some practical interest in the plots that are recorded on the tablets (cf. *World*, 116). The question then arises of the precise nature of that interest. There is no information on the tablets about the precise location of the plots vis-à-vis others in the same area: so we can presumably rule out the possibility that they are part of a cadastral survey, made by the palace to enable it to arbitrate if disputes should arise over the ownership of land.<sup>10</sup> What we do know, however, is that the land-holders on the Er tablets and on Es 650 were expected to make contributions, of wheat or its equivalent in other agricultural products, to Poseidon and others, and that the amounts of those contributions were in some way related to the amounts in the GRA (WHEAT) entries that are shown at the ends of the records.<sup>11</sup> All entries on the E-tablets, however, conclude with GRA figures; and it would seem a reasonable conclusion therefore that all these records were compiled for the same *fiscal* purposes as the Er records and Es 650:<sup>12</sup> that in the case of each of the plots that is recorded a contribution, most likely in wheat, or some equivalent agricultural product, was expected by the centre in respect of the holding, and that the size of this contribution was dependent on the size (or 'rateable value') of the plot, as indicated by the GRA entry.<sup>13</sup> The same conclusion is suggested by the numerous references in the records to obligations to

<sup>10</sup> Cf. *Mémoires* IV, 117. 'A strictement parler, il n'existe pas de cadastres mycéniens.'

<sup>11</sup> For detailed discussion of the relationship, see *Documents*<sup>2</sup>, 456ff.; DE FIDIO 1977. I assume throughout this study that the traditional identification of ideogram \*120 as wheat is correct. For the suggestion, however, that \*120 is barley and \*121 wheat see PALMER 1992. But see also HALSTEAD 1995(b) for a defence of the traditional transcription.

<sup>12</sup> For a similar conclusion, see BENNETT 1956, 120: 'We notice that the record is of the names of the holders of land, of relationships among two not entirely exclusive groups of landholders, and of the sizes, but not of the boundaries or position of their holdings. The most likely purpose for information so limited would appear to me to be an assessment for the levying of taxes or of services. Possible, but less likely to be so complete, would be the record of the receipt of such taxes.' See also *Mémoires* IV, 117f.; MARAZZI 1979, 118; FOSTER 1981, 81; and compare POSTGATE 1974, 227ff.

<sup>13</sup> FOSTER 1981, 81 suggests that the purpose of drawing up the Eo/En and Eb/Ep tablets may have been to provide a basis for an exaction of service, rather than a contribution of produce. As she notes, no record of the assessment or collection of an impost on this land has been preserved; whereas we do possess lists of tribute due from other land-holdings (the Es records, etc.). It would be surprising, however, if the only contribution required in respect of this land was service, to find such exact 'measurement' of the plots as is suggested by the GRA figures on the records, many of which involve fractional amounts of WHEAT. For the payment of land-taxes in kind (and the distinction between 'rents' and 'land-taxes') see JONES 1974, 178: 'The land-tax [in antiquity] was normally 10 per cent of the crop. The Seleucids and Attalids levied a tithe, and the *artabieia* imposed by the Ptolemies on sacred and private land came to the same thing, since the average crop in Egypt was ten *artabae* per *arura*. The Ptolemies imposed much higher rates — up to 5 or even 6 *artabae* — (half the crop or more) on royal lands, but these were rents, not taxes.'

perform duties,<sup>14</sup> though the precise nature of these remains obscure. Though it is not explicitly stated on the records, it seems reasonable to suppose that these services were expected in connection with the holdings.<sup>15</sup>

**§ 6.3.1.2.** What is much more difficult to determine, however, is the precise nature of these holdings and the basis on which they were held. A number of the plot-holders on the E-tablets are identified not only by name but also by means of a professional description; and some are specifically stated to be craftsmen, etc. 'of' the king and 'of' the *lāwāgetās*, who is plainly a significant figure in the palace hierarchy, and may be the crown prince. Though certainty is impossible, it is tempting to suspect that these are persons who have been allocated their holdings by the palace authorities because of their connexion with the centre,<sup>16</sup> and that the same holds good for the other persons known to have close links with the palace who are mentioned as land-holders on other records in the archives, some in the E-series and others elsewhere.<sup>17</sup> Even, however, if this is the case, we still cannot establish whether the land in question was technically part of a royal estate (in which case, one might perhaps compare with the holdings of the king's fuller, etc. on the E-tablets the 'prebend' holdings allocated to office-holders on temple and royal estates in the ancient Near East),<sup>18</sup> or land on which the palace was able to allocate holdings, although it did not technically own it. That the latter is a real possibility, in some cases at least, is made clear by the description of some of the holdings on the E-tablets as *pa-ro da-mo*, 'chez' or from the *dāmos*, and the very good chance (though this is more controversial) that most at least of the land mentioned in the series is technically speaking *dāmos* land.<sup>19</sup> Though discussion

<sup>14</sup> Such as the *wo-ze-e* obligations of holders of *ke-ke-me-na* land.

<sup>15</sup> *World*, 113. If land carried with it an obligation to provide service, this would not of course exclude the possibility that contributions in kind were also expected from it. On the (small) contributions of produce which were expected in respect of palace-allocated 'office' land in C13-14 Ugarit, see HELTZER 1976, 39 n. 92.

<sup>16</sup> DE FIDIO 1992, 181; cf. FINLEY 1957, 139 (though see also n. 22 below).

<sup>17</sup> DE FIDIO, loc. cit. As DE FIDIO points out, these include, besides the *lāwāgetās* and members of his 'household', (a) *e-qe-ta*, *lhek<sup>m</sup>etāt*, 'followers' (one of whom is plausibly identified as the 'collector' *a-pi-me-de*, *Amphimēdēs*; see Mémoires III, 107) and *e-qe-si-jo do-e-ro*, *lhek<sup>m</sup>esioi do(h)eloi* (probably 'servants' of *a-pi-me-de*); (b) priests and priestesses; and (c) administrative officials (such as the *po-ro-du-ma*, deputy *du-ma*, probably mentioned as a land-holder on Eb 149.1/Ep 613.4).

<sup>18</sup> On these, see e.g. GELB 1965, 241; POSTGATE 1992, 186f. See, however, DE FIDIO 1992, 181 on the difficulty of identifying any of the numerous different categories of land-holding mentioned on the records as "plus 'de service' que d'autres".

<sup>19</sup> For arguments in favour of regarding not only the *ke-ke-me-na* but also the *ki-ti-me-na*, *iktimenāt*, land on the E-tablets as land in or of the *dāmos*, see DE FIDIO 1977, 145-161; cad. 1987, 142-147; KILLEN 1998(a).

continues as to what precisely the *dāmos* was<sup>20</sup> (village community? [DE FIDIO 1987] provincial administrative district? [*World*, 76f.]), and while the *dāmos* land on the E-tablets would presumably not have been recorded in the palace archives if the palace did not have at least a degree of control over it, there is much to suggest that it was not something coterminous with the central power.

§ 6.3.2.1. We have, then, in the E-tablets at Pylos detailed records of individual land-holdings which may well have been allocated, if not actually owned, by the centre, and from which the centre almost certainly derived revenues in the form of crops or the like. It would be dangerous to extrapolate from this, however, and to assume that there was a similar pattern of land-tenure, and similar close central control of land, throughout the kingdom (*Documents*<sup>2</sup>, 443). At most, the E-tablets relate to five different localities (for details, see *Mémoires* IV, 117); and it may not be an accident, given this very limited coverage, that at least one of the areas dealt with in the series, *pa-ki-ja-ne*, appears to have been close to the centre,<sup>21</sup> and that some at least of the land-holders whose plots are recorded in the series are evidently persons of a somewhat exceptional character: the religious personnel whose plots are listed on many of the records; the craftsmen 'of' the king and the *lāwāgetās* whose holdings were mentioned in the last paragraph.<sup>22</sup> Clearly, one possibility

<sup>20</sup> See especially *Mémoires* III, 137-154; *World*, 76f.; DE FIDIO 1977, 145-161; ead. 1987 (as always, an extremely acute and stimulating discussion — though it should be noted that some of the suggestions offered in the paper, e.g. that *ke-ke-me-na* land was the weak point of the *dāmos* in its relations with the centre, are based on interpretations [in this case, that *ke-ke-me-na* contains the same root as Gk. *khērā*, 'widow', and means 'abandoned'] which cannot be regarded as certain).

<sup>21</sup> For this point about *pa-ki-ja-ne*, the place to which the vast majority of the E-tablets relate, see *Documents*<sup>2</sup>, 443. The only other place mentioned in the E-tablets for whose location we have anything approaching certain evidence is *a-ke-re-wa*. This is mentioned on PY Eq 213, which appears to record a kind of inspection of land-holdings by a certain *a-ko-so-ta*, /Alkoxitās/, apparently an important palace official. For the suggestion that *a-ke-re-wa* (which is certainly in the Hither Province) is a coastal town to the south of Pylos, probably on the bay of Navarino, see *Documents*<sup>2</sup>, 416.

<sup>22</sup> *Documents*<sup>2</sup>, 443. Certainly, it is dangerous to argue, on the evidence of the E-tablets alone, that because the land-holders mentioned in the series range from 'slaves', shepherds, potters and the like up to the king himself, land-holding in general in the kingdom is likely to have been connected with an office or occupation (see FINLEY 1957, 139). Far from reflecting the whole gamut of professions and occupations in the Mycenaean world, the land-holders on the E-tablets may all be persons of a special or elevated status. As has just been noted, some of the craftsmen referred to in the series are specifically described as 'of' the king or the *lāwāgetās* (and are probably best explained as members of their personal households: see CARLIER 1984, 71); and the fact that the *do-e-ro*, /do(h)eloī/, of *a-pi-me-de*, /Amphimedēs/, whose plots are recorded on PY Eb 1186, etc. are the 'slaves' of one of the most important dignitaries of the

which we cannot exclude in the light of this evidence is that the areas dealt with on the E-tablets were all closely adjacent to the palace,<sup>23</sup> and that the centre exercised a much less direct and detailed control over land in areas that were more remote from the centre.

Indeed, some support for a broad picture of close control of land in the vicinity of the palace, and a much more decentralised regime in more remote areas, appears to be provided by other evidence. First, just as at Pylos detailed records of land-holdings often involve the place *pa-ki-ja-ne* close to the centre, so the great majority of the (admittedly scanty) detailed records of land-holdings at Knossos involve the places *qa-ra* and *ti-ri-to*, which we may again feel confident lay reasonably close to the palace (KILLEN 1987[a], 171f.). Second, a recently discovered record of land at Thebes again relates, in part at least, to places in the vicinity of the centre.<sup>24</sup> Third, as M. LEJEUNE has emphasised, there is undoubtedly a marked difference of approach in calculating the contributions listed on the Ma and Na tax records at Pylos, which relate to the whole kingdom, and those levied on the land-holders on PY Er 312, 880, Un 718 and the Es tablets (*Mémoires IV*, 76). In the latter, as we have already noted, the contributions expected are (roughly) proportional to the dimensions of the land held by the contributors. In the former, by contrast, the taxes are levied on whole localities (Na) and districts (Ma); and whatever precise method was used for calculating the assessments on the Ma tablets,<sup>25</sup> it is clear that they are

Pylian kingdom makes one reluctant to suppose that the fact that these particular 'slaves' have land-holdings is necessarily a proof that the same held good for slaves in general in the kingdom.

<sup>23</sup> It would certainly not be surprising if the land allocated to palace retainers was located in the immediate vicinity of the palace. For a comparable situation, see MURRA 1980, 167, 179 on the 'royal perimeter' around Cuzco, the Inca 'capital': land within a certain radius of Cuzco where all holdings were 'crown, royal or church land'; where whatever was harvested 'went to the appropriate public warehouses'; and where royal retainers had holdings. It may also be significant that the contributions expected in connexion with the holdings on the Es tablets (and perhaps on the PY E-tablets more generally) are of *wheat*. In the Inca kingdom, 'we are told by Polo that the more remote provinces contributed only gold and cloth, while nearby areas produced the heavy and bulky food' (MURRA 1980, 111). It is true that we have records at Knossos of wheat which was probably harvested in areas, like *da-wa*, which are not close to the centre: see further below. But it is possible that these supplies were not sent to Knossos, but were used by local officials to feed the workforce in the same local area.

<sup>24</sup> For a photograph, a drawing and the text of the record (TH Ft 140), see ARAVANTINOS 1999, 54f. and *TOP*. For its identification as a record of land, see KILLEN 1999(c). Line 1 refers to land at Thebes itself (*te-qa-i*, /*Thēgʷāhi*/); line 5 records land at Eleon (*e-re-o-ni*, /*Eleōni*/), usually identified with the modern Arma on the road from Thebes to Tanagra.

<sup>25</sup> For discussion of this question, see WYATT 1962; SHELTERDINE 1973; OLIVIER 1974; *Mémoires IV*, 185-188; DE PIDIO 1982; KILLEN 1996.

based on a view of the taxable capacity of the districts as a whole, and not (directly at least) on the capacity of any individual land-holdings within the districts.<sup>26</sup> It is also noticeable how often the amounts of the individual localities' contributions on the Na tablets are multiples of 10 units, with 30 being a particularly common amount. This again suggests a roughness of computation that appears, at least at first sight, to distinguish these particular contributions (in flax) from those dealt with on the Es tablets, etc. (and probably, as we have suggested, on the E-tablets more generally), where the GRA (WHEAT) entries regularly involve fractional amounts.<sup>27</sup> And fourth and finally, the few records

<sup>26</sup> With the situation here, we may compare that revealed by taxation documents at Ugarit: HELTZER 1976, 7-47. Like the Ma taxation districts, the 'rural communities' of C13-14 Ugarit were required to make contributions to the centre in a wide variety of commodities, including silver, grain and wine. Here, too, the villages were treated as collective units for the purpose of assessment (HELTZER, *op. cit.* 34); and as also evidently with groups like the *ka-ke-we*, *ikhalkewes*, 'bronze-smiths', within the Ma contributing districts, they appear to have worked out the details of who should provide what of the contributions among themselves (HELTZER, *op. cit.* 45: 'Here again the village is treated as a single unit with no indication of how payment of the tax was distributed among the households or individual families'). It cannot be argued against this view of close control of land-holdings near the palace and a much more decentralised régime elsewhere that both the Ma and Na records (see below) include records of contributions from *pa-ki-ja-ne*. If the palace had a system for collecting taxes, say in flax, which could be used effectively in more remote places, it could well have decided for the sake of simplicity to use it for all regions, including those, like *pa-ki-ja-ne*, which were in the immediate vicinity of the palace.

<sup>27</sup> For round numbers on assessment figures as an indication of rough estimates of the liabilities, see JONES 1974, 151f.: 'The Kings of Egypt, Assyria and Babylonia expected regular gifts from the peoples subject to them, and their subjects gave them as much as they thought would satisfy them. The first two Persian Kings followed the same practice. "In the reigns of Cyrus and Cambyses", says Herodotus, "there was nothing fixed about the tribute, but they used to collect gifts". It was Darius who first divided the empire into satrapies and fixed the annual tribute of each in talents of silver, with occasional supplements in kind. *The sums are round and evidently based on the roughest of estimates of the wealth of the areas concerned* (my italics). Within each satrapy the satrap apparently apportioned the tribute among the several communities, which had to collect it themselves, in a similar fashion. It was not until after the suppression of the Ionian revolt that Artaphrenes, satrap of Sardis, "measured their territories by parasangs and by this measurement fixed the tribute for each". This was a local and exceptional measure, and very rudimentary; a parasang is about 6 kilometers. But it was the first attempt at a scientific assessment of taxable capacity.' It is just possible that the round numbers on the Na tablets may not in fact be such a distinctive feature of these records, as compared with the E-tablets. As PIA DE FIDIO has shown (1977, 72), the *hierā chōrā*, 'sacred estate', which lies behind the *dosmoi*, '[assessments for] contributions', to Poseidon and others on the Es tablets may well have had a 'rateable value' of 1/300 of wheat (or 30 whole units); is it significant that 30 units (of SA) is also one of the common 'targets' for local contributions on the Na tablets? On the other hand, if the evidence of PY Nn 831 (see below) gives a typical picture of how the contribution for a district was made up, the 30s in the case of the Na tablets will have been made up from a series of individual contributions which themselves involve round numbers: unlike the 30 on the Es tablets, which has been made up from measurements of individual holdings that regularly include fractional figures.

which we possess at Pylos and Knossos which refer to land in parts of the kingdom apparently not as close to the centre as those dealt with in the (Pylos) E-series and (Knossos) Uf records normally (though not invariably) deal with areas as a whole, or with large-scale land-owners, as distinct from smaller, individual holdings within larger estates.<sup>28</sup>

**§ 6.3.2.2.** While, however, I believe that there is much truth in this picture of direct palace control decreasing the further one gets from the centre, it would also I believe be mistaken to see too hard and fast a distinction between the land in the immediate vicinity of the centre, over which the palace exercises very close control, and land in more remote areas in which the palace takes no interest, other than the indirect one that it receives some of its produce in the form of taxes: taxes that are assessed on the areas as a whole, rather than on individual land-holdings within the areas. First, while the point still holds good that the frequent round numbers in the village assessments on the PY Na tablets betoken a roughness of calculation which distinguishes these contributions from those listed on the Es tablets (and those probably implied by the E-tablets more generally), we do have one record, PY Nn 831, which probably relates to one of the localities that are dealt with in more summary form in the Na series, and which reveals a knowledge by the palace of the identity of the individual contributors of flax (SA) within this area (probably *ko-ri-to*, */Korinthos/*)<sup>29</sup> some of whom, like *a-mu-ta-wo*, */Amuthāwōn/* (l. 7), are mentioned by name, while others, like *ka-ke-u*, */khalkeus/*, 'the smith' (l. 11), are identified by a trade-name or title:<sup>30</sup>

<sup>28</sup> See, at Pylos, An 830 (land and its holders [DA] at *a-te-re-wi-ja* [l. 6] and *e-sa-re-wi-ja* [l. 7] in the Further Province) and perhaps the holdings 'of' the king and the 'collector' *we-da-ne-u* on the Na tablets (see further below), though we cannot confirm that these are in remote locations; at Knossos, E 843 (land or wheat [which would presumably imply land] 'of' the 'collector' *e-me-si-jo* at various locations, including *pu-na-so*, [cf. E 7338] and E 1569 [land at *do-ti-ja*: l. 1] and 'of' the *läwāgetās* [also at *do-ti-ja?*: l. 2]). On the one clear exception to this general rule, KN F(2) 841, which gives details of small individual holdings at Phaistos and (probably) *do-ti-ja* (though they are seemingly on an 'estate' of a 'collector' *sa-pi-ti-nu-wo*), see KILLEN 1987(a), 174-177; on possible reasons for this departure from the norm, see KILLEN, *op. cit.* 177.

<sup>29</sup> Undoubtedly not the town on the Corinthian Gulf but a homonym within the Pylian kingdom.

<sup>30</sup> For a suggestion about the reason for the compilation of this record (that it relates to a place where there was an exceptionally large number of exemptions from tax), see KILLEN 1992-93(b), 120 n. 30; id. 1996, 147.

Nn 831.1	ko-ri[	]no ,	[[do-so-mo]]
.2	u-re[	]	SA 4
.3	a-mo-ke-re[	]	SA 1
.4	e-re-e-u		SA 2
.5	qo-u-ko-ro	[	]
.6	a-ro-je-u	[	] SA 1 [
.7	a-mu-ta-wo	[	] SA 4
.8	e-po-me-ne-ゅ[	]	SA 4
.9	ko-re-te[	]	SA 24
.10	po-me-ne	[	] SA 2
.11	ka-ke-u[	]	SA 1
.12-15 vacant			

Even more significant in the context of our present discussion is the evidence of those members of the Na series itself which contain entries involving the verb *ekhō*: *e-ke*, /ekhei/, 'he has, holds'; *e-ko-si*, /ekhonsil/, 'they have, hold'. As J. CHADWICK has convincingly demonstrated, these, like the *e-ke* references on the E-tablets, are likely to be references to land-holdings (*Documents*<sup>2</sup>, 469ff.; see further KILLEN 1979[b]; FOSTER 1981, 76), while the *SA* entries which follow them are indications of the amounts of the commodity which are payable to the centre in respect of the holdings. In some cases, these references are to holdings by single individuals (though one of them at least is a person of significance). PY Na 334, for instance, mentions a holding of the king (*wa-na-ka e-ke*, /wanax ekhei/), while Na 926 is plausibly explained as a record of /aktitos/ or /aktiton/ land held at the place *pa-ka-a-ka-ri* by a certain *a₂-ku-mi-jo*:

Na 926 .a                   , e-ke-de-mi , a₂-ku-mi-jo , SA 6  
                              pa-ka-a-ka-ri , a-ki-ti-to

'*Pa-ka-a-ka-ri*: *aktitos/-on* land: *A₂-ku-mi-jo* holds it: FLAX 6'.

Unfortunately, we cannot be certain of the purpose of this entry. One possibility is that it indicates that the plot in question, though normally liable to produce a contribution of 6 units of flax, will not in fact do so: presumably because of its status as /aktitos/, /aktiton/ land (for this view of the matter, see *Aspects*, 172f.) — a purpose of this kind seems to lie behind the *wa-na-ka e-ke* entry on 334: in this case, the land, or the flax it produces, is additionally described as /eleutheral/, 'free (of taxes)', 'remitted', *vel sim.* Alternatively, the point of noting that the land is /aktitos/, /aktiton/ could be that certain obligations

of service were (or were not) attached to it. As has frequently been noted, there are some striking similarities, both in names and amounts, between the Na tablets and the An coastguard records. Thus among the groups of personnel who are said to hold land on the Na tablets are the *ko-ro-ku-ra-i-jo* at the place *ka-ra-do-ro*; and a group of the same name is mentioned on the An records, on PY An 661. Again, it is tempting to compare the entry relating to the place *e-na-po-ro* on PY Na 1027 and that relating to *e-na-po-ro i-wa-so* on An 661: on the Na tablets, *e-na-po-ro* is due to contribute 70 units of flax; while the group of *e-na-po-ro i-wa-so* listed on An 661 consists of 70 men. Do these agreements perhaps reflect a situation whereby groups of land-holders in various Na districts were expected, not only to provide contributions in flax in respect of their holdings, but also to contribute military (or para-military) service?<sup>31</sup>

But whatever the precise explanation of the *e-ke*, *e-ko-si* entries on the PY Na tablets, it is clear from them that in certain circumstances the palace felt it necessary to acquire detailed knowledge even of individual land-holdings in remote areas, and that it was perfectly capable of acquiring such information by way of its administrative machinery. We may also note that there is a reference (though admittedly in an obscure context) on the edge of another Na tablet, 395, to land of the *ke-ke-me-no* type: one of the two main classifications of land that are regularly mentioned on the E-tablets. Moreover, we may well have evidence for the contribution of *services* to the centre in respect of land-holding on records other than the E- and perhaps the Na series. As J. CHADWICK has suggested, it is attractive to interpret PY An 724 as a record of exemptions from service as rowers (*e-re-ta*, /eretal/) which have been granted

<sup>31</sup> The similarities in the names and numbers in the two series were first noted by MÜHLESTEIN (1956, 16-18), who interpreted them as meaning that the troops on the An records were issued with one *SA* apiece. It is now clear, however (see above), that the *e-ke*, *e-ko-si*, *tekhei*, *ekhonsi*, 'he has, they have', entries on the Na tablets indicate, not that the individuals involved in them receive flax, but that they hold land on which flax is produced. For a more sceptical view of the significance of the Na/An correspondences, however, see *Documents*<sup>2</sup>, 471: 'All that the facts show is that at certain places liable for a contribution of flax, there were "occupiers" of land who bore special generic names and were drawn upon to provide the manpower required for the coastguard service'. But see also DE FIDIO 1987, 132 (and *op. cit.* 139 n. 37, where she mentions a letter from CHADWICK in which he too takes a less sceptical view). If the An records do reflect 'contributions' of military (or para-military) services by dependent land-holders, provided in respect of their holdings, this is not of course evidence that Mycenaean Pylos was a *feudal* society. Though military service based on land-holding is one of the characteristics of medieval European feudal societies, it is also found widely in 'Asiatic' economies in the ancient Near East. On the ancient Mesopotamian *erín*, for instance, a class of dependent labour, often of foreign origin, who were provided with land-holdings by the centre, and who were required in return to provide military service when this was needed, see GELA 1973.

to land-holders:<sup>32</sup> presumably land-holders whose holdings have rendered them liable to provide such service. The heading of the tablet speaks of 'rowers absent' (*e-re-ta a-pe-o-te, /eretai apehontes/*); and, as CHADWICK suggests, it is attractive to interpret the entries which stand in the body of the tablet as providing explanations of why these absences have occurred. Lines 2-4 of the tablet, for instance, read as follows:

- .2 me-nu-wa , a-pe-e-ke , a-re-sa-ni-e [ VIR 1 ]
- .3 o-pi-ke-ri-jo-de , ki-ti-ta , o-pe-ro-ta , [ e ]
- .4 e-re-e VIR 1 VIR

Given the parallels on lines 7 and 5 (*ra-wa-ke-ta a-pe-e-ke[ , e-ke-ra<sub>2</sub>-wo-ne* [nom.?] *a-pe-e-ke]*), it is attractive to take *me-nu-wa*, which is the name or title of an official (cf. *ra-wa-ke-ta*, /lāwāgetās/, in line 7), as the subject of the sentence; *a-pe-e-ke* could well be aorist (or perfect) of *aphiēmi* 'I discharge'; and *ki-ti-ta o-pe-ro-ta e-re-e* is plausibly interpreted as /kti(s)tān ophēlonta erēhen/. The purpose of the entry could well therefore be to record the exemption (*a-pe-e-ke*) by *Me-nu-wa* (or the *me-nu-wa*) of a land-holder (/kti(s)tān/) who owes service to the centre as a rower (/ophēlonta erēhen/). The term *ki-ti-ta* (and the closely related *me-ta-ki-ti-ta*) again appears in connexion with rowers on PY An 610; and it is possible that this tablet (and the apparently related PY An 1) is a record of similar service due in respect of land (see KILLEEN 1983). While at least one of the places that are referred to on An 724 (and on An 610), *a-ke-re-wa*, may well have been close to the centre, others, like *ri-jo*, probably Rhion, the modern Koroni, seem likely to have lain rather further afield. We have no evidence that the palace was aware of the precise dimensions of the plots held by these individuals; what does seem probable, however, is that the palace was aware of the identity of these persons, and of the obligations of service that were attached to their land.

**§ 6.4.** So much, then, for the nature of land-tenure in the kingdoms: as will be seen, much in this area still remains uncertain. But whatever the precise conditions under which land was held, and even if the palaces exercised a much less direct control over the land in remote areas than they did over plots in the immediate vicinity of the centres, it is still evident that the palaces had

<sup>32</sup> CHADWICK 1979; id. *Tractata*, 75-83. See also *Interpretation*, 131 on lines 11, 12 of the tablet: 'The intrusion of *ka-ma* and *e-to-ni-jo*, land tenure terms, into this context of rowers is puzzling, but the terms may single out the persons providing the man in question by virtue of their land-holding.'

a substantial interest in the agricultural production of a wide area surrounding them. This is clear from the large number of records at both Pylos and Knossos, some of which we have already mentioned, that deal with contributions to the centre. In the first place, these records show that the places from which the centres derived their revenues in raw materials and food extended over a wide area. At Pylos, for instance, the Ng totalling records for the Na flax records which we have mentioned earlier refer to a division of the area from which the contributions listed on these records come into two sectors, *de-we-ro-a<sub>j</sub>-ko-ra-i-ja* and *pe-ra<sub>j</sub>-a-ko-ra-i-ja*; and there can be little question that the two sectors in question are 'on this side' (*deuro*) and 'on the far side' (*perā*) of Mt. Aigaleon (*Documents*<sup>2</sup>, 144; see also RUIJGH 1972). Similarly, there are references on certain or probable 'contributions' records at Knossos to places as far distant from the centre as Phaistos in the south of the island. Moreover, while we have no means of quantifying the total amounts contributed to the centre in most individual commodities, much less the total contributions in all commodities, we do have some evidence to suggest that the palaces controlled a substantial proportion of the total production of these extensive taxation catchment areas (though its interests in commodities may well have been selective).<sup>33</sup> One tablet at Knossos, F(2) 852, for instance, records a minimum of 10,000 units of WHEAT (possibly as much as 775 tons) (*World*, 117f.) in connexion with the place *da-wo* in the south of the island; and while we cannot be fully certain that this is an amount that was actually under the control of the palace or its local representatives, the fact that the tablets seem normally to be concerned only with commodities, etc. in which the palace has a direct interest must make it overwhelmingly probable that this was the case (though it remains highly uncertain how the palace obtained this WHEAT).<sup>34</sup> Even less unambiguous is the

<sup>33</sup> As *Documents*<sup>1</sup>, 131 points out, no signs for the leguminous plants (beans, lentils, etc.) have been identified on the tablets; whereas, as HALSTEAD has stressed, these are widely attested in the archaeological record of Bronze Age Greece (HALSTEAD 1992, 60, 64; id. 1995, 229). HALSTEAD suggests that this and other contrasts between the archaeobotanical and the tablet data are significant; and he argues that 'palatial involvement in grain production was highly specialized, and that all pulses and some cereals were grown only outside palatial control and perhaps introduced to palatial contexts through exchange' (1995[b], 232).

<sup>34</sup> On the function of F(2) 852, see further KILLEN 1994-95, where it is suggested that the phrase *a-ma e-pi-ke-re* on it and the similar F(2) 851 is */hamā epi khēreīl*, 'harvest in hand' viz. that these and other comparable tablets at Knossos are records of crops which are now in store and available for disposal in the areas named on the records. On the vexed question of how such crops were obtained, see most recently KILLEN 1998(a), where it is suggested that they may have been produced on *dāmos* land, rather than on royal estates; HALSTEAD 2001, 40f., where it is suggested that they may have been obtained via a share-cropping arrangement, with the palace assisting the *dāmoi* by providing them with working oxen. For the important point that the recording of working oxen in the archives — some at least evidently owned by the centre — reveals at least some involvement by the palace in the working of land, see DE FIDIO 1992.

evidence of the Knossos Da-Dg SHEEP records. In their original state, these tablets are likely to have recorded something like 100,000 animals (OLIVIHR 1967; id. 1972), all evidently in the centre of the island,<sup>35</sup> and all set 'targets' for their wool production by the central authority (KILLEN 1964); and it is difficult to believe, given the evidence for the sheep carrying capacity of Crete in modern times, that these animals do not represent a substantial proportion of all the sheep present in this area of the island at the time of the compilation of the tablets.<sup>36</sup>

**§ 6.5.** We can also be certain of the *purpose* of these contributions of raw materials and foodstuffs to the central palaces. Here too there are close parallels with the Near East; for there can be little question that the palaces in Mycenaean kingdoms, like the central palaces and temples in the ancient Near East, are functioning as *redistributive centres*.<sup>37</sup> All our evidence strongly suggests

<sup>35</sup> See 183f.; HALSTEAD 1995(a), 18. For the suggestion that the working oxen on the Ch tablets at Knossos are palace-owned animals being temporarily assigned for ploughing duty, see KILLEN 1992-93(a).

<sup>36</sup> See (e.g.) KILLEN 1977 for the conclusion that most at least of the places on the Knossos tablets lay in the centre and west of the island. Moreover, the Da-Dg tablets appear to deal only with the centre of the island: sheep in the far west are listed on the separate Co tablets.

<sup>37</sup> A recent figure for the sheep population of Crete is 529,910 (see KILLEN 1964, 5 n. 23). RAU-LIN 1858, 419, however, gives a somewhat higher total: 666,000 sheep, plus a further 239,000 goats. It is evident from the detailed breakdown of these figures, however, that there were far fewer animals than this in the central area of the island i.e. the area covered by the Da-Dg tablets (see note 35). The total includes 195,000 sheep in the Khania province, and a further 150,000 in the Sitia area of the far east; if we subtract these figures, we are left with a sheep population for the more central region of 321,000.

<sup>37</sup> Cf. FINLEY 1957, 135. For a definition of redistribution, see POLANYI 1957(b), especially 250: 'Redistribution designates appropriational movements toward a center and out of it again'. As T.K. EARLE points out, however (EARLE 1977, 215ff.), this definition will cover no less than four different types of economic institution, and it is necessary when one is using the term to specify which of the four one has in mind. Some writers on the prehistoric Aegean, for instance, speak of the redistributive role of the palaces as if it were concerned merely with moving commodities that were available in one area of the kingdom to other areas in which they were not available. Its purpose is much more plausibly seen, however, as the *mobilisation of resources*: the acquisition of the food and raw materials needed by specialist craftsmen and others who served the centre and who depended on the centre for those commodities because they did not produce them themselves. On mobilisation of resources as one of the possible functions of redistribution, see EARLE 1977, 215 (who defines mobilisation as 'the recruitment of goods and services for the benefit of a group not coterminous with the contributing members'). See also HICKS 1969, 23f.: 'This alternative description of the non-market economy as a Revenue Economy, in which a "surplus" of food and other necessities is extracted from cultivators, and used to provide sustenance for public servants, is the final point which I want to emerge from this chapter'. All this is not to suggest, of course, that no benefits accrued to the contributor of taxes in the Mycenaean world. As EARLE points out in his discussion of the mobilisation of resources by Minoan chiefs, 'this is not to gainsay the important benefits to the local subsistence economy', including aid to destitute populations in time of famine, aid

that there was neither a market or money in the Mycenaean world;<sup>38</sup> and there is little question that in the absence of these means of exchange the palaces themselves played a major entrepreneurial role in the economy, and had a deep involvement both in the movement of goods and in the employment of labour in the kingdoms (cf. FINLEY 1957, 134f.). In particular, while we do have evidence to suggest that the palaces did not have a direct involvement in such relatively simple forms of 'industrial' production as net-making (see Appendix III below),

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in repairing irrigation systems, and capital investment in irrigation (EARLE 1977, 226). Similarly, as Marc BLOCH points out (1961, 265), the feudal lord in medieval European society was expected to provide his subjects with protection. It is quite possible that the Mycenaean subject expected a similar service from the central palace. (ii) In a recent paper, W.A. PARKINSON has queried the conclusion that the Mycenaean palaces functioned as redistributive centres, suggesting that the 'view of Near Eastern temples as functioning as redistributive centers has recently come under attack' (PARKINSON 1999, 74). In support of this claim, he quotes J.N. POSTGATE's observations (1992, 109): 'Until the 1950s... claims were even made that at Lagaš... the temple owned all the land and employed the entire population... This extreme view is now discredited. We cannot any longer maintain that because the temple collected commodities and distributed them to its dependants the entire economy operated through "redistribution" or that the priests controlled all agricultural production and commercial activity'. But the key word here is of course 'entire': POSTGATE is not suggesting that there was *no* redistribution at this period, simply that it was less extensive than used to be supposed. Compare POSTGATE, *op. cit.* 191 on 'the redistributive mode [of exchange which] is associated in the ancient Near East with the temples and palaces'.

<sup>38</sup> On the absence of money from the Mycenaean world see FINLEY 1957, 135. FINLEY's discussion needs little modification in the light of more recent information, except for the statement that 'no word on any existing tablet has been read which, by any reasonable analysis, can mean "to buy", "to sell", "to lend" or "to pay a wage"'. The term *qi-ri-ja-in*, clearly the ancestor of Classical Greek (*e)priato*, '(he) bought', is now known to appear on four (perhaps five) tablets in the Knossos A1 and B series. It is probably significant, however, that all the purchases listed on these records are evidently of *persons*: in most cases at least, 'slaves' (*do-e-ro, do-e-ra, /do(h)eloj, do(h)elai*). In Homer, the verb *priasthai* is similarly always used of the purchase of humans; and since it has been shown by E. BENVENISTE (1969, 136f.) that a number of other terms for 'buy', 'sell', 'price', etc. in Indo-European languages are likely to have been used originally in the same limited connexion, it may not be an accident that *priasthai* only appears in this context on the tablets. And not only have we no evidence that the 'buying' on the A1, B tablets involved money or markets: all the other transactions recorded on the tablets seem clearly to have been of a non-market, non-money character: the 'payment' of taxes in kind, the issue of raw materials and rations to a dependent, specialist workforce. It is true that there is one tablet in the archives where the 'value' of one commodity may be stated in terms of another, and where bronze is the commodity that may be used to indicate the 'value': see KN L 693 (see Chapter 9.11 below) — though its interpretation is far from certain. But there is nothing whatever to support the view (and a good deal to disprove it) that bronze was a regular standard in the Mycenaean world. If it had been a standard, we would surely have expected bronze ingots to have been of a standard weight or weights: but we have clear evidence that this was not the case, as witness the two Knossos records Oa 730 and Oa 733, which are concerned with listing the weight of ingots (if the ingot had been of a standard weight, such records would clearly have been unnecessary). Moreover, as G.F. BASS has reported, the ingots found in the merchantman wrecked off Cape Gelidonya were of widely varying weights (BASS 1967, 71).

coarse ware pottery production<sup>39</sup> and the making of obsidian blades (PARKINSON 1999), it is difficult to believe that they did not control all 'industrial' production in the kingdoms that involved a high degree of craft specialization. It is clear from the trade-names on the tablets (and from the astonishing degree of skill that Mycenaean craftsmen were able to achieve) that there was a considerable degree of division of labour in part of the work force in the kingdoms; and we can be in no doubt whatever that this degree of specialisation<sup>40</sup> could not have developed in a non-market, non-money economy without the intervention of a central redistributive agency: an institution interested in the luxury and other products of a highly specialised labour force, and, more important, capable of fostering such production, first, by gaining control of substantial quantities of raw materials and foodstuffs (this would normally be done by way of a taxation system or, in the case of raw materials not available locally, by external trade or exchange) and, second, by redistributing this revenue, in the form of working materials and rations, to a dependent or semi-dependent, specialist workforce. Without the existence of such a redistributive system, there would have been no means in a world which lacked markets for a highly specialised worker to obtain his livelihood.<sup>41</sup> And we have clear evidence that it

<sup>39</sup> On the extent of palatial involvement in pottery production see GALATY 1999; KNAPPETT 2001; WHITELAW 2001 (an admirable discussion, which seeks to quantify the annual pottery consumption of the palace of Pylos relative to that of the kingdom as a whole).

<sup>40</sup> It is important to emphasise 'this degree of specialisation'. One can of course find specialisation of a limited kind even in cottage industries (for instance, family members of different ages and sex contributing different elements to the process of making homespun cloth: sorting and cleaning the wool; carding and spinning; weaving; fulling); and there were doubtless specialist (though perhaps part-time) smiths, potters, etc. in Mycenaean villages. What I am referring to here is the much higher degree of specialisation revealed by such trade-names on the tablets as '(female) decorator of cloth', '(female) head-band maker', '(female) maker of *te-pa* cloth', etc., etc. See further the next note.

<sup>41</sup> It is certainly significant that once the palaces were destroyed at the end of the LH III B period, specialisation, to the degree to which we find it in the tablets, evidently ceases to exist. One indication of this is provided by trade-names. As A. MORPURGO DAVIES has pointed out (MORPURGO DAVIES 1979, 104f.), the only trade-names on the tablets which recur in Greek of the later Archaic and Classical period are those which reflect broad areas of craft activity, like 'bronze-smith' or 'potter': not those reflecting much more narrow specialisms, like 'maker of *te-pa* cloth', 'finisher' (of cloth or bronze) or 'head-band maker'. It is not, indeed, until the Hellenistic and Roman periods that one finds evidence in the Graeco-Roman world for a degree of specialisation in the textile industry comparable to that which the tablets attest. The circumstances which led to the growth of specialisation at that period, in the large towns of Roman Egypt, have been admirably discussed by E. WIPSZYCKA (1965, 126ff.). They include, as she points out, the existence of a well-developed exchange system (market-places and money), and, of particular importance, a sufficiently large and sophisticated market to enable workers to concentrate on a particular specialised aspect of their craft and still obtain a livelihood from it. On the importance of the size of the market as a factor influencing the growth of specialism in a market economy see also Xenophon, *Cyropaedia* 8. 2. 5 (what M.I. FINLEY has called the

is the palaces in particular, and not some other institution, which play this role of redistribution in the Mycenaean kingdoms. There was already strong evidence pointing in this direction before the decipherment: as was clear from the archaeological record, the palace buildings contain two of the key diagnostics of a major redistributive centre viz. administrative records and elaborate storage facilities, such as the western magazines at Knossos; and now that we can read the documents there can be little room for remaining doubt in the matter. First, there is nothing on the tablets to suggest that there was another major power in the kingdoms which was capable of organising redistribution, at least on a substantial scale.<sup>42</sup> Second, not only, as we have seen earlier, do

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most important ancient text on division of labour: 1973, 135), where Xenophon discusses the superiority of the meals served in the Persian court. See also (the classic early modern discussion) Adam SMITH, *The Wealth of Nations* Book 1, Chapter 3; though, as M.I. FINLEY points out (1973, 207 n. 25), the emphasis in SMITH's treatment is on the greater quantity, rather than quality, of production which can result from specialisation. But for the point that specialisation can also develop in a non-market economy, via a redistributive system, see HICKS 1969, 23: 'We have been so accustomed, ever since Adam Smith, to the association of division of labour with market development, that it comes with something of a shock when one realizes that this was not its origin. The first development of skill is independent of the market. It does imply specialisation, but it is a specialisation (like that which occurs when a new process is introduced into a modern factory) that is directed from the top. Specialisation is indeed a matter of the economies of scale; it does depend upon the concentration of demand; but the market is only one of the ways by which demand may be concentrated. There is another, which was already present, very mightily present, in the classical bureaucracies, and which even in the households of feudal lords was present to a not negligible extent.'

<sup>42</sup> For instance, it is difficult to believe that the so-called 'owners' or 'collectors' can have formed a genuinely independent sector of the economy, given that 'their' flocks and workgroups appear to have been treated by the palace administration in precisely the same way as its 'own' flocks and workgroups: set the same targets for production — which in the case of the sheep on the D-tablets evidently represents the total production of the animals; given the same rations, etc. For the suggestion that these 'owners' are members of the royal family, the nobility or the like who have been allocated (in some sense) part of the productive resources of the kingdom, see *World*, 129; KILLEN 1979(a), 176ff. Nor is there anything to encourage belief in a powerful and independent 'religious' sector in the economy, comparable to temples at some periods in Mesopotamian history. It is true that certain flocks and workgroups at Knossos, Pylos and Thebes are attributed to gods and goddesses: the flocks 'of' Potnia at Knossos; the bronze-smiths 'of' Potnia at Pylos; the flock 'of' Hermes at Knossos (see D 411); the workshop 'of' Potnia at Thebes (Of 36). In common, however, with the 'collector' or 'owner' workgroups, flocks, etc., these religious interests are not only recorded by the palace, but are treated by it in precisely the same way as its 'own' interests. Moreover, in sharp contrast to what happens in the Near East, the records of these 'religious' interests are not kept in separate temple archives. For a similar point about the subordination of religious to secular interests in the Mycenaean world, see HILLER 1982, 98f. Even in the Near East, indeed, it may be unwise to draw too sharp a distinction between the temple and the palace, at some periods at any rate. See, for instance, GELB 1969, 139: 'We may disagree with them [DEIMEL and SCHNEIDER] in their translation of *ē-Ba-ú* as "the temple of Bau", rather than "the household of Bau" (whatever the terms appear in the administrative-economic texts), and on their emphasis on the temple rather than the ruler or the state as the controlling agency of the Lagash temple households'.

the tablets contain records of contributions to the centre in raw materials and foodstuffs: they also reveal the centre in process of redistributing these revenues, in the form of working materials and rations, to a dependent, specialist workforce.<sup>43</sup> Thus many of the records at Pylos, Knossos, Mycenae and Thebes refer to the allocation of raw materials such as bronze and wool to workers, and to the production which occurs as a result of these allocations. At Knossos, for instance, the Lc(1) CLOTH and WOOL records deal with the 'targets' for textile production set for groups of women weavers and with the wool needed to complete these stints; and the Od(1) and Le records in the same scribal hand deal with later stages in the same production process: the Od(1) tablets with the delivery of the wool to the workers; the Le tablets with the later receipt of the finished product.<sup>44</sup> Other records again deal with the allocation of rations to workers. These include the Ab records at Pylos, which record the rations given to groups of women workers and their children, at Pylos itself and other locations, many of whom, like the women workers on the Lc(1) and Le records at Knossos, are specialist workers in a state-controlled textile industry.<sup>45</sup>

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As GELB has noted in another context 'in the Pre-Sargonic period at Lagaš, when you would expect the temple economy to flourish, it is the two queens (Saša and Baramtarra, the wives of the rulers of Lagaš) and not the priests who are at the head of the temple household of Bau' (privately circulated comments on I.M. DIAKONOFF's paper *Socio-Economic Classes in Babylonia and the Babylonian Concept of Social Stratification*, Bayerische Akademie der Wissenschaften., Philos.-hist. Kl., Abh. N.F. Heft 75 [München, 1972], 49-51). See too POSTGATE 1972, 820f.; and for a similar point about the relations between temple and civil administration in ancient Egypt, see KEMP 1972, 659f. See also, however, POSTGATE 1972, 821 for the point that in later periods in Mesopotamian history the link between king and temple loosened, and that in some instances 'the temples were able to assume some degree of political power'.

<sup>43</sup> There is no space here to enter into a full discussion of the status and degree of dependence of the various categories of workers recorded on the tablets. In brief, however, I believe that the women workers on the A-records at Pylos and Knossos are most probably fully dependent personnel who were supported by the palaces on a full-time basis (for this conclusion, see e.g. LENCMAN 1966, 151ff.; *World*, 79; though see also UCHITEL 1984; DE FIDIO 1987, 138, who take a different view), but that the bronze-smiths on the Pylos In records are more likely to have been semi-dependent workers who spent part of their time working in a palace-controlled bronze industry and perhaps as village bronze-smiths and part of their time working on land-holdings: perhaps land-holdings allocated to them by the centre in return for their services. It was on such land-holdings, I would suspect, that they produced the contributions of flax and other agricultural produce which they are shown as making, or temporarily not making, on the Pylos Na, Nn and Ma records: see KILLEN 1979(b).

<sup>44</sup> For the records in all these series, see KILLEN 1965. For other types of 'industrial' production recorded in the archives, see Appendix III below.

<sup>45</sup> In both her 1992 and 2001 discussions of the Mycenaean economy, P. DE FIDIO, while agreeing that there is a 'peculiar link between specialized production and the palatial centre' (2001, 20), wonders (very cautiously) whether that link was an exclusive one: whether some specialist work might not have been carried out on an independent basis, not controlled by the centre. As possible indications of such independent activity, she mentions *inter alia* the 'slaves' (*do-e-ro*, /*do(h)e-loi/*) — no fewer than five and thirty-one respectively — 'of' the bronze-smiths *To-sa-no*

**§ 6.6.** We can scarcely doubt that the major ultimate beneficiary of this production was the centre which organised it: the ruling élite, together with the hierarchy of officials and priests which surrounded the rulers. After their arrival at the centre, at least some of the products of the dependent labour forces in the kingdoms appear to have been placed in store in the palace buildings (at Knossos, for instance, the Ld[1] CLOTH and Sd CHARIOT tablets both seem certain to record stores, mostly, it would seem probable, at the centre itself);<sup>46</sup> and there can be little doubt, in the light of analogies both in Homer and in the ancient Near East, that stores of this type would have been of considerable importance to the centre as a source of prestige and of economic power.<sup>47</sup> It is possible, indeed, that some of the items of luxury production which are mentioned on the tablets were never intended for use in the narrow sense of the term, but were objects that would have remained in store until such time as

and *A-mu-ta-wa*, /Amuthāwōn/, on the Pylos Jn records; the workers 'of' 'collectors' on records of the Knossos, Pylos and Thebes textile industries; the records relating to *o-pa*, probably /hopā/, 'finishing', workshops at Knossos and Pylos; and the documents relating to 'the "payments" or "benefits" (*o-no*, *o-na*), awarded by the palace in exchange for products and supplies bought, so to speak, "on the market"' (DE FIDIO 2001, 22). Such evidence as we possess, however, is consistent with the conclusion that *o-no* (/onon/, literally 'benefit') 'payments' were given only in return for relatively simple artefacts (which might have been produced using a domestic mode of production): see further Appendix III below; nor does there seem much in what (little) we know about the 'collectors' (see n. 42) to encourage the belief that they (or the bronze-smiths *To-sa-no* and *A-mu-ta-wa*, who DE FIDIO compares with the 'collectors') were engaged in high-grade, specialist production wholly or partly independently of the palaces. Certainly, given our present evidence, I should myself be hesitant about describing them as "'entrepreneurs'"... to whom the palace appears to have in part delegated the organization of certain productive activities': DE FIDIO, *op. cit.* 23. Note, moreover, S. VOUTSAKI's conclusion (VOUTSAKI 2001), based on archaeological evidence for the location of workshops engaged in the production of prestige goods, and the distribution of these artefacts in graves, that the production, circulation and consumption of such objects was strictly controlled by the palaces.

<sup>46</sup> For the conclusion that the Ld(1) tablets record stores, see first FURUMARK 1954, 44 (and for further discussion see KILLE 1979[a]). On the Sd tablets as records of stores ('stockage') see Mémoires III, 298. It is noticeable how many points there are in common between the Ld(1) and the Sd tablets. Both start with a term in majuscule indicating the general content of the record (*pa-we-a*, /pharwehal/, cloths; *i-qi-ja*, /hikkīja, -ail/, chariot[s]); and both provide a great deal of detailed information about the objects they record. No place-names are found on the Ld(1) tablets, in spite of the fact that they record *pa-we-a* which we know from the Lc(1) tablets (see KILLE, 1979[a]) to have been produced in a number of different areas. Given the other resemblances between the two series, one is tempted to conclude therefore that the three place-names which appear on the Sd tablets (*pa-i-to*, Phaistos; *ku-do-ni-ja*, Kydonia; and *se-to-i-ja*) are not indications of the provenance of the chariots, but show the places where they are currently in store (where no place-name is entered, the chariots in question, like [doubtless] the cloth on the Ld[1] tablets, are presumably in store at Knossos itself). It is worth noting that all the three places mentioned on the Sd tablets are evidently important centres; and it is not difficult to think of reasons why chariots should have been kept at such locations.

<sup>47</sup> On the importance of stored wealth in the Homeric world, see FINLEY 1956, 65, 67; on its importance in ancient Near Eastern societies, see LIMET 1977, 55.

the need arose to dispose of them by way of a diplomatic or other gift.<sup>48</sup> Other manufactured goods may have been used for conspicuous display in the palace buildings (one thinks here particularly of the elaborate furniture recorded on the Pylos Ta tablets);<sup>49</sup> and this again would have been an important means of enhancing the prestige (and hence also the power) of the centres. Some products, again, may have been used for trading or other external exchanges: most probably, exchanges conducted or controlled by the centres themselves. As I suggest in Appendix I below, one of the commodities which may have been used in this way is the cloth qualified as *xenvia* on the Knossos Ld(1) 'store' records. Finally, a great many products were doubtless redistributed within the domestic economy: arms and armour to the army; cloth, perhaps, of particular varieties to particular grades of personnel; etc.<sup>50</sup>

§ 6.7. For all this, there are again close parallels in the ancient Near East. On the general redistributive role played by palaces and temples in the Near East, and of their role in organising 'industrial production', see the passage from FINLEY quoted at the beginning of the discussion; and with the suggestions I offer in the previous paragraph about the uses that the palaces may have made of the products of their dependent labour forces, compare the following passage in A.L. OPPENHEIM's discussion (1957, 31), again, of the redistributive role of the Near Eastern centres:

Into that center were channelled for storage or conversion into manufactured objects the products of the labours of a complex hierarchy of personnel working for and within the organization. The center used the stored wealth as a source of social and economic power, for prestige purposes as well as — by means of special channels of redistribution — for the support of a second hierarchy of personnel, from priests and scribes to warriors and merchants.

\* \* \* \* \*

<sup>48</sup> Cf. FINLEY 1956, 65: 'The twin uses of treasure [in the world of Odysseus] were in possessing it and in giving it away, paradoxical as that may appear. Until the appropriate occasion for a gift presented itself, most treasure was kept hidden under lock and key. It was not "used" in the narrow sense of that word.'

<sup>49</sup> For the suggestion that the Ta records list furniture, cooking equipment and instruments for killing animals used on the occasion of state-sponsored sacrificial banquets, held to mark particularly significant events (like the appointment by the king of a *da-mo-ko-ro*, the event mentioned on Ta 711), see KILLEEN 1998(b).

<sup>50</sup> A possible example of distributions of the second type is the *e-ge-si-ja*, */hekʷesia/*, cloth on the Ld(1) tablets: perhaps cloth for *e-ge-ta*, */hekʷetai/*, 'followers', though it is possibly only cloth of '*e-ge-ta*' type viz. a variety associated with the *e-ge-ta*, though not necessarily intended to be worn or otherwise used by them. Compare the obligations of the feudal count to 'distribute cloaks to his chief vassals' mentioned in the medieval *Usages of Barcelona* (BLOCH 1961, 222).

**§ 6.8.1.** Since my task here is to discuss the Mycenaean economy, the emphasis of what I have so far written has been on the more purely economic aspects of the workings of the kingdoms. This is not to suggest, however, that economic activity in the narrower sense was all that the palaces were concerned with. Besides the records dealing with economic activity narrowly defined there are a great many more that bear witness to an involvement by the palaces in a wide variety of other activities, such as military and religious affairs. Not only, for instance, do we have records dealing with the production and allocation of arms and armour: the Pylos An *o-ka* tablets are concerned with military (or para-military) dispositions. Again, many of the records deal with religious affairs: the land-holdings of priests and priestesses; the issue of foodstuffs to participants in religious festivals<sup>51</sup> and state-sponsored sacrificial banquets;<sup>52</sup> the making of offerings to divinities; etc.

**§ 6.8.2.** Once we are faced with this evidence, it becomes in my view extremely difficult to avoid the conclusion that the role which the palaces played in the economy of Mycenaean states was not merely significant, but central and dominant. Caution is still certainly in order: as we have seen earlier, it may well be that the tablets give us an unbalanced picture of the state, and one in particular which exaggerates the importance of the role of the centre in the workings of the economy. Against this background, it would clearly be unwise to rule out such possibilities as that some of the land in the kingdoms was owned privately, particularly since there appears to be evidence for privately owned land at most periods at least in the ancient Near East (see e.g. GELB 1969). Again, as FINLEY points out, we have no evidence on what happened after the chain of administrative distribution was completed (FINLEY 1957, 135), and it is quite possible that there was some private bartering of surplus allocations, or of surpluses in local agricultural and 'industrial' production, at local, village level in the kingdoms. As we have seen, the palaces' interests in crops may well have been selective; their methods of acquiring wheat and other staples, particularly in remote areas, may have been such that significant amounts remained in the hands of the producers;<sup>53</sup> and there is much to suggest the existence in the kingdoms of domestic, non-luxury 'industrial' production in which the palaces were not involved, and in some of whose products they may well have taken little or no interest. Nevertheless, given even the limited

<sup>51</sup> For the suggestion that the Fn tablets at Pylos record allocations of this type, see KILLEN 2001(a).

<sup>52</sup> On the evidence for these, see e.g. PITEROS – OLIVIER – MELENA 1990; KILLEN 1994.

<sup>53</sup> On the possibility that staples were acquired by the palaces by way of share-cropping arrangements, see n. 34.

amount which it is possible to say for certain about the range and, in some cases also, the depth of the involvement of the palaces in the life of the kingdoms, it is surely difficult (to borrow FINLEY's comment on the 'private' sector in the Near Eastern redistributive economies) to elevate any such non-palace, local or private, activity to the prevailing pattern of economy: though it must certainly be recognised as an element in the economy, viewed as a whole.<sup>54</sup>

## APPENDIX I

### TRADE

#### I

§ 6.9.1. We saw earlier that the tablets provide us with no certain information about the mechanisms of the external trade of the kingdoms. It would seem plausible to guess, however, that one mechanism by which goods from abroad entered the kingdoms was *gift-exchange*.<sup>55</sup> The external trade of 'primitive and archaic' societies (to use B. MALINOWSKI's terminology) often takes this form; the *Iliad* and *Odyssey* contain frequent descriptions of exchanges of gifts between guest-friends, which, although they appear to have had a mainly social, as distinct from economic, function, at least provide evidence

<sup>54</sup> I did not make this point in the original paper, and ought to have done so. Cf. DE FIDIO 2001, 17, who though she endorses my verdict that the palace is 'the dominant and characteristic element' of the system (*op. cit.* 24), rightly points out that 'the notion of "dominant element" does not exclude the parallel presence of competing elements'. Note, however, that some other recent writers on the question of the extent of palace control over the economy are much less prepared than DE FIDIO is to acknowledge the significance of the role of the centre. For examples, see PARKINSON 1999 and SMALL 1999, who goes so far as to see the Pylian polity as nothing more than 'an estate that was reaching out beyond its borders to supply goods for its workshops': *op. cit.* 47. See, however, my criticisms of at least some of the details of these papers in the same volume: KILLEEN 1999(b). And note, too, DE FIDIO's excellent point (*op. cit.* 23f.) that in assessing the role of the centre it is necessary to have regard not only to quantitative factors — though these are certainly important — but also qualitative considerations. As she writes, 'the strict control exercised by the centre represents the essential qualitative fact, and it is of secondary importance to establish whether the numerical quantity of the population of the royal sector corresponds to only 10 or 20% of the total population. It is not on the basis of such information that the system may be transformed *ipso facto* into a "Homeric" or "tribal" form of royalty...'.

<sup>55</sup> I select from the vast literature on gift-giving MAUSS 1954 (the classic study); HERSKOVITZ 1952 ch. 8; SAHLINS 1972 chs. 4 and 5, and CARNEY 1973, esp. 20f., 59ff. See also POLANYI 1957(a); DALTON 1961.

that reciprocal gift-giving is likely to have existed in early Greece;<sup>56</sup> and there is considerable evidence in non-Greek sources of the period, such as the Amarna archives in Egypt, for the exchange of presents between rulers. Though these exchanges often involved only moderate quantities of prestige objects (like jewellery and fine furniture) and precious raw materials (like gold and ebony), and are most plausibly understood as serving a primarily sociopolitical or diplomatic purpose, rather than being trade in disguise, they may also have involved very substantial quantities of copper: thus raising the possibility that the Mycenaeans may have obtained this (imported) commodity by way of similar exchanges. See in particular *EA* 35, 10–11 in MORAN's edition (MORAN 1992, 107), part of a letter from the king of Alasia (Cyprus) to the Pharaoh: 'I herewith send you 500 (*talents*) of copper. As my brother's greeting-gift I send it to you.' As the brackets and italics indicate, however, '*talents*' is a restoration; and some scholars have argued for the insertion of a term for a much smaller weight.<sup>57</sup>

Against this background, it is interesting to note that some of the cloth listed on the Ld(l) 'store' records at Knossos is described as */xenwia/*.<sup>58</sup> We cannot be certain of the precise sense of */xenwia/*; and it may merely refer to cloth which was intended for use in providing a welcome for guests, or which, more loosely, is of 'guest-welcoming' type.<sup>59</sup> It is tempting, however, to wonder, given the evidence quoted above, whether it is not in fact cloth 'for guest-gifts',

<sup>56</sup> For the demonstration that these Homeric descriptions are likely to reflect a genuine social institution, see FINLEY 1956, esp. ch. 3.

<sup>57</sup> See for instance PANAGIOTOPoulos 2001, 277 n.26 (I am grateful to John Bennett for drawing my attention to this paper). For reasons, however, for restoring '*talents*', see MORAN's note on the passage (MORAN 1992, 108), and note the mention of 100 talents of copper in *EA* 34 (MORAN 1992, 105f.), again a gift of the king of Alasia. On the whole question of whether the royal gift-exchange mentioned in the Amarna correspondence is merely trade in the guise of gift-exchange (for this view see e.g. ALEXIOU 1961, 137, quoted in KILLEN 1985, 262f.), or whether its function is primarily a sociopolitical or diplomatic one, see e.g. COHEN – WESTBROOK 2000, esp. 226f.; PANAGIOTOPoulos 2001, 275–278.

<sup>58</sup> *Ke-se-ne-wi-ja* Ld(1) 649.b; *ke-se-nu-wi-ja* Ld(1) 573.b, 574.b, 585.b.

<sup>59</sup> See *LSJ*<sup>2</sup> s.v. *xenios*. At first sight, an argument in favour of the term meaning 'for guest-welcoming' would seem to be provided by the fact that the only commodity, apart from cloth, that is described as */xenwia/* on the tablets is olive oil: see PY Fr 1231.2 (*ke-se-ni-wi-jo*), Fr 1255 (?*ke-se-nu-wi-jo*). This reminds one at once of the descriptions of the welcoming of visitors in Homer which includes (a) washing the guest and anointing him with *olive oil* and (b) providing him with a fresh outfit of *clothes*. Thus e.g. *Od.* 4, 49–50 (describing the reception of Telemachus at Sparta): 'And when the serving-women had washed them and rubbed them with oil, and dressed them in woolly cloaks and tunics...' (tr. M. HAMMOND). However, the case for taking the term in this sense is far from compelling. Not only is *xet(n)ios* never applied in Homer to the oil and clothing used for welcoming visitors (when it is used in this context, it is normally of the food and drink which are placed before the guest): there is nothing to prevent */xenwia/* on the Fr tablets from meaning 'received by way of a guest gift' (between rulers?). For this suggestion, see *Documents*<sup>2</sup>, 477f.; and for the possibility that olive oil was transported between different parts of the Mycenaean world, see below. There is also

in the sense of fabric intended for use in external exchanges (for this suggestion, see previously MELENA 1975, 45). Cloaks and tunics are mentioned as guest-gifts in Homer (see e.g. *Od.* 8, 392); elaborately finished fabrics (and those on the Ld[1] records undoubtedly are this) are used widely for trading purposes in 'primitive and archaic' societies (see e.g. CARNEY 1973, 60; cf. PANAGIOTOPoulos 2001, 277); folded fabrics are among the gifts which the Keftiu, who are almost certainly the Cretans, are shown as bringing to the Pharaoh on Egyptian tomb paintings; clothes are among the gifts which the king of Alasia requests from the Pharaoh in the Amarna letters (see MORAN 1992, 106); and small amounts of textiles were regularly sent as gifts (*sūbultum*) by the kings of Mari to neighbouring monarchs (J.-M. DURAND has suggested that the primary purpose of these gifts was to establish goodwill, though in the friendly atmosphere thus created more commercial exchanges might then take place: DURAND 1983, 515).

If the */xenwia/* cloths on the Ld(1) tablets are goods for external exchange purposes, there is one further feature of these tablets which deserves a mention. On several records in the series we find the term *a-ro<sub>2</sub>-a*, *lariohal*, 'better', 'of better quality'. It is noticeable, however, that this epithet never occurs on records of */xenwia/* fabric: only on tablets listing a second variety of cloth that is dealt with in the series, *e-qe-si-ja*, */hekʷesial*, fabric.<sup>60</sup> It is possible that the omission of *a-ro<sub>2</sub>-a* from the records of */xenwia/* fabric reflects the fact that all cloth of this type was 'of better quality', thus making it unnecessary to add the qualification; but it is at least as likely that the term is not written because it does not apply here. If this is the case, it might seem curious, in view of what normally happens in the modern world, that goods for export (if */xenwia/* fabric was this) should have been of less high quality than some of those retained for domestic purposes (as may well have been true of the *e-qe-si-ja* fabric, which is cloth 'for *e-qe-ta*' or 'of *e-qe-ta* type' — the *e-qe-ta*, */hekʷetail*, 'followers' were important Mycenaean officials). There is, however, a precise parallel for this in the ancient Near East: as H. WAETZOLDT has reported, the cloth and

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considerable difficulty in believing that the cloth on the Ld(1) tablets or the oil on the Fr tablets can have been used literally for welcoming guests. There are likely to have been at least 100, and perhaps as many as 300, units of */xenwia/* cloth recorded on the Ld(1) tablets, all of it, it seems highly probable, produced in the same year (see KILLEn 1979[a]); and it is difficult to believe that the palace would have used this number of cloths each year for providing hospitality for chance visitors to Knossos. It is also difficult to take */xenwion/* on the Fr tablets as meaning literally 'for welcoming guests' since the oil described as */xenwion/* on Fr 1231 is also stated to be a religious offering (to Potnia). In both contexts, however, it would be possible to take */xenwios/* as meaning 'of guest-welcoming type'.

<sup>60</sup> For *a-ro<sub>2</sub>-a* qualifying *e-qe-si-ja* cloth, see Ld(1) 571, 572, 583. The term is not found on any of the four surviving records which list *ke-se-ne-wi-ja* / *ke-se-nu-wi-ja* cloth: see Ld(1) 573, 574, 585, 649.

wool which were exported from Sumer to Magan and Dilmun during the Ur III period were 'vom schlechteren Qualität' (WAETZOLDT 1972, 72). What this presumably implies in the case of the Sumerian fabric is that Magan and Dilmun (or their customers) were less skilled as producers of cloth than Sumer was, and were hence willing to accept even inferior Sumerian fabrics as being better than anything they could produce in their own domestic industry.<sup>61</sup> It is sometimes argued, on the somewhat unreliable basis of the archaeological record, which suggests that the Minoans and Mycenaeans were net importers of raw materials and net exporters of finished goods, that they likewise traded with peoples who were less technically proficient than they themselves were (see e.g. RENFREW 1973, 212). If the *xenwia* fabric on the Ld(1) tablets was indeed cloth for export, the absence of the epithet 'better' from the records of this fabric, and its presence on the records of *e-qe-si-ja* cloth, could obviously lend some strength to that view.

Cloth, then, may have been one commodity the Mycenaeans exported; and olive oil may have been another. Not only is oil the only other commodity on the tablets which is described as *xenwios* (see above): perfumed (?) olive oil is a strong candidate for identification as at least one of the commodities that were transported in the inscribed LM/LH stirrup-jars which have been found on mainland sites, and which there is now mounting evidence came, partly at least, from the far West of Crete.<sup>62</sup> There is nothing on the tablets, however, to confirm (or disprove) any of the other standard suggestions as to what the Minoans and Mycenaeans exported: wood, wine, currants, perhaps herbs (which were exported from Crete in the eighteenth century A.D.: see CADOGAN 1976, 16) and the purple dye extracted from the murex shell.

As regards *imports*, the tablets do little more than to confirm what we knew already from the archaeological record: that the Mycenaeans used a number of imported (or probably imported) raw materials. Among the probable or certain imports that are mentioned on the tablets are bronze (both copper and tin are likely to have been imported), gold and ivory. In addition, the Knossos tablet Od 667 records finely-measured wool, probably for embroidery or the like, which is described as *ku-pi-ri-ja*, 'Cypriot', and which is likely to have been

<sup>61</sup> As DALTON points out (1961, 13f.), following HERSKOVITS and POLANYI, 'external trade in primitive economy is induced by the non-availability of the import items at home'. By contrast, external trade in modern western market economies 'takes place on the least-cost principle: things are imported which can be produced at home if such imports are cheaper than the domestic equivalents' (DALTON 1961, 14).

<sup>62</sup> See CATLING *et al.* 1980. A.J.B. WACE observed (1958, 3) that some of the stirrup-jars which he found in the House of the Oil Merchant at Mycenae bore traces which suggested that they had originally contained olive oil. On these jars, see further below, Chapter 8.

imported from Cyprus, since it is contrasted on the same tablet with wool which is probably described as *ke-re[-si]-ja*, 'Cretan'. Finally, the term *tu-ru-pte-ri-ja*, found on two Pylos records (An 35, Un 443), and also on a Tiryns tablet, TI X 6, is probably */struptēriāl* and denotes alum. This is not a commodity which was available in southern mainland Greece; and the Mycenaeans may therefore have imported it either from Melos, which was famous for its alum in the Roman period (see Pliny, *N.H.* XXXV), or, alternatively, from Cyprus.

## II

§ 6.9.2. It is noticeable how few tablets there are in the archives which can be explained even tentatively as direct records of trading activity. Two records at Pylos may record payments (*o-na, /ona/*, literally 'benefits') for alum, a commodity which is likely to have been imported into Greece (see above) — though the nature of the goods given in exchange for the commodity suggests that the transactions concerned may well not have been with external agencies, but have been purely internal ones (PALMER 1994, 100f.; KILLEN 1995, 220); and one tablet from Mycenae, X 508, evidently records the despatch of textiles to Thebes (*te-qa-de, /Thēgʷansde/*), more likely than not the Boeotian centre (see further below). These apart, however, records of trading activity (or possible trading activity) are conspicuous for their absence.

How are we to explain this gap in our documentation? Several possibilities come to mind.

1. *That trade was essentially an occasional and marginal activity for the palaces, and the records of a single year (in some cases, indeed, probably only part of a year) would not therefore be expected to contain many references to it.*

We may note in this connexion G. DALTON's observations, in DALTON 1975, about the differences between modern and 'primitive' external trade. See especially his points (i) (89, 102) that whereas in modern capitalistic societies trade is a twenty-four hour activity, under 'aboriginal' conditions 'trade expeditions or voyages were seasonal and sporadic, not continuous activities'; and (ii) (102) that most early trade 'consisted of the procurement of a few desired items from a distance'. See, too, DALTON's observations, in DALTON 1961, quoted in n. 61 above, on the absence of 'least-cost' trading in 'primitive' economies: that is, the importing of goods from abroad, not because they are unavailable at home, but because it is cheaper to import them than to produce them oneself. It is true that the Mycenaeans would have had to import both copper and tin, and that

over a ton of bronze is recorded on the Pylos Jn tablets; but even an amount of this size could readily have been carried in a single ship. As the late David CLARKE once remarked to me, it is interesting to note, in view of the total amount of bronze recorded on the Jn records, that the merchantman wrecked off Cape Gelidonya was carrying about a ton of copper.

While, however, it may well be a mistake to overplay the importance of trade in the Mycenaean world, a serious difficulty for this explanation is presented by the extensive evidence for mainland Mycenaean pottery in the Levant, and most particularly in Cyprus. It could of course be that the trade in oil (?) (given presumably in exchange for Cypriot copper) was conducted at sub-palace level; but one is reluctant to take this way out of the difficulty, given what seems likely to have been the extent and in some cases also the depth of the palaces' involvement in the internal economies of the kingdoms, which makes it difficult to believe that they were not also involved in external trading activity.

*2. That we do have more records of trading activity in the archives, but these are not recognisable as such.*

This possibility is suggested by a comparison of economic records in ancient Near Eastern archives. Whereas some records of external trade in the Near East contain explicit mentions of the fact, others do not (it is not uncommon for records of the latter type to contain merely a note of an issue of a commodity to an individual, without specifying, as we can deduce from other evidence, that the commodity in question is intended for use in a trading exchange).

On the whole, however, this seems unlikely to be the explanation of the lacuna. Though there are still some records of issues in the archive whose precise purpose we cannot be sure of, in most cases records of this type can be identified as relating to purely internal transactions, such as the issue of raw materials to dependent workers in the domestic economy.

*3. That there were originally more records in the archives dealing with external trade, but these, by chance, have not survived.*

In connexion with this possibility, it is perhaps worth mentioning the House of Shields at Mycenae. In his discussion of this building in *MT II*, A.J.B. WACE confesses puzzlement about its purpose. He writes as follows (6). 'At present we have no clue to its purpose. It certainly does not seem to have been a dwelling, and also it does not appear to have been intended for any religious uses. Perhaps the text of the tablet found in the West Room may one day enlighten us.'

In a subsequent study, J. SAKELLARAKIS has suggested that the House may have been an ivory workshop, engaged in production for the export trade:

just as the neighbouring House of the Oil Merchant may, he believes, have been a workshop engaged in perfume manufacture, also for export (SAKELLARAKIS 1979, 21ff., 98f.). WACE reports that there was a great deal of ivory found in the House, some of it clearly the remains of inlay for furniture, and SAKELLARAKIS suggests that some of this is only half-worked. Unfortunately, no support for SAKELLARAKIS' hypothesis is provided by the 'spice' tablets from the House of the Oil Merchant: almost certainly, these deal with spices intended, not for perfume manufacture, but for culinary purposes. Moreover, other writers on the ivories have drawn somewhat different conclusions from SAKELLARAKIS about the nature of the activity carried on in the House. J.-C. POURSAT, for instance, sees this as 'une sorte d'entrepôt, ou ... un atelier où l'on adaptait les ivoires aux meubles qu'ils devaient décorer' (POURSAT 1977, 136; cf. KRZYSKOWSKA 1996, 100f.); and I. TOURNAVITOU agrees that this was not a location of the primary working of ivory, but a place where inlays were fitted to furniture, and where the finished furniture was stored ('Ivory Houses', 288). We do, however, have some further evidence which encourages the suspicion that the House may have been the centre of activity concerned with the import and export 'trade'. Besides the ivory, the House contained a number of exceptionally fine vases, some of them clearly of foreign manufacture. WACE writes as follows: 'In the same deposit [as the ivories] was a fine series of stone vases, some of serpentine, some of limestone, some of steatite, some of pudding stone and one of *Lapis Lacedaimonius*. Two of the stone vases had been decorated with inlay of different variegated stones or other materials. Some of them apparently had had lids or mouth-pieces of metal such as silver. Like the ivories they had all been affected by the violent fire which destroyed the building and many of them had been shattered into fragments. The stone vases were found rather in the northern part of the room and the ivories in the southern part. Foreign imports are represented by several vases of faience probably of Syrian... fabric and part of an Egyptian vase of alabaster of the characteristic 'baggy' type. Hardly any Mycenaean vases were found, but there are a few of the LH III B style which date the building.'

In view of this heavy concentration of foreign imports in the House, it is at once interesting to note that the only tablet found in the House, MY X 508, may be our sole record, at any site, of a transaction involving another Mycenaean kingdom. The text of the record reads as follows:

X 508

.a ]te-qa-de , ta [  
]ze-ta , / pu-ka-ta-ri-ja<sub>1</sub>,ma-ri-ne[

There seems little question that this is a record of *pu-ka-ta-ri-ja* cloth, a variety known at both Knossos and Pylos; and there can be little doubt that *te-qa-de* is 'to Thebes', /*Thēg<sup>w</sup>ansde/; the term also occurs on three sealings at Thebes, where it undoubtedly has this sense. It is true that we cannot finally exclude the possibility that, just as *ko-ri-to*, /*Korinthos/ at Pylos is undoubtedly not the famous Corinth but a place of the same name somewhere within the Pylian kingdom, so *te-qa-de* here might refer to another Thebes in the immediate vicinity of Mycenae, not to the Boeotian centre (*Documents*<sup>2</sup>, 585; OLIVIER 1996–97, 277f.). But support for the view that this is indeed Thebes in Boeotia is provided by the Of wool records from that site, which mention the same name *ma-ri-ne-u* as appears to be referred to on the far right of this record (*ma-ri-ne[*]), and which is also attested at Knossos. This argument is again not fully conclusive:<sup>63</sup> if *ma-ri-ne-u* is a god, his name might clearly have been in use in three different locations; and if this is 'collector's name, which seems at least as likely, the same could also be true (KILLEN 1979[a], 176–179), though it should also be stressed that while some 'collectors' names do appear at more than one site, and while one (*ko-ma-we*) may possibly appear at three, it is far from being the case that they all do. It would still, however, be a remarkable coincidence if a record of a non-Boeotian Thebes near Mycenae happened to refer to a god's or 'collector's name which was also attested at (Boeotian) Thebes. It may well be, then, that X 508 provides further confirmation that the House of Shields was somehow connected with the import and export 'trade'.**

Given this evidence, two thoughts come to mind. First, would other tablets from the House of Shields, if they had been preserved, have dealt with foreign transactions, and hence have added, perhaps considerably, to our Linear B evidence for trading activity? And, second, is the absence of trading records from the Linear B archives more generally due to (a) the fact that trading exchanges between the Mycenaean kingdoms and the outside world were conducted via Mycenae (note, for instance, that much of the mainland pottery found in Cyprus appears to have been made in the Argolid) and (b) the accident that so few tablets from Mycenae, and particularly from the House of Shields, happen to have survived?

This may be part of the explanation; but at least one puzzle remains. If trading exchanges with foreigners were conducted on behalf of (e.g.) Pylos by the centre at Mycenae, we should have expected to find some references in the Pylos archives of the arrival of the goods at that palace; yet there is nothing in the documentation there which could easily be interpreted as a record of

<sup>63</sup> Cf. OLIVIER 1996–1997, 278f. (who expresses himself somewhat more forcefully).

this kind. All in all, therefore, it seems best to conclude that the absence of more records dealing with trade from the archives still remains something of a mystery.<sup>64</sup>

## APPENDIX II

### TAXATION

**§ 6.10.** The following is a list of the more securely identified commodities recorded on tablets in the archives that probably or certainly list *contributions* to the centre made via the taxation system. Items marked § are found on tablets which contain one or more of the noun *a-pu-do-si*, /apudosis/, 'payment to the palace', the term *o-pe-ro*, /ophelosi/, 'deficit in payment', and a part of the verb *didōmi*, 'I give', where it seems certain that this refers to a payment to, as distinct from an issue by, the palace.<sup>65</sup> Where the Linear B term for a commodity is known from the records, I show this in brackets after the name. Where different spellings are attested, I give the one most frequently found.

§	<i>po-ni-ki-jo</i> , /phoinikion/ (a spice?)	(KN B, Ga)
	wheat (but see n.11 above)	(KN E, F)
§	<i>olive oil</i> ( <i>e-ra<sub>3</sub>-wo</i> , /elaiwon/)	(KN Fh)
	olives	(KN F)
§	<i>ki-ta-no</i> , perhaps /kirtanos/, 'terebinth', here with reference to pistachio nuts	(KN Ga)
§	coriander ( <i>ko-ri-ja-do-no</i> , /kori(h)adnon/)	(KN Ga)
§	cyperus ( <i>ku-pa-ro</i> , /kuparos/)	(KN F, Ga)
§	mixed spices	(MY Ge)
§	honey ( <i>me-ri</i> , /meli/)	(KN Gg)
§	bronze ( <i>ka-ko</i> , /khalkos/)	(PY Jn)**
§	gold ( <i>ku-ru-so</i> , /khrusos/)	(PY Jo)**
§	* <sup>146</sup> (a textile?)	(PY Ma)

\*\* These may well be somewhat exceptional contributions.

<sup>64</sup> For further discussion of the problem, see *Perfume*, 139-141; P. DARCUE IN TREUIL *et al.* 1989, 521f. (with a slightly inaccurate account of my own views).

<sup>65</sup> On the meaning of these terms, see DUHOUX 1968; *Mémoires IV*, 103-113.

§	*152 (probably ox-hide)	(PY Ma)
	she-goats	(KN Mc)
	horns (probably of the agrimi goat)	(KN Mc)
§	saffron	(KN Np)
§	flax ( <i>ri-no</i> , /linon/)	(PY Na, Ng, Nn; KN Nc) <sup>66</sup>
§	deer skins, <i>e-ra-pe-ja</i> [di-pte-ra], /elapheiai [diphtherai]/	(PY Ub)
§	wood	(PY Vn) <sup>67</sup>

As will be seen, most of the items in this list of contributions are raw materials and foodstuffs. There is, however, one apparent exception to this general rule: the commodity \*146 on the Pylos Ma tablets. L.R. PALMER has suggested that this may be flax, and hence a further raw material (PALMER 1965, 325–327); but a reasonably strong case can be made out for taking it as some form of textile, perhaps a garment (CHADWICK 1964, 24; *Mémoires II*, 315ff.). If it is a textile, however, the question arises of why it occurs on the Ma tablets. Not only do all other records of contributions to the centre appear to deal with raw materials and foodstuffs: the only commodity on the Ma tablets apart from \*146 which we can reasonably securely identify is again a raw material (\*152, probably ox-hide). Furthermore, not only would it be contrary to expectations to find records of deliveries of finished production from palace-controlled workshops on the same tablets as records of contributions: there is no evidence elsewhere in the archives for palace-controlled weaving workshops in most of the areas that are dealt with on the Ma tablets.<sup>68</sup> The likely solution to the

<sup>66</sup> Y. DUHOUX (*Aspects*, 177ff.) is certainly right to criticise my suggestion (KILLEN 1966) that all the flax (SA) on the Nc tablets is being issued by the palace. One member of the series, KN Nc 4484 [=] 4488, which is clearly a totalling record, contains the term *a-pu-do-so*, most probably *a-pu-do-so-mo*, /apudosmos/; and, as we now know, thanks to DUHOUX's own investigations, this is a reference to an assessment for tax payments to the palace. Moreover, there is almost certainly a reference to a deficit in an incoming payment (*a-pe-ro*, /ophelos/) on Nc 8115, which is probably part of Nc 5100. It is not quite inconceivable, however, that, just as the KN Fh oil series contains both receipt records and records of payments, so the Nc series relates both to incomings and to outgoings, with 4484 and 5100 dealing with the former and the remainder of the tablets relating to the latter. See further KILLEN – KOPAKA in DRIESSEN *et al.* 1988, 81f.

<sup>67</sup> A number of further commodities are recorded on PY Un 718: *far* (= flour), wine, cheese, unguent, livestock and fleeces. It is not clear, however, how far these /dosmoi/ to Poseidon, like the WHEAT listed on the PY Es tablets other than Es 650, are [assessments for] contributions to the *palace* in the same sense as e.g. the taxes on the Ma tablets. In addition, *wool* is acquired by the palace at Knossos by means of the production targets set for the (probably) palace-owned animals listed on the Da-Dg, Di and Dq records.

<sup>68</sup> This is unlikely to be an accident. The PY Aa, Ab and Ad series, which deal with weaving workgroups in each of the two provinces, are clearly relatively well preserved (it is rare for a workgroup mentioned in one of the series not to appear in at least one of the others); and while it is just possible that there once were further series dealing with other workgroups elsewhere in the kingdom, that does not seem particularly likely.

problem would appear to be as follows: that \*146 is indeed a contribution, and is cloth of a relatively simple kind which could readily be produced by non-specialist labour in the villages (as opposed to the doubtless more elaborate fabrics which were produced in the workshops the palace controlled). We have parallels for contributions of this kind in other societies: the *Codex Theodosianus* (VII.vi.3), for instance, reveals that in the fourth century A.D. 'the imperial government assessed the levy of military cloaks and tunics on land on the same basis as the levies of wheat, meat, wine and oil' (JONES 1974, 39). As A.H.M. JONES has commented on this passage (*ibid.*), it shows that 'plain weaving [was] generally practised throughout the country-side'.

### APPENDIX III

#### 'INDUSTRIAL' PRODUCTION<sup>69</sup>

§ 6.11. We have *direct* evidence in the tablets for the following types of 'industrial' production:<sup>70</sup>

1. *Textile production* (PY La [in part]; KN Lc,<sup>71</sup> Ld [in part],<sup>72</sup> Le, L [in part], Od [in part]; MY Oe [in part];<sup>73</sup> TH Of).<sup>74</sup>

<sup>69</sup> For an excellent general discussion of the records dealing with 'industrial' production, see ASPECTS, 67ff.

<sup>70</sup> I have excluded from the list (i) records of artefacts (like \*146) supplied by way of the taxation system; (ii) records of completed production now in store; (iii) records of workgroups involved in industrial production (like the Pylos Aa, An tablets); (iv) records of raw material, except for raw material stated explicitly on the tablet to be destined for manufacturing industry.

<sup>71</sup> On the tablets in this group (and the closely related Od 562 and the Le 'delivery' records), see KILLEN 1965.

<sup>72</sup> For the suggestion that the Ld(1) 'delivery' tablets in hand 116 deal with deliveries to the palace by (male) finishing groups (fullers, etc.), see KILLEN 1979(a).

<sup>73</sup> Though some of the outgoings of wool on the Oe tablets are clearly intended for manufacturing purposes, others are issued to persons whose descriptions make it clear are not workers in the state textile industry (like the bakers — *a-to-po-ko-i*, *taropok"oihil* — mentioned on Oe 117). Are these *rations* of wool (for clothing purposes), similar to those found widely in ancient Near Eastern records (see GELB 1965, esp. 235)?

<sup>74</sup> Pace CHADWICK in SPYROPOULOS - CHADWICK 1975, 91ff., and despite the small amounts of wool recorded in the series, it seems to me much more likely that the issues of wool on the Of records are deliveries to workshops for industrial purposes than that they are religious dedications. Note in particular the large number of textile trade-names that occur in the series (*a-ra-ka-te-ja*, *lālakateiai*, 'distaff women', *te-pe-ja*, 'makers of *te-pa* cloth', *a-ke-ti-raj*, *askētrai*, 'decorators' and probably *no-ri-wo-ki-de*); and note too the presence of a group of *a-pi-go-ro*, *lamphik"oloi*, 'attendants', both here and on the Pylos Aa, Ab tablets, many of the women recorded on which are workers in the state textile industry. It is true that there are also

2. *Bronze working* (PY Jn; KN K[1] 875 (?);<sup>75</sup> TH Ug [?]).<sup>76</sup>
3. *The production of perfumed unguent* (PY Fr 1184,<sup>77</sup> Un 249, 267 [cf. An 616]; KN Fh [in part], Ga[1], Ga[2], Gg[2]).<sup>78</sup>
4. *The production of chariots, chariot wheels and weapons* (?) (PY An 1282, Vn 10; KN Sg 888,<sup>79</sup> So[1] [in part] [?], So[2] [in part],<sup>80</sup> U[1] 7507 [?]).<sup>81</sup>

mentions in the series of divine names (*e-ra*, */Hérā/*, Hera, *e-ma-a₂*, */Hermāhās/*, Hermes, *po-ti-ni-ja*, */Potnia/*, 'the Mistress'); but, in view of the industrial context made probable by the textile trade-names, these are most plausibly understood as references to workgroups and workshops 'owned' by these divinities. With the 'house' of Potnia on Of 36, for instance, we may compare the smiths attributed to Potnia (*po-ti-ni-ja-we-jo*, */Potniaweoioi/*) on the Pylos Jn records and the flocks attributed to Potnia and Hermes on the Knossos D series, as well as the frequent mentions of 'divine' workers and flocks in ancient Near Eastern and Inca sources. For a similar view of the divine names, see PALMER 1978.

<sup>75</sup> On this record, see KILLENN 1987(b).

<sup>76</sup> On the possibility that these records deal with bronze-working see KILLENN, *op. cit.* 65-67.

<sup>77</sup> For a recent discussion of this tablet, which suggests that it may relate to a delivery of already perfumed oil from a junior unguent-boiler to a senior colleague, perhaps for quality checking, see KILLENN 2001(b), 179f.

<sup>78</sup> For the suggestion that the tablets in hand 135 at Knossos record substances which will be used to make aromatic oils, see FOSTER 1977; GODART 1968; KILLENN 1979(a), 178. The substances recorded on these tablets include two (if ME on 267 is honey, three) of the commodities listed on PY Un 267, which is a list of ingredients for perfumery issued to an *a-re-pa-za-o*, */aleiphadzohos/*, 'unguent-boiler'. Note also (with GODART and KILLENN) that several of these 'spice' records contain a mention of one *ku-pi-ri-jo*. We cannot be certain that this is the same *ku-pi-ri-jo*, */Kuprios/*, who makes regular appearances on the (Fh) oil records, also at Knossos; but given that we know that Mycenaean unguent-boilers regularly used olive oil as a base for their preparations, and since the amounts of the commodities with which *K.* is associated in both 'spice' and oil records are relatively large, it is tempting to suppose that he is indeed the same person in both these series: perhaps an important official in charge of the unguent-boiling department of the palatial economy at Knossos (KILLENN, *ibid.*), or even a 'collector' with special interests in this sphere (KILLENN 1995, 215-221; OLIVIER 1996-97, 287-291). For criticism of a different explanation of *ku-pi-ri-jo* — that it is an adjective */kuprios/* indicating that the commodities on the records on which it appears are from, or intended for export to, Cyprus — see KILLENN, *loc. cit.*

<sup>79</sup> We cannot finally exclude the possibility that the *o* ('deficit') entry here relates to a shortfall in a taxation payment, rather than in a delivery from a workshop. Given, however, the evidence that at least some work on chariots was carried out under '*ta-ra-si-ja*' arrangements (see below), and the good possibility that the entries on the record concerned a single individual and a single artefact, which is a pattern found on records which certainly or probably relate to '*ta-ra-si-ja*' production, this does not seem very likely. See further KILLENN 2001(b), 178f.

<sup>80</sup> Though many of the So(1), So(2) tablets clearly record wheels in store, So(2) 4442 contains the term *ta-ra-si-ja*, and refers to a shortfall in production under these arrangements at the place *se-to-i-ja*. Y. DUHOUX has suggested (*Aspects*, 95-98) that a number of other terms in these series refer to production under the same arrangements; but whereas the participles *wo-zo-me-no*, *wo-zo-me-na*, */wordzomenō*, -*ai*, on So(2) 4433, 4438 may mean 'in course of production', they might also indicate wheels in process of refurbishment (a process which may not have involved '*ta-ra-si-ja*' arrangements); and while the participle *de-do-me-na*, */dedomenal/*, on So(1) 4429, 4440, 4441 may mean 'delivered from the workshops' it might also mean 'given for refurbishment'. See further KILLENN 2001(a), 167f. On the whole, however, I think it more likely than not that DUHOUX is right in seeing terms like *o-pe-ro*, */o(phelos)/*, 'deficit', and

5. *Furniture production* (PY Pa 398 [?], 889 [?], Pn 30 [?];<sup>82</sup> KN As[2] 1518 [?], V(7) 1521 [?], 1524 [?]).<sup>83</sup>
6. *Leather working* (PY Ub 1318).

*ne-wa, /newal*, 'new, this year's', on these tablets as referring to (original) production under '*ta-ra-si-ja*' arrangements, and that chariot and chariot-wheel production in general at Knossos (and also at Pylos) was carried out under '*ta-ra-si-ja*' arrangements: see KILLEN, *op. cit.* 165-169, 178f. Unlike DUHOUX, however, I do not believe that there are references on the Sd and So tablets to the place of manufacture of chariots, etc. On the place-names *pa-i-to*, *se-to-i-ja* and *ku-do-ni-ja* in the series, see n. 46 above. Moreover, it now seems likely that the term *o-pa*, probably */hopðl*, on the Sd, Sf, So records does not mean 'workshop' but '(non-*ta-ra-si-ja*) work on finishing or refurbishment': see MELENA 1983; KILLEN 1999(a).

<sup>81</sup> This is concerned with the commodity denoted by ideogram no. \*256, which may be 'bow' (see OLIVIER 1965) and contains the term *de-do-me-na*, */dedomenal*, which, as we have just seen, may mean 'delivered (from the workshops)' though it could also indicate 'given for refurbishment'.

<sup>82</sup> Both Pa tablets record \*169, viz. beds or footstools (see MANESSY-GUITTON - WEILL 1976; *Idéogrammes*, 172-176; VANDENABEELE 1982, 29-32); and since both also contain the term *qa-si-re-wi-ja*, */gʷasilēwidi*, 'establishment of a *qa-si-re-u*', *gʷasileus*', and since *qa-si-re-we* are shown as involved in metal-working under '*ta-ra-si-ja*' arrangements in the Jn records, also at Pylos, there is clearly a reasonably good chance that these are again records of '*ta-ra-si-ja*' production. The case of Pn 30 (which also records \*169) is less straightforward. It clearly lists deliveries and shortfalls in deliveries; and it looks as if each of the three contributors named on the record could have been set the same fixed target for his contribution (35 units). Since records of this pattern are more at home in taxation than in '*ta-ra-si-ja*' production contexts, this may be a record of simple beds, not made under '*ta-ra-si-ja*' arrangements, which the palace is acquiring via its taxation procedures (see n. 87 below for possible evidence for something akin to this at Knossos). On the other hand, a possible pointer to a state-controlled production context is the appearance as the recipient of the beds of the 'collector' *a-ko-so-ja*, */Alxoitās*, who is attested elsewhere at Pylos (see Un 267) as supplying raw materials to a state-controlled worker.

<sup>83</sup> These three records, all in the same scribal hand, have the same find-spot as As(2) 1517, which lists a chairmaker or chairmakers (*to-ro-no-wo-ko*, */thrōnoworgōi*, *-oi*); the term *ta-ra-nu*, */thrānus*, 'footstool', appears in several entries on V(7) 1521; and all three records appear to follow a similar pattern (in all three, the same term is repeated in successive entries). For the suggestion that all three are part of the same 'file' of records dealing with furniture production, see *Scribes Knossos*, 127. If this is correct, it is tempting to suppose that the personal and trade-names (?) which are found on each tablet before the repeating term refer to the craftsmen who are responsible for the production. On V(7) 1524 the repeating term is *po-da* (ll. 3, 4 and 5); and on l. 5 it is attractive to restore the man's name *de-ki-si-wo*, */Dexiwos*, before this (see *Documents*, 539). If this is a record of the production of furniture, it will presumably follow, since *po-da* is invariably followed by the numeral one, that it deals with the production, by individual craftsmen, of single individual feet of furniture. At first sight, this might seem odd; but the ivory feet of furniture found at Thebes (see DEMAKOPOULOU - KONSOLA 1981, 54 and pl. 257) were clearly made separately from the top of the object to which they were attached, and certainly involved elaborate carving. If *po-da* is 'foot', the precise explanation of the form remains unclear. It could be an accusative singular, */poda*, governed by a verb (now missing) in the heading of the tablet. Perhaps a likelier possibility, however, is that it is an accusative of rubric, written instead of the standard nominative of rubric because if */pōs!* (< \**pods*) had been written according to the normal spelling rules, it would have appeared as a monosyllable (*po*), and this might well have caused confusion (e.g. with ideographic *PO*).

We also have *indirect* evidence, via trade-names on the tablets, for the following further activities: pottery-making; bow-making; gold-working; working with lapis-coloured glass; ship-construction; carpentry; (probably) net-making; house-building; (probably) ivory-cutting;<sup>84</sup> (perhaps) horn-working.<sup>85</sup>

Many of these various types of production are likely to have been carried out under the '*ta-ra-si-ja*' system, which involved an allocation of raw material by the central authority to dependent or semi-dependent workers. The term *ta-ra-si-ja* itself, probably /*talasiāl*/, 'amount weighed out and issued for processing', is attested in the Pylos Jn records (bronze-working), the Knossos Lc(1), Le tablets (textile production), the Mycenae Oe tablets (textile production) and the Knossos So(2) tablets (chariot wheel manufacture); and it is not unlikely that other production, e.g. the making of chariots and chariot wheels in general, took place under the same system.<sup>86</sup> It is possible, however, that the '*ta-ra-si-ja*' system proper was not used for other forms of luxury production such as the making of perfumed unguent: though it is clear that the centre provided the raw materials for this in the same way as it did for (state-controlled) bronze-working, textile production, etc. (KILLEN 2001[b], 169-175). Moreover, there is some evidence to suggest that certain forms of production (besides the production of the commodity \*146 mentioned in Appendix II) may have taken place under radically different arrangements. The Pylos tablet Un 1322 appears to record the giving of an *o-no*, /*onon/*, literally 'benefit', to a net-maker or net-makers (*de-ku-tu-wo-ko/*, /*dektuworgōi*, -oi, -oihi/)) and a weaver or weavers (*i-te-we*, /*histēwei*, -es/); and Y. DUHOUX has suggested (*Aspects*, 130-134) that these are workers of a more independent status than those who carried out duties under the '*ta-ra-si-ja*' system, and who are given these payments in return for their services. Even if this is the case, however, it may well be significant that the workers in question are not (or not necessarily) engaged in high grade, luxury production; for it would not be surprising if the palace only played an interventionist role in forms of production (like the production of fine textiles) where division of labour could lead to a higher quality product, and was content, in cases where this was not possible or necessary, to acquire the product either by taxation (as it did in the case of the plain textile \*146) or by giving payments for it.<sup>87</sup> Note, however, that

<sup>84</sup> For the attractive suggestion that the term *pi-ri-je-te*, probably /*pri(h)entēr/*, 'sawyer', on the Knossos Ra(1) tablets is a reference to a worker who saws ivory (for attachment to the grips of swords) see BIRASCHI 1978.

<sup>85</sup> On the possibility that the term *ke-ra-e-we* on the newly discovered PY Un 1482 is /*kerahēwe/* or /*kerahēwes/* and a reference to a worker or workers in horn (and ivory?) see KILLEN 2000-01, 80. For a different suggestion, however, see MELENA, 2000-01, 380-384.

<sup>86</sup> See n. 80 above.

<sup>87</sup> If I am right in suggesting (KILLEN 1995, 219) that the Knossos o.t. record Fh 5431, which reads *o-na de-mi-ni-jo*, records payments for beds (/*ona demniōn/*), its evidence is not inconsistent

'purchases' of this kind (if this is what they are) do not loom large in the archives. In comparison with records which clearly or probably deal with '*ta-ra-si-ja*' production, records which show *o-no* occur relatively infrequently.

### § 6.12. REFERENCES FOR CHAPTER 6

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with this picture. Though it appears likely that some (superior?) beds were produced in palace-controlled workshops (see n. 82 above), it would not be surprising if others (such as those recorded on MY V 659 as being allocated to female textile workers) were not.

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## CHAPTER 7

# MYCENAEAN TECHNOLOGY\*

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### § 7.1. INTRODUCTION

*Aspects*; AURA JORRO in press; DARCUE 1989; *Diccionario*; DICKINSON 1994; *Documents*<sup>2</sup>; HILLER – PANAGI 1976; *Idéogrammes*; *Interpretation*; LAFFINEUR – BETANCOURT (eds) 1997; RUIPÉREZ – MELENA 1990

§ 7.1. Linear B tablets record some of the products of Mycenaean palatial technology — chariots, wheels, weapons, pieces of furniture, vessels, textiles, and perfumes. The study of these references, which form the main subject of our analysis, together with that of iconography and archaeological findings, will show that in Mycenaean times there was an important industry and handicraft activity.

### § 7.2. FURNITURE

BERNABÉ 1998; BIRGIT 1990; DEL FREO 1990; HALLEUX 1969; LASER 1968; MILANI 1972; RICHTER 1966; VANDENABEELE 1996

The tablets offer no direct indications about the processes involved in furniture making. In order to gain some insight into them we have to rely on the analysis of the lexicon.

§ 7.2.1. The word *te-ko-to* (= τέκτων) 'carpenter' is attested on the tablets, but its occurrences provide no information about the kind of work carried out by these workers. Our best source of information about furniture are the tablets of the Ta series of Pylos, together with some scattered data found in other tablets from Pylos and Knossos. The following pieces of furniture are mentioned: chairs, stools, tables, and, maybe also beds, if *de-mi-ni-ja* in PY Vn 851.1 is to be understood as δέμυτα 'bedsteads, bed'. Another word meaning 'bed', λέχος,

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is indirectly attested on the tablets in the compound *re-ke(-e)-to-ro-te-ri-jo* on PY Fr 1217.2 and 343, which may be understood as *lekhe(s)-strōtērion/lekheheistrōtērion* (?) 'placing of beds', probably a religious festival.

§ 7.2.2. As stated on PY Ta 711, the tablets in Pylos Ta series were written on the occasion of the appointment by the king (*wa-na-ka = wanaks*) of *au-ke-wa* (a personal name) as *da-mo-ko-ro = dāmo-ko-r-os* (an officer), and the consequent compilation of some kind of inventory of specially valuable objects. This means that we are dealing with special, not common, everyday objects, a fact which must be taken into account when comparing this data to those of archaeological findings.

§ 7.2.3.1. As shown by the PY Ta tablets, there were tables (*to-pe-za = torpeza*, cf. τράπεζα 'table') of various kinds made of various materials. There were both wood and stone tables, as demonstrated by the adjectives *ra-e-ja* (*läheyā*, cf. λᾶς and λᾶος 'stone') and *ku-te-se-ja* (adj. from *ku-te-so*, cf. κύτιος 'ebony'), and possibly tables of an unidentified material (*mi-ra<sub>2</sub>*). It should be remarked that only fine wood, specifically ebony, is mentioned, which fits with the special character of these records. Other tables are described as made of ivory, *e-re-pa-te-ja = elephanterā* (PY Ta 713.2, 715.2). It is difficult to see how a table could be wholly made of ivory unless it was very small and had only an ornamental or ritual use. It would be tempting to translate the adjective *e-re-pa-te-ja* as 'inlaid with ivory', but such an explanation is ruled out by internal evidence since in the first line of the same tablets the scribe has been careful enough to record the basic material (wood or stone) and then the ivory ornaments. The most probable explanation is that 'ivory tables' is an elliptic expression for 'tables covered up with ivory plaques'. The same applies to some stone tables described as having ivory or ivory and ebony legs or stays (PY Ta 642.3, 713.1) and also to the ebony tables having ivory stays (PY Ta 713.3, 715.1).

§ 7.2.3.2. When the number of legs of a wooden or stone table is mentioned, it is regularly nine (*e-ne-wo-pe-za = en[n]ewopeza*). Only one of the ivory tables has a different number, since it has only six legs (*we-pe-za = we[k]s-peza*). Most wooden and stone tables are also described as *a-pi-ko-to*. This adjective has been usually explained as *amphig<sup>w</sup>otos*, i.e. a compound of ἀμφί 'around' + the verbal adjective in -τος from the same root as βαίνω 'go', but its meaning has also been differently interpreted, mainly as 'round' or 'with a rim'.<sup>1</sup>

<sup>1</sup> BERNABÉ (1998) has argued in favour of explaining it as '8-shaped' and relating it to Hom. ἀμφίβοτος, which may have been a transformation of an original \*ἀμφίβοτος through folk

**§ 7.2.3.3.** The ornaments applied to the tables are also relevant for our understanding of Mycenaean technology. PY Ta 642.1 records a stone table inlaid (*a-ja-me-na* = *ayāimenā*) with various precious materials. *ku-wa-no* (cf. κυανός) must be lapis lazuli or else its cheaper Phoenician substitute, a kind of blue vitreous paste. *a₂-ṛ₂[ lu-do-pi]* has been explained as *halosudo(p)phi* ‘with aquamarine’, while there is no clearcut identification for the dat. *pa-ra-ke-we-*. The contexts in which it occurs, however, make it clear that it may be a precious or semi-precious stone. The same table is described as *we-a-re-ja*, which is usually explained as *wehaleyā* (cf. θάλεος) and rendered as ‘inlaid (or decorated) with glass’, in spite of the fact that we would expect a spelling with initial *u-wa-* and not *we-*. The stone tables recorded at PY Ta 642.2 and .3 are described as inlaid with ivory (*e-re-pa-te a-ja-me-ṇa* = *elephantei ayāimenəq*) or having ivory legs and stay (*e-re-pa-te-jo po-pi e-ka-ma-te-qe* = *elephanteyois popphi hekhmatei-kʷe*), while that at PY Ta 713.1 has ebony and ivory stays (*ku-te-se-jo e-ka-ma-pi e-re-pa-te-jo-qe* = *kuteseyois hekhmapphi elephanteyois-kʷe*). The two ebony tables are also described as *ko-ki-re-ja* (= *konkhileyā*) ‘decorated with shells’. The two *mi-ra<sub>2</sub>* tables at PY 715.3 are instead inlaid with *pa-ra-ku-*.

**§ 7.2.3.4.** In the description of three of the stone tables and one of the ivory tables we find either the passive participle *qe-qi-no-me-na* (= *gʷegʷi-nōmenā*) or the verbal adjective *qe-qi-no-to* (= *gʷegʷi-nōtos*), both followed by instrumentals. There has been much discussion about the exact meaning of these terms, but they have usually been related to the word δινωτός, cf. κλισίην ... δινωτὴν ἐλέφαντι καὶ ἀργύρῳ ‘a chair inlaid with ivory and silver’ (*Od. XIX 56*). It has been proposed that when applied to pieces of furniture these words mean ‘turned’, specifically ‘with turned legs’, which would fit well with some of the models archaeologically attested. However, the instrumentals which follow these words in Mycenaean make the proposal difficult to accept. In contrast with *a-ja-me-no* ‘inlaid’, which is always followed by an instrumental of material, on the tablets *qe-qi-no-me-no* is followed by an instrumental referring to items with a specific shape, so *qe-qi-no-me-no/qe-qi-no-to to-qi-de* must mean ‘carved with a spiral’ (*to-qi-de* = dat. *torkʷidei*, cf. τρόπις ‘keel’ or στροφίς ‘band’). We have also a record of a table (PY Ta 642.2) carved with helmets and another element for which we lack a satisfactory interpretation (*qe-qi-no-to au-de-pi ko-ru-pi-qe* = *gʷegʷi-nōtos au-de-pi? korupphi-kʷe*).

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ctymology. This fits well with having nine legs, of which four would support each circle and one would be placed where the two circles join each other.

§ 7.2.3.5. Another interesting point for the study of Mycenaean technology is found on PY Ta 715.2, where two tables are described as *a-ka-ra-no* (= *akrānos* or *akaranos*) ‘without head’, i.e. ‘without top’, showing that, as one would expect, the different components of a table (top, legs, etc.) were separate pieces and they were assembled only when the table had to be used. Occasionally a part could have been deteriorated or even lost.

§ 7.2.4. We may now turn to chairs (*to-no* = *thornos*, cf. θρόνος). Only wooden, specifically ebony, chairs are recorded. A chair in PY Ta 714.1-2 is described as *we-a<sub>2</sub>-re-jo* ‘made of glass’, but this should be interpreted as suggested in § 7.2.3.3 for the *we-a-re-ja* table. The descriptions of the chairs show that they too could be richly decorated. Even gold was used for their ornamentation, as shown by PY Ta 707.1 and 714.1-2. In the former tablet we find the phrase *ku-ru-sa-pi o-pi-ke-re-mi-ni-ja-pi o-ni-ti-ja-pi*, where the adjective χρυσός qualifies an element which has been explained as the ‘back’ (*opikeleme-niāphi*) of the chair and is also described as ‘having birds’ (*ornithiāphi*) as an ornamental pattern. The most luxurious chair, however, if we are to judge from the use of gold, is that recorded on PY Ta 714.1-2. This chair, besides being decorated with glass (*we-a<sub>2</sub>-re-jo*), is inlaid with lapis lazuli, *pa-ra-ku-*, and gold (*a-ja-me-no ku-wa-no pa-ra-ku-we-qe ku-ru-so-qe = ayāimenos kuanōi pa-ra-ku-we-kʷe khrusōi-kʷe*), with its back inlaid with golden human figures, a siren head, and palm trees (*o-pi-ke-re-mi-ni-ja a-ja-me-na ku-ru-so a-di-ri-ja-pi se-re-mo-ka-ra-o-re-qe ku-ru-so ku-ru-so-qe po-ni-ki-pi = nom. pl.?* *opikeleme-niai ayāimenai khrusois andriamphi seirēmokrahorei-kʷe khrusōi khrusois-kʷe phoinikhphi*). Decoration with siren heads<sup>2</sup> and human figures also occurs on tablets PY Ta 707.2 and 708.2, although they must be ivory decorations in these cases. On PY Ta 707.2 calves (*po-ti-pi- = portiphī*) are mentioned as an ornamental pattern.

§ 7.2.5. A number of stools (*ta-ra-nu* = *thrānus*, cf. θρῆνος) are also mentioned in the Ta series of Pylos. In contrast with tables and chairs, they are identified by an ideogram (\*220) which provides important information about their shape (see Figure 7.1).<sup>3</sup> These stools frequently are listed with *thronoi* (PY Ta 707, 708, 714), so they must have been used together with them, a fact for which we also have some good iconographical documentation. As those

<sup>2</sup> In principle, siren heads do not differ from human heads, but we can guess that Mycenaeans could tell them apart by means of a characteristic element, such as a special kind of headdress, in the same way that we can tell apart saint heads by their characteristic halo.

<sup>3</sup> Unless stated otherwise, all figures in this chapter are taken from *Idéogrammes*.

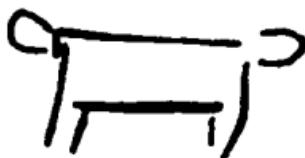


Fig. 7.1. Ideogram \*220  
(PY Ta 722.1)

representations show, the foot-stool was not used for stretching the feet before the seat — *thronoi* seem to be high chairs, so that when somebody was sitting on them their feet may have not reached the ground. The stool was thus placed below so that the feet could rest on it. The stools must have been made of wood, although this is stated three times only (PY Ta 707, 708). Again, we find that the wood is ebony. As for their decorations, stools tend to reflect the ornamental patterns of the chairs that they match. So they are frequently inlaid with ivory motifs — human figures, lions and lion heads, spirals, nuts, octopuses, and palm trees, as well as *au-de-* and *so-we-no-*, which lack a good interpretation, are all mentioned in the tablets. The stool on PY Ta 714, like its matching chair, is inlaid with lapis lazuli, *pa-ra-ku-*, and gold. It has also golden *ko-no-ni-pi*, for which a relationship to καύονις ‘fringe’ has been suggested.

§ 7.2.6. The Pylos tablets record also another type of stools in the Pa and Pn series. They were probably used for sitting, even if they may occasionally have been used as foot-stools too (VANDENABEELE 1996, 1330). We do not know how they were called, as their name was not written next to the ideogram, but their form was different from that of the stools recorded in the PY Ta series (see Figure 7.2).

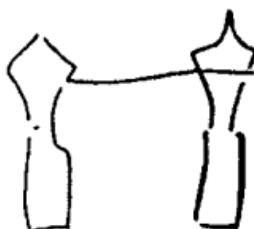
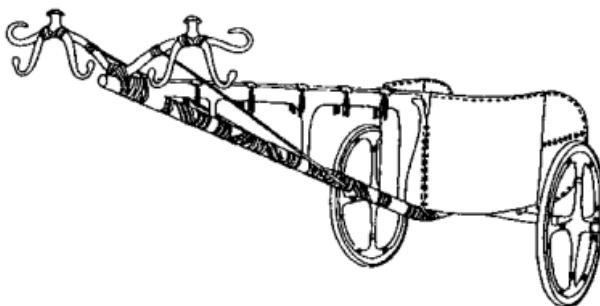


Fig. 7.2. Ideogram \*/69  
(PY Pn 30.4)



**Fig. 7.3.** A Mycenaean chariot, according to Crouwel's reconstruction  
(CROWWEL 1981, 116)

### § 7.3. CHARIOTS AND WHEELS

BERNABÉ 1996; BERNABÉ *et al.* 1990/1991; BERNABÉ *et al.* 1992/1993; CHANTRAIN 1956; CROWWEL 1981; DORIA 1972; DORIA 1975; Études; GODART – FRANCESCHETTI 1990; LEJEUNE 1968; MELENA 1972; PALAIMA 1980; RUIJGH 1976; RUIJGH 1979

The making and provision of chariots and wheels were controlled by the palaces, as shown by the series Sc, Sd, Se, Sf, and Sg from Knossos for chariots and by the series So from Knossos and Sa from Pylos for wheels.

**§ 7.3.1.** The chariot was called *i-qi-ja* (*hikkʷiā*), a form derived from *i-qo* (*hikkʷos*) 'horse'. It was a light war-chariot, which was drawn by two horses and on which both the driver and a fighter could ride. This chariot was a complex object, and its construction must have required accuracy and expertise in the production and assembly of the parts. We are well informed about the chariot's constituent elements: they are sketched in the BIG ideogram (see Figure 7.4), chariots appear on some frescoes and some are mentioned on the tablets.<sup>4</sup> Chariots had two four-spoked wheels, called *a-mo-ta* (= *armota*, cf. ἄρμα, which in First-Millennium Greek came to mean 'chariot' through a semantic shift of the type *pars pro toto*).

The frame of the case was made of wood and covered by leather at the front and at the sides. The chariot floor (*pe-qa-to* = possibly *peggʷaton* lit. 'place along which the feet go', cf. πούς 'foot' and βαίνω 'go') most probably consisted of

<sup>4</sup> See Figure 7.3 for a reconstruction of a Mycenaean chariot.



Fig. 7.4. Ideogram BIG  
(KN Sc 230)

flexible leather straps. In order to make access easier the chariots were provided with footboards, called *pte-no* (= dual *pternō*). The chariot case had two back extensions at both sides. A long wooden pole started on the middle of the lower side of the chariot case while a pole stay started at an upper part of the case; they met near the yoke under which the horses were placed. The triangle thus formed was filled with flexible wooden arches.<sup>5</sup>

Wheels turned on an axle. On PY Va 1323 thirty-two bronze axles (*a-ko-so-ne ka-zo-e* = *aksones khalkyohes*) are recorded and PY Vn 10 is a delivery record concerning the fabrication of chariots and wheels:

- .1 *o-di-do-si , du-ru-to-mo,*
- .2 *a-mo-te-jo-na-de , e-pi-[pu]-ta* 50
- .3 *a-ko-so-ne-qe* 50

*hō didonsi drutomoi armoteyōnade epi[phu]ta* 50 *aksones-k"e* 50 'thus the wood-cutters give to the wheeler's workshop 50 new branches and 50 axles'. In this case we have wooden axles. The *epiphuta* may have been used for the flexible arches which filled the triangle between the poles discussed above (cf. PALAIMA 1980).

The axle was fixed to the chariot case with some pegs (*a-]ko-so-ni-ja* = *aksonia*); the wheels turned on it (cf. Ruijgh's interpretation of *we-je-ke-a<sub>2</sub>* in § 7.3.2).

Other elements of the chariot are also mentioned, cf. the *a-re-ta-to* (probably *arestaton*, a kind of spear or sword sheath) and the part simply called 'pipe'

<sup>5</sup> On a tablet a chariot is described as *wo-ra-we-sa*, probably *wōrāwensa* 'having *wōra*'. The word [*wo-]ra*, *wo-ra-e* (identified with ideogram \*253, see Figure 7.8) seems to refer to bronze curved pieces (*ka-za* = *khalkyā*), and it must probably be interpreted as *wōrd(e)* 'protection(s)', presumably the name of the pieces which served to protect the back extensions of the chariot case (BERNABÉ *et al.* 1992/1993, 143).

(*au-ro* = *aulos*), possibly for placing the whip. In the Sd series from Knossos chariots are supplied with reins. We shall discuss them in § 7.8.1.

The reins went through a fastener. Possibly it is this part which on some tablets in the Sd series is called *i-ko-e-qe* (dat. *hikkʷ-o-hekʷei*, meaning more or less ‘horse-follower’), and can be made of leather (*wi-ri-ni-jo* = *wrīniōi*) or wood (*do-we-jo* = *dorweyōi*, cf. δούρειος).

**§ 7.3.2.** The series KN So, PY Sa, and TI SI deal with wheels, for which the ROTA ideogram is used. From them we learn that wheels could be made of various kinds of wood: willow (*e-ri-ka* = gen. *helikās*), elm (*pte-re-wa* = gen. *ptelewās*), and cypress (*ku-pa-ri-se-ja* = *kuparisseyā*). *ki-da-pa* must also be the name of an unidentified type of wood. Very occasionally bronze (*ka-ki-jo* = dual *khalkiō*) wheels are also mentioned.

There are two main types of wheels (for other more specific types see BERNABÉ *et al.* 1990/1991). In the wheels called *o-da-twe-ta/o-da-ku-we-ta* (*odatwenta/odakwenta* lit. ‘those in which the spoke “bites” the hub’, cf. δόδους ‘tooth’ and δόδωξ ‘by biting’) the spoke was inserted in a hole of the hub. In the others, called *te-mi-dwe-ta* (*termidwenta*), which were more complex, the joining of the spoke to the hub was secured through some kind of wedges or chocks (*termides*) (Figure 7.5). The terms *we-je-ke-a<sub>2</sub>* and *no-pe-re-a<sub>2</sub>* are more difficult to account for. They were initially interpreted as ‘ready for use’ (*uveikeha*) and ‘useless’ (*nōpheleha*), but other interpretations have been proposed by RUIJGH (*Études*, 330), who explained *we-je-ke-a<sub>2</sub>* as ‘rotating around an axle of the *enkhos* type’ and, as far as *no-pe-re-a<sub>2</sub>* is concerned, BERNABÉ *et al.* (1990/91, 157-159) remarked a) that *no-pe-re-a<sub>2</sub>* wheels are never ordinary wheels, b) wheels on the whole do not break in pairs, and c) *ophelos* is not attested in Mycenaean with the meaning ‘use’, only with the meaning ‘debt’, ‘obligation’. Their conclusion is that the *no-pe-re-a<sub>2</sub>* (*nōpheleha*) wheels have not been obtained through regular procedures, i.e. as product of tasks owed by the workers (*ophelos*), but in other ways (e.g., as gifts or part of loot).



Fig. 7.5. Ideogram ROTA  
(KN So 4441 and  
KN So 4430.b)

Some wheels are provided, most probably as decoration, with brackets or clasps made of more valuable materials: *a-ku-ro*, *ka-ko de-de-me-no* (*argurōi*, *khalkōi dedemenō*) or *ka-ko-de-ta* (*khalkodeta*) 'silver- or bronze-bound'.

**§ 7.3.3.** The making of chariots and wheels relied on specialised workers, according to the palaces' usual practice (see Chapter 5.4.4 above). The process was organised in various successive stages.

Information about the assembly of chariots is only available in the Knossos archives. The first stage consisted in assembling the case and the pole to form the basic frame, which was represented by the CAPS ideogram (see Figure 7.6). The scribe of the Sg series, which, unfortunately, is very badly preserved, recorded that some of the cases had been covered with some kind of grease or varnish for protection (*e-na-ri-po-to* = *enalipatos*). He supervised the workers' debts (*o-pe-ro* = *ophelos*) and the total stock. Next the complex series of additional parts that we have already mentioned, as well as the ivory ornaments, were added to the frames. The scribes of the Sf series recorded whether the chariots were assembled or not (*a-ra-ro-mo-te-me-na* = *arārmotmenai*, cf. ἀρμότω, vs. *a-na-mo-to* = *anarmostoi*) and whether there was or was not any form of inlaying (*a-ja-me-na* = *ayāimenai* vs. *a-naf(i)-to* = *anaitoi*). One of the chariots (Sf 4428) must have broken at a later stage and was brought back to the workshop in a disassembled state (*me-ta-ke-ku-me-na* = *metakhekhumenā*) so that its parts could be used again. Next, the chariots were painted and the wooden frame was covered with leather.

In the Sd and Se series chariots without wheels are recorded (ideogram CUR, see Figure 7.7). The scribe of the Se series describes some as *po-ni-ki-ja* (*phoinikiā*) 'purple' and others as *pe-te-re-wa* (*ptelewās*) 'of elm wood', which seems to indicate that some had already been painted and others had not; if so, we may assume that they were painted at that workshop. Twice (KN Se 879.b, 891.B) the scribe writes that the chariots were 'perforated for the goat tendons' *e-(ka-)te-re-re-ta a<sub>3</sub>-ki-no-o* (*ektrētā aiginoois*), i.e. the case had been provided



Fig. 7.6. Ideogram CAPS  
(KN Si 4424)



Fig. 7.7. Ideogram CUR  
(KN Se 881)

with holes for the goat tendons which fastened the leather to the wood. It seems that in that workshop a special kind of inlaying was made, too (BERNABÉ *et al.* 1992/1993, 160). The stage prior to making the chariot ready is known to us through the Sd series, which records chariots which had been assembled, inlaid, painted and provided with reins.

Since tablets recording materials obtained from dead goats (the KN Mc series) were found in the Arsenal, just like the tablets of the Sd series (cf. MELENA 1972), it seems likely that it was there that the chariots were provided with reins and were kept until they were allocated. Sometimes it is stated that a part or parts of the chariot are missing; presumably the intention was to replace them, if possible, before delivery.

**§ 7.3.4.** Wheels went through a separate process. In the So archive of Knossos a distinction is made between wheels which had already been delivered (*de-do-me-na* = *dedomena*) and those which were being worked upon (*wo-zo-me-na* = *worzomena*, cf. ἔρδω 'do'). This means that the work went on outside the palace. In the PY Sa series no deliveries are recorded, but we find personal names in the genitive followed by *wo-ka* (probably *worgā* 'task'). Every worker was in charge of small quantities of wheels, possibly because the quantities reflect only the number of wheels which were being worked *in situ* at the palace when they were subject to control (BERNABÉ *et al.* 1990/1991, 163-164).

The final stage of the assembly process for chariots and wheels is reflected in the KN Sc series. Chariots already provided with wheels (ideogram BIG) and horses (ideogram EQU), as well as armours (ideogram TUN) were distributed to their future users. Chariots ready for use and completely equipped must have been 'parked' in some kind of 'garage'.



Fig. 7.8. Ideogram \*253  
(KN Sp 4451)

#### § 7.4. SHIPBUILDING OR ARCHITECTURE? THE TABLETS PY Vn 46 AND 879

BAUMBACH 1972; VAN EFFENTERRE 1970; HOCKER – PALAIMA 1990-91

**§ 7.4.1.** The tablets PY Vn 46 and 879 deserve a special mention, since it has been suggested that they are related to shipbuilding and that they list the parts of a ship being built or repaired. Although many of the terms mentioned in those tablets remain unexplained, they may well refer to wooden parts necessary for the construction, possibly listed in the same order as they were assembled. The term *ka-pi-ni-ja* has been compared to σκάφος and would thus mean 'boat' or 'hull' *uel sim.*, while *ta-ra-nu-we* (= *thrānues*, cf. *ta-ra-nu* above § 7.2.5) could be explained as thwarts, the structural crosspieces which form seats for the rowers. We should also remember that *na-u-do-mo* (*naudomoī*), the persons in charge of ship building, are mentioned both at Pylos and Knossos.

**§ 7.4.2.** This explanation, however, cannot be taken for granted and an alternative view also deserves mentioning according to which PY Vn 46 and 879 would deal with repair work on the palace. If so, these tablets would still contribute to our understanding of Mycenaean technology, but they would belong to the chapter of Mycenaean architecture. On this assumption *ka-pi-ni-ja* would be related to κάπνη 'chimney, hole in the roof through which the smoke goes out', *e-ru-mi-ni-ja* would be interpreted as *elumniai* 'beams' and *ki-wo-* as *kiwōn* 'column', just to mention some of the terms with a more straightforward interpretation. No compelling argument has been produced so far in favour of either hypothesis. As for architecture, this is not the place to discuss in full what we know about it from the analysis of the extant remains of walls, houses, palaces, and other buildings. A general review can be found in DICKINSON's book (1994, 144-164).

#### § 7.5. IVORY AND HORN ITEMS

POURSAT 1977. See also bibliography in § 7.2-3 and 7.6.

**§ 7.5.1.** Ivory (*e-re-pa* = *elephas*, adj. *e-re-pa-te-jo* = *elephanteyos*) is mentioned several times in Mycenaean texts. Many of its occurrences are found specifically in some tablets of the KN Sd and Se and PY Sa and Ta series. This means that ivory is almost always mentioned in connection with the making of chariots and wheels and furniture. In these contexts ivory was used as an ornamental material — it was inlaid in the tyres (PY Sa 793) or in the chariot itself (KN Sd 4401, 4403, 4408), and in tables (PY Ta 642.2) and chairs

(PY Ta 708.1). In other cases, it forms part of pieces of furniture as chair backs (PY Ta 707.2, 708.2), or constitutes decorative elements like human figures, lions, and others. We dealt above (§ 7.2.3.1) with 'ivory' table legs and stays. Some of these descriptions may be compared with the few surviving ivory pieces from Mycenaean times, which also show the high degree of perfection attained (cf. POURSAT 1977). On the uses of ivory as an ornament for harnesses see § 7.8.1 below.

§ 7.5.2. Some tablets (KN Og 7504, V 684) mention quantities of ivory, measured either in pieces or by weight. The latter possibility seems to imply that we are dealing with raw material, for objects made of ivory would not be registered in that way.

§ 7.5.3. In the tablets we do not have any specific reference to how this material was worked.<sup>6</sup> Since in the *Iliad* and the *Odyssey* ἔλέφας is only used for the material itself — ivory —, but not for the animal — the elephant<sup>7</sup> —, we may wonder if in Mycenaean times the situation was similar. Ivory could have been obtained in exchange for other goods, but the Mycenaeans might not have been aware of the ultimate origin of this precious material.

**§ 7.5.4.** We can make some inferences about ivory work from the lexicon used by the scribes in connexion with ivory. Tablet PY Va 482 is quite interesting for that purpose. Its interpretation, however, is not certain. It runs as follows:

a *qe-qi-no-me-no*  
*e-re-pa , a-no-po , a-ko-so-ta , ZE , e-wi-su-\*79-ko 4 ro-i-ko 2*

*e-re-pa* seems to be qualified at least by three words or phrases: *a-no-po*, *qe-qi-no-me-no e-wi-su-\*79-ko* and *ro-i-ko*. *a-no-po* has been variously explained, usually as a personal name as in PY Cn 131.6, though in this context we would expect an adjective. We could have, in fact, *anōpos* meaning 'not perforated', cf. ὁλή 'hole' and Hom. πολυωπός 'with many holes' and στεινωπός 'narrow'. That meaning would fit well with *qe-qi-no-me-no e-wi-su-\*79-ko*, perhaps 'carved with two symmetrical gazelles' (*gʷegʷinōmenos ewisuzorkōi*, cf. Hom. ἔση 'even', 'well-balanced' and ζόρκος 'gazelle', BERNABÉ *et al.* 1992/1993, 142) and *ro-i-ko* (= *ρότκός*) 'crooked'. The last adjective thus seems to point

<sup>7</sup> Ἐλέφας meaning 'elephant' first occurs in Herodotus (III 114, IV 191).

to the natural form of a piece of ivory, while the first two may reflect two different phases of ivory work — when the ivory had not yet been carved and when it was carved with a motif.

**§ 7.5.5.** There are also a couple of mentions of horn alongside with ivory<sup>8</sup> in the KN Ra series which deals with the making of weapons (see § 7.6.8 below). Horn is also used as an ornamental element stucked to some parts of the harness (see § 7.8.1 below) and it is mentioned in connection with wheels as well (PY Sa 840), where it must have been substituted for ivory as a cheaper material.

**§ 7.5.6.** Horn may have been used also for the fabrication of some kind of vases, as shown by KN K(1) 872, where we find *ke-ra-a* (= *keraha*) followed by \*227<sup>VAS</sup>, an ideogram showing a kind of rhyton in the shape of a bull head. However, we cannot be sure whether the name 'horn' refers to the material or just to the shape, as happens in Classical Greek (cf., e.g., ἐξ ἀργυρέων κεράτων πίνοντες 'drinking from silver horns' *Pi. Fr.* 166).

## § 7.6. WEAPONS

BERNABÉ in press 2; CÀSSOLA GUIDA 1973; CÀSSOLA GUIDA – ZUCCONI 1992; FERLUGA 1979; FRANCESCHETTI 1978; GODART – FRANCESCHETTI 1990; HEUBECK 1986b; MATZ – BUCHHOLZ (eds) 1977; SNODGRASS 1965; XENAKI-SAKELLARIOU 1984

The palace archives mention weapons too, and offer a valuable source of information about what they looked like and how they were produced. We will begin with defensive weapons.

**§ 7.6.1.** In the Sh series from Pylos there are mentions of armours. PY Sh 737 reads as follows:

ARM I *o-pa-wa-ta* , *me-zo-a<sub>2</sub>* , *O* 20 *me-u-jo-a<sub>2</sub>* , *O* 10 *ko-ru-to* , *O* 4 *pa-ra-wa-jo* 2

The ideogram ARM (Figure 7.9) corresponds to *to-ra-ke* (*thōrākes*) on Sh 736 — on TI Si 5 we find *to-ra-ka* followed by the ideogram ARM, as well. In Mycenaean, however, *thōrāks* did not mean, as in first millennium Greek, 'corslet', but 'armour', since, as we shall see, it includes the helmet. After ARM I the parts of which the armour consisted are specified as 20 *opaworta* (*O* stands for

<sup>8</sup> The opposition between horn and ivory appears in the well known Homeric passage about the gates of dreams (*Od. XIX* 563).



**Fig. 7.9.** Ideogram ARM  
(PY Sh 740)

the same word) *mezoha* 'big' and 10 *meiyoha* 'small'. The compound *opaworta* (from *opi* 'on' and *aweirō* 'bind', 'fix') must mean '(pieces) fixed up'. There has been much discussion about how these 'plaques' were distributed on a base that probably was a piece of cloth or leather (cf. RUIPÉREZ – MELENA 1990, 205).

There follows a reference to the helmet (*gen. koruthos*), which has four other *opaworta* and two earflaps (*parāwahyō*) as well. Some suits of armour recorded in this series are provided with 22 big and 12 small plaques. The term *pa-ra-jo* (*palaioi*) 'from last year' on Sh 740 reveals that the contribution of armours followed the palace's regular *ta-ra-si-ja* practice.

§ 7.6.2. The Sk series from Knossos provides similar data, but we find in it new information too. We will analyse Sk 8100 (where line B must be read before A):

- .A *qe-ro<sub>2</sub>* 2 *e-po-mi-jo* 2 / *o-pa-wo[-ta*  
 .Ba *o-pa-wo-ta* 2  
 .Bb *to-ra* / *ko-ru* GAL 1 *o/pi-ko-ru-si-ja* 2 *pa-ra-wa[-jo* 2

We are dealing again with a suit of armour (*thôrâks*), whose parts are listed from top to bottom, beginning with the helmet, which is indicated both by the word *korus* and by the ideogram GAL. It has earflaps, too, and two *opaworta* instead of four. Two other elements are just called *opikorusia* '(pieces) on the helmet'. As for the corslet, instead of the references to big and small *opaworta* — which are typical of the Pylian archive —, we find the term *qe-ro<sub>2</sub>* (*skʷellô*, dual from *skʷellâ*, cf. Hsch. στέλλα), which refers to the two parts of a bivalve corslet made of leather (cf. HEUBECK 1986). There are also the *e-po-mi-jo* (*epōmîo*) 'shoulder pieces', not mentioned at Pylos.

On the tablets there is no record of anything similar to the magnificent bronze armour found in Dendra,<sup>9</sup> which consisted of fifteen bronze pieces joined by leather straps. Its weight must have been enormous, thus rendering it difficult to use, so it cannot have been very common.

**§ 7.6.3.** A type of helmet which is never recorded on the tablets is the boar's tusk one. Some exemplars have been preserved and found in archaeological excavations and we have some additional information on surviving figures.<sup>10</sup> We also have a detailed description in the *Iliad* (X 261-265), which must have come down to Homer from Mycenaean times through oral tradition. No information on shields is found on the tablets either, but there are Mycenaean representations which show an 8-shaped shield, possibly the one which is called ἀσπίς ἀμφιβρότη in Homer.<sup>11</sup>

**§ 7.6.4.** Mycenaean defensive weaponry must have also included greaves or leggings, as shown by some representations, like the well-known Warrior Vase from Mycenae kept at the Athens National Museum (n. 1426),<sup>12</sup> which can be related to the descriptions provided by Homer. The tablets provide no evidence.

**§ 7.6.5.** As for offensive weapons, an archer, *to-ko-so-ta* (*toksotās*) is mentioned on the tablets (KN V[1] 150 + 7624), as well as a bow-maker, *to-ko-so-wo-ko* (*toksoworgos*) on PY An 207.12. We do not find the word for arrows, but the ideogram SAG does appear.<sup>13</sup>



Fig. 7.10. Ideogram \*256 (KN U 124)

<sup>9</sup> See CASSOLA GUIDA (1973, table XV).

<sup>10</sup> See CASSOLA GUIDA (1973, table XXVII).

<sup>11</sup> For the possible relation of the adjective ἀμφιβρότος to Myc. *a-pi-qo-to* see § 7.2.3.2 above.

<sup>12</sup> See photograph in CASSOLA GUIDA (1973, table XXXI, fig. 1).

<sup>13</sup> In fact, the bow could be represented by the ideogram \*256 (BERNABÉ in press 2), see Figure 7.10. See also that paper for the possible Mycenaean terms for arrows.

**§ 7.6.6.** Other offensive weapons are mentioned in PY Jn 829.3:

*ka-ko , na-wi-jo , pa-ta-jo-i-qe , e-ke-si-qe , a<sub>3</sub>-ka-sa-ma*

Here it is recorded that a certain quantity of bronze from shrines or ships (*khalkos nāwios*) was delivered for making heads (*aiksmans*) for javelins (*paltaioihī*) and spears (*enkhessi*). The shafts of these weapons must have been made of wood. We find very similar terms in *Iliad* VI 319-320: ἔγχος ἔχ' ἐνδεκάπηχυ πάρουθε δὲ λάμπετο δουρός / αἰχμὴ χαλκείη 'he held a spear of eleven cubits; at the front, the bronze spear-point blazed'. There are also similarities in vocabulary between KN R 1815 *e-Jke-a / ka-ka re-q* HAS 12 (*en]kheha khalkāreha*) and *Iliad* XVIII 534 χαλκήρεσιν ἐγχείησιν 'bronze spears'. The nominative plural of *paltaia* appears together with the ideogram JAC on some nodules of the KN Ws series found in the Arsenal. The workers responsible for making these spear and javelin heads must have been the *ka-ke-we* (*khalkēwes*) 'bronze workers' (on which see Chapter 5.4.4 above).

**§ 7.6.7.** Two swords (*qi-si-pe-e = k"siphehe*, cf. Hom. ξίφος) are mentioned on PY Ta 716.2 before the ideogram \*234, in what seems to be the inventory of the equipment of a banqueting hall.

**§ 7.6.8.** The KN Ra series is our source of information about the provision of swords to the palace. The tablets were found in the so-called 'Sword-tablets corridor'. Their state of preservation is not very good, but we know that they recorded quantities of two kinds of weapons:

- a) *pa-ka-na* (corresponding to the ideogram PUG), i.e. *phasgana* (cf. Hom. φάσγανον). They had ivory hilts (*e-re-pa-te = elephantei*) and they were *a-ra-ru-wu-a* (*arārwōha*, perfect participle of ἀπαρίσκω), that is, 'fitted together'. These must be the kind of daggers that we know well thanks to archaeological findings, and which had ivory hilts joined by rivets.
- b) *zo-wa* (corresponding to the ideogram GUP), for which we lack an assured transcription. They are described as *ke-ra de-de-me-na*, with a phrase where a form of the word κέρας 'horn' is followed by the perfect participle of δέω 'bind'. They must be some kind of knives with horn hilts, maybe fitted just by pressing.

In this series two different classes of workers are mentioned:

- a) *pi-ri-je-te* (*prietēr*), a derivative from πρίω 'saw', probably the name of the ivory worker (cf. Hom. πριστοῦ ἐλέφαντος 'of sawn ivory', i.e. 'of carved ivory').
- b) *ka-si-ko-no*, which has been variously explained. BERNABÉ (in press 2) understands it as a compound of *κασι-* < \**kati-* (cf. κασίγνητος, Hitt. *katti-*, etc.; LEJEUNE 1960) and a term possibly related to χέω, cf. Cret. χόννος 'copper cup'.

It seems that the sword blades, produced by a *ka-ke-u* (*khalkeus*), were later sent to these workers. The *prietēr* then sawed the ivory for the dagger hilts and the horn for the knife hilts. He then fitted them to the blade and the *ka-si-ko-no* inlaid other materials on the blade. Some excellent pieces have been found which have gold or silver inlay or niello work. Some fine weapons were also produced in Mycenaean times, such as those with golden hilts which were found in the Mycenae graves and are kept in the Athens National Archaeological Museum.

## § 7.7. TEXTILES

BARBER 1991; HEUBECK 1986a; KILLEN 1964; KILLEN 1966; KILLEN 1979; KILLEN 1984; KILLEN 1988; KILLEN 1999; LUJÁN 1996-97; LUJÁN 1999; LUJÁN 2002; LUJÁN in press; MELENA 1975; VARIAS 1990-91; WICKERT-MICKNAT 1982

According to the data provided by the extant tablets, textile production was one of the most important activities in Mycenaean economy. We are best informed about the organisation of that industry at Knossos, where we have extensive sets of tablets — records of sheep flocks, wool production, and textile production allow for a detailed study. Our goal here, however, is not to describe the organisation of that industry (see for that Chapter 5.4.4 above), but to try and recover the relevant aspects of the techniques involved in textile manufacture.

§ 7.7.1. Two types of fibres are attested in our texts: wool (ideogram \*145 LANA, adjective *we-we-e-a* = *werweheha*, cf. εῖρος 'wool') and flax (*ri-no* = λίνον and acrophonic abbreviation *Ri*). Flax is recorded not only as a textile fibre, but also as a plant (KN Np 7423, Og 5778, etc.), but the tablets do not provide any information about the processes necessary to make it suitable for the textile industry. We know, however, that there were some female workers specialised in flax, the *ri-ne-ja* (*lineyai*) 'flax-workers' (PY Ab 745, Ad 295, etc.). We have relevant information about the use of wool in the textile industry mainly from the series KN L-, Od, TH Of, and MY Oe. Obviously the wool had to be spinned before it could be used for the fabrication of textiles, and we have some data about this on the tablets. First, the word *a-ra-ka-te-ja* (= ἀλακατεյαι) 'spinners' (cf. ἄλακατη 'distaff') is attested several times.<sup>14</sup> Second, there are some tablets which record quantities of wool, which is qualified by terms that seem to describe the kinds of thread or yarn that it has been

<sup>14</sup> Curiously enough, these *a-ra-ka-te-ja* not only were in charge of spinning, but were also provided with the appropriate quantities of wool and had to make cloths out of them, as shown by tablet KN Lc 531. See LUJÁN (in press).

turned into. These terms are: a) *o-nu*, pl. *o-nu-ka* (*onu* [?]),<sup>15</sup> possibly the weft (cf. also *o-nu-ke-ja* ‘*o-nu* makers’ on PY Ab 194 and Ad 675 and the adjectives *po-ki-ro-nu-ka* and *re-u-ko-nu-ka* discussed at § 7.7.3); an alternative explanation of *o-nu* and *o-nu-ke-ja* defended by KILLENN (1979) is that the *o-nu-ka* were some decorative elements added on the cloths; b) *e-ne-ro* (*eneron*), possibly the warp; c) perhaps also *e-ta-wo-ne*, meaning simply ‘thread’ (MELENA 1975, 82-93), cf. also *e-ta-wo-ne-u* ‘*e-ta-wo-ne* maker’, but the interpretation of this term is by no means certain.

§ 7.7.2. Wool can also be recorded as *ti-ra* (KN Od[1] 681 and 687), a term that can be interpreted as *tilai* ‘tuft (of wool)’. This points to the fact that in Mycenaean times wool was not shorn, but plucked, a system which is well attested in antiquity (*Documents*<sup>2</sup>, 586; MELENA 1975, 100 n. 3).

§ 7.7.3. Wool could be dyed or left undyed, as shown by the tablets MY Oe 106 and 115, where the ideogram is qualified by the adjectives *ko-ro-to* (*khrōston*) ‘dyed’ and *a-ko-ro-ta* (*akhrōsta*) ‘undyed’, cf. χρόζω ‘tinge’. This is also proved by the adjectives which qualify the cloths in the KN Ld(1) series: *re-u-ko-nu-ka* and *po-ki-ro-nu-ka* ‘with white (λευκός) *o-nu*’ and ‘with variegated (ποικίλος) *o-nu*’. Further colour references appear in the Ld series from Knossos, where a number of adjectives are used to describe the cloths: *re-u-ko* (*leukos*) ‘white’ and *po-ri-wa* (*poliwa*) ‘grey’ must refer to various shades of the natural colour of wool,<sup>16</sup> while *pa-ra-ku-ja/\*56-ra-ku-ja* ‘with *pa-ra-ku-* colour’ and *po-pu-re-ja* (= *porphureyai*, cf. πορφύρεος) ‘purple’ clearly demonstrate the use of various dyes. The interpretation of *pa-ra-ku-ja* is ambiguous, since the *pa-ra-ku-* stone has not been identified for sure — it could either mean just that the cloth is the same colour as the stone or that the stone itself has been ground and used as a dye. As for *po-pu-re-ja*, the straightforward explanation is that πορφύρα ‘purple’, one of the most appreciated dyes in antiquity, was used. We can thus envisage two different procedures for dying:<sup>17</sup>

<sup>15</sup> The morphology of this word is unclear. On the one hand, we have nom. sg. *o-nu-ka* besides *o-nu*, which points to a masculine noun, *onuks*, written in the same way as *to-ra-ka* / *to-ra* = *thrāks* ‘armour’. On the other hand, *o-nu-ka* normally appears before the cloth ideograms and numbers like 4 and 5 and consequently the -*a* ending may point to the plural of a neuter noun.

<sup>16</sup> This also seems the most likely explanation for *ka-sa-to* (*ksanthon*) ‘reddish’ on MY Oe 113, which is usually considered as a personal name. The colour of the wool of some sheep was reddish, as some ancient writers explicitly state (see LUJÁN 1999, 132 with further references).

<sup>17</sup> It has also been proposed that a third, alternative procedure for colouring the cloths did exist — rubbing the colours or painting the motifs after the cloth had been weaved. This may be the meaning of the expression *ki-ri-ta e-ru-ta-ra-pi* (= *khrista eruthrāphi*) ‘anointed with red (dye)’ (LUJÁN 1996-97, 350-352).

dying the threads before they were weaved (to which the adjective *po-ki-ro-nu-ka* could point) and dying the cloth once it had been weaved (which seems more natural with purple dyeing and was the usual procedure in Greece and Rome).<sup>18</sup> We need to add a few comments about the various kinds of dyes attested on the tablets, beside those that have already been dealt with. In the MY Ge series we find the plant called *ka-na-ko* (cf. κνῆκος) in two varieties: red (*e-ru-ta-ra* = *eruthrā*) and white (*re-u-ka* = *leukā*). The former is usually identified with the *Carthamus tinctorius*, which was one of the most frequent red dyes in antiquity. It has also been argued (MELENA 1976, 186) that the *po-ni-ki-jo* mentioned on the tablets could be the *Rubia tinctorum* (the ἐρυθρόδανον), another plant used as a dye, but this identification is not assured. Other vegetal dyes must also be taken into account: the saffron, which is always written on the extant tablets with an ideogram, so that we do not know its Mycenaean name, as well as the sumach (cf. *ro-u-si-je-wi-ja/ro-we-wi-ja* = *rousyēwiai/rowewiai*, cf. φοῦς 'sumach', attested for tinging hides in PY Ub 1315). The henna may also be mentioned on the tablets under the name *hertis* (cf. *e-ti-we* and *a-e-ti-to*), although it also appears in the context of the fabrication of perfumed oil (cf. *Perfume*, 26-31).

**§ 7.7.4.** Even if felting as a process to make cloths must have been known in Mycenaean times,<sup>19</sup> there is no clear indication about it in the extant texts. The only process that is undoubtedly attested is weaving. There are many ways to prove this: a) the ideogram \*159 TELA (see Figure 7.11) clearly shows a piece of cloth in the loom; b) some *i-te-u* (*histeus*) and *i-te-ja-* (*histeyai*) 'weavers' (cf. λετός 'loom') appear on the tablets; c) we have already mentioned the adjectives *re-u-ko-nu-ka* and *po-ki-ro-nu-ka* and other terms possibly referring to warp and weft; d) some of the terms used for various types of cloth have clear correspondences in the Homeric poems, where they are explicitly described as woven cloths. This is the case, e.g., with one of the most frequent types of cloth in the tablets, the *pa-we-a/pa-we-a<sub>2</sub>* (*pharweha*, cf. Hom. φύπος), the kind of cloth that Penelope weaves and unweaves to cheat her suitors (*Od.* XXIV 120 ff.).

<sup>18</sup> It should also be noted that the adjective *po-pu-re-ja* is only used to describe the *pu-ka-ta-ri-ja* kind of cloth, and that this according to MELENA (1975, 109 n. 1) could be the Mycenaean name of felt. If *pu-ka-ta-ri-ja* were felt, which is, however, not likely (see LUIJÁN 1996-97, 342, n. 24), dying after having made the cloth would be the only possibility, since felt is not weaved.

<sup>19</sup> See previous note. A further argument for that is II. X 265, where, in the description of the helmet given to Odysseus by Meriones, we are informed that πύλων 'felt' had been used to make it. The helmet belongs to a type that began to be used in the MH period and was given up in the LH III B (13<sup>th</sup> century BC).



**Fig. 7.11.** Ideogram TELA  
(KN Ld[1] 587.1)

**§ 7.7.5.** Information about the different types of cloths is found mainly in the Lc, Ld, Le, Ln, and L series from Knossos, as well as the La series from Pylos and the L series from Mycenae. Besides the *pa-we-a*, we also know the *pu-ka-ta-ri-ja* and the *tu-na-no* cloths, for which no uncontroversial explanation has been provided. If *pu-ka-ta-ri-ja* is related to πυκ(ι)νός 'thick', we could assume that these cloths were thicker than the *pa-we-a* and more wool was needed to make them. However, we lack any indication about the quantity of wool used for the *pu-ka-ta-ri-ja*, while we know that usually one and a half unit of wool (approx. 4.5 kg) was needed for all cloths of the *pa-we-a* type, and four units (12 kg) for every *tu-na-no*. The identification of the *te-pa* cloths with the Homeric τάπτητες is generally accepted, in spite of the phonetic difficulties. For the fabrication of a *te-pa* seven units of wool (21 kg) were needed, so that they must have been big and thick cloths, which fits well with the way in which they are used in Homer to make a bed or a seat more comfortable (*H.* IX 200, *Od.* IV 124 and X 12). Other cloths mentioned on the tablets are: *ki-to* (*khitōn*) 'tunic', *e-pi-ki-to-ni-ja* (*epikhitōnia*) 'attachments to a tunic?', *we-a-no-/we-a<sub>2</sub>-no[* (*wehanos*, cf. Hom. ξανός) 'fine robe', and *u-po-we* (*hupowes*). The *u-po-we*, according to its etymology, must be some kind of undergarment (cf. δροέστητης χιτών Hsch.) made out of flax, as KN L 178 shows. As for *ki-to* and *e-pi-ki-to-ni-ja*, we must mention KN L 693, where they appear together with some quantities of bronze, which has led to the suggestion that the tablet in fact records some kind of armour which was made attaching bronze plaques to a flax dress (cf. HEUBECK 1986).

**§ 7.7.6.** Some finishing tasks are also recorded on the tablets. The structure of KN Ln 1568 indicates that the workers called *a-ze-ti-ri-ja*, also spelled *a-ke-ti-ri-ja* and *a-ke-ti-ra<sub>2</sub>* elsewhere (= *askētriai*, cf. Hom. ἀσκέω 'work', 'produce'), must have been involved in some kind of finishing task carried out after the

other groups of workers mentioned on the tablet had finished their own work. It is also possible to give a similar interpretation of the verso of the KN Lc(2) tablets, in which various quantities of wool are recorded together with the word *to-u-ka* (*thoukhāi*, cf. Hom. τεύχω 'produce', 'make'). If we can extrapolate from the use of this verbal root in Mycenaean, the word must indicate that the cloths recorded on the recto of those tablets were undergoing, or were meant to undergo, a special finishing process, for which those quantities of wool were needed (LUIJÁN 2002). On KN L 871.b we have *te-tu-ko-wo-a* (*thethukhwoha*), the perfect participle of τεύχω, qualifying some cloths, so that it must have there the same meaning. We must also mention here the *pe-ko-to* (*pektōi*) cloths recorded in the KN Lc series, which must be connected with the *pe-ki-ti-ra<sub>2</sub>* (*pektriai*) workers. Both terms are related to πέκω 'comb', but, since the process involved here is performed after the cloth is woven, it cannot refer to the combing of the wool, but to a special finishing process which combs the cloth in order to bring out some hair and make the outer side of the cloth smoother; MELENA (1984, 37-38) has provided some good Assyrian parallels. In his recent study on *o-pa* (= *hopā*, cf. ἔπω) KILLEN (1999, 331) has argued that KN L 695 is also concerned with a textile finishing or refurbishing process.

## § 7.8. LEATHER

BERNABÉ in press 1; KIRK 1990; RUIIGH 1966

**§ 7.8.1.** In the Sd series from Knossos, which, as we saw above (§ 7.3.3), records finished chariots, we find the indications *a-ra-ru(-wo)-ja a-ni-ja-pi = arāruia* (*arārwohya?*) *anhiāphi* 'equipped with reins' and *o-u-ge a-ni-ja po-si = ou-kʷe anhiai posī* 'and there are no reins added'. Two elements of the harness are mentioned:

a) *o-po-go* (*opōkʷois*) 'horse-blinders' (cf. *opi* and *okʷs*), which are usually *wi-ri-ni-jol/wi-ri-ne-jo* (*wrin[e]yois*) 'made of leather' (cf. [F]βινός 'hide') but are *e-re-pa-te-jo* (*elephanteyois*) lit. 'made of ivory' on KN Sd 4403. It is highly doubtful that this means that these objects were made of ivory, for this does not fit at all with their function. So it should rather be assumed that they were made of leather and had some ivory ornaments added, cf. Il. V 583 ήνια λεύκ' ἐλέφαντι 'reins white with ivory'. KIRK (1990, 117-118) states that the reference could be to decorative discs rather than to a kind of handle. He also points to the Niniveh bas-reliefs of Ashurbanipal's lion-hunt in which the reins are not decorated, but the remaining other part of the harness is. In an interpolation in Eustathius' commentary to this passage (Eust. 583.44), the word ἐλεφαντώνωτος 'with ivory back' is coined as a parallel to χρυσόνωτος, which qualifies the

ἵνια at Sophocles, *Ajax* 847. This can provide a further argument for considering that it was the decoration of the reins — and not the reins themselves or parts of them — that was made of ivory.

b) *ke-ra-ja-pi o-pi-i-ja-pi*, an instrumental in -phi of a derivative in -yos from κέρας 'horn' plus a compound of *o-pi* 'on' and *hiá* 'strap', cf. ἱπάς 'leather strap'. So we have here some 'horn plaques fixed on the straps'. This obviously reinforces the interpretation proposed for the ivory horse-blinders, so that on the tablets both the more expensive and the cheaper decoration of the blinkers are attested.

**§ 7.8.2.** At Pylos some seals of the Wr series, found in the room 98, record deliveries of hides as *o-pa* (about this word see § 7.7.6). The Ub series was found in the adjoining room 99; it consists of four tablets, which allow us to understand how the leather industry worked. Two tablets, Ub 1316 and 1317, record deliveries of deer hides (*e-ra-pi-ja* = *elaphiai*) by tanners, possibly hunters, with the indication that they are owed from the previous year. We may infer that the tanners were supposed to deliver to the palace a certain quantity of hides.

Ub 1318 records not yet treated hides (*di-pte-ra* = *diphtherai*) from various animals: cows (*wi-ri-no* = *wrinoi*), lambs (*we-re-ne-ja* = *wrēneyai*), goats (*a<sub>3</sub>-za* = *aigyā*), and deers (*e-ra-pe-ja* = *elapheyai*). They are allocated to various workers for the making of specific objects, which are registered on the tablet in the dative case, e.g. *pe-di-ro-i* (*pediloihī*) 'for sandals'. It seems that men are entrusted with the production of harnesses and women with that of shoes, bags, and dresses. All this shows that the distribution was made in that room of the palace.

Finally, the finished products delivered to the palace by the workers were also recorded. Thus on Ub 1315 (cf. BERNABÉ in press 1; RUIJGH 1966) we find *a-ni-ja* (*anhiai*) 'reins' of various types, some new and some repaired, as well as *di-pte-ra*, (*diphtherai*) 'hides' which have been tinged in red or yellow, and *po-qe-wi-ja* (*phorg<sup>w</sup>ēwiai*) 'halters'.

## § 7.9. VESSELS AND OTHER METAL ARTEFACTS

ANDERSON 1994-95; LEWIS 1983; MOUNTJOY 1986

Mycenaean vessels can best be researched through the direct analysis of the extant artefacts found in the archaeological excavations at the various Mycenaean sites. We will not review here the archaeological data, for which there is a vast bibliography since clay vessels have traditionally been the main criterion for establishing the chronology of the Aegean Bronze Age. For a general overview the reader should check the chapters devoted to Mycenaean pottery

in comprehensive surveys of the Aegean Bronze Age, such as those by DARCQUE (1989, 505-510) and DICKINSON (1994, 101-143), where additional bibliography can be found. Relevant archaeological information appears in the books by LEWIS (1983) and MOUNTJOY (1986).

**§ 7.9.1.** The Mycenaean tablets provide no information about the actual production of pottery, but the pottery maker, *ke-ra-me-u* (*kerameus*), is mentioned several times and we also find interesting information about the names of various vessels. It seems, however, that in most cases the vessels recorded are metal, not clay ones. There are a number of reasons for this conclusion: 1. the pots are recorded in very small numbers, while clay vessels are found in large quantities in excavations; 2. the shapes of the ideograms which represent them fit better with metal work; 3. in some cases the ideogram AES precedes the ideogram of the vessel.

**§ 7.9.2.** Nevertheless, it is not unlikely that the amphoras (*a-pi-po-re-we/a-po-re-we* = *am(phi)phorēwes*) recorded at Knossos and Mycenae, and possibly also at Pylos ( *]re-we* ), and perhaps some or all of the *ka-ra-re-we* (*khlarēwes?*), *u-do-ro* (*hudros* 'water jar', cf. δρπία), and *i-po-no* (*ipnos?*), were, in fact, clay vessels. The quantities of \*210<sup>VAS</sup> + KA, i.e. of *ka-ra-re-we* on KN K 700, which add up to 1800 units, seem to lead to this conclusion.

**§ 7.9.3.** The information on Mycenaean vessels provided by the tablets will be best summarised in a table similar to that found in *Documents*<sup>2</sup>, 324. A comprehensive list of the names of Mycenaean vessels can be found in ANDERSON's (1994/1995) paper.

Table 7.1

	Ideogram	Name	Alph. Greek equivalent	Interpretation <sup>20</sup>
	*132			amphor?
	*155 <sup>VAS</sup>			bowl

<sup>20</sup> Only the most probable interpretation is provided. For alternative explanations see *Diccionario* (s. uu.).

	Ideogram	Name	Alph. Greek equivalent	Interpretation <sup>20</sup>
	*183			water pot?
	*200 <sup>VAS</sup> /*219 <sup>VAS</sup>	<i>pi-je-ra<sub>2</sub></i> <i>pi-a<sub>2</sub>-ra</i>	φιέλη φιάλη	boiling pan
	*201 <sup>VAS</sup>	<i>ti-ri-po</i> <i>ti-ri-po-di-ko</i>	τρίπους τριποδίσκος	three-legged cauldron
	*202 <sup>VAS</sup> *214 <sup>VAS</sup> + DI	<i>di-pa</i>	δέπας	jar
	*203 <sup>VAS</sup>	<i>qe-to</i>	πίθος?	jar
	*204 <sup>VAS</sup>	<i>qe-ra-na</i>		pitcher, ewer
	*205 <sup>VAS</sup>	<i>a-te-we</i>		pitcher, jug
	*206 <sup>VAS</sup>	<i>ka-ti</i>	κηθίς, κάθιδος	water jar
	*207 <sup>VAS</sup>	<i>ku-ru-su-*56</i>		three-legged amphor
	*208 <sup>VAS</sup>	<i>po-ka-ta-ma</i>		cup

	Ideogram	Name	Alph. Greek equivalent	Interpretation <sup>20</sup>
	*209 VAS	<i>a-pi-po-re-we</i> <i>a-po-re-we</i>	ἀμφιφορεύς ἀμφορεύς,	amphor
	*210 VAS	<i>ka-ra-re-we</i>	κλᾶρος? χλαρόν?	stirrup jar
	*211 VAS			water bowl?, water jar?
	*212 VAS	<i>u-do-ro</i>	ὑδρία	water pot
	*213 VAS	<i>i-po-no</i>	ἰπνός	cooking bowl
	*214 VAS	<i>pa-ko-to</i>	φάκτον?	jar?
	*215 VAS			cup
	*216 VAS			cup
	*217 VAS			flask
	*218 VAS			cup
	*221 VAS			cup?
	*222 VAS			jar?

	Ideogram	Name	Alph. Greek equivalent	Interpretation <sup>20</sup>
	*227 <sup>VAS</sup>			rython
	*228 <sup>VAS</sup>	po-ro-e-ke-re-ri-ja		ladle
	*229 <sup>VAS</sup>			ladle
	*246	a-sa-mi-to	ἀσάμινθος	bathtub
	*250 <sup>VAS</sup>			water pot?
	*301 <sup>VAS</sup>			bowl?
	*302 <sup>VAS</sup>			bowl?
	*303 <sup>VAS</sup>			pitcher, jug
	*305 <sup>VAS</sup>			bowl?

§ 7.9.4. The PY Ta series records, beside the pieces of furniture and the vessels, other metal artefacts. Mainly, it is the brazier (*e-ka-ra* = *eskharā*) and the implements needed to deal with fire: *au-te* (*austēr*) 'kindler', *pura-u-to-ro* (dual *puraustrō*) 'fire-tongs', and *qa-ra-to-ro* (*skʷalathron*) 'fire-rake'. The two *e-ka-ra* recorded are described as: *e-ka-ra a-pi-qo-to pe-de-we-sa* and *e-ka-ra i-to-we-sa pe-de-we-sa so-we-ne-ja au-de-we-sa-qe*. The first could be 8-shaped (*amphigʷotos*, cf. § 7.2.3.2) and has legs (*pedwessa*, cf. *πούς* 'foot'), while the second is provided with an upright support (*histowessa*, cf. *ἱστός* 'mast') and has legs. The other two adjectives have no certain interpretation.

§ 7.9.5. On PY Ta 716 two *pa-sa-ro ku-ru-so a-pi to-ni-jo* are recorded, whose interpretation is uncertain. They could be two 'golden chains encircling the chair' (*psallō khrusō amphithorniō*), although other suggestions have been made (see e.g. DEL FREO 1990). No satisfactory explanation has been provided for the *wa-o* mentioned on the same tablet and followed by the ideogram \*232, showing a double axe.

§ 7.9.6. Although we have already mentioned metal work when dealing with the different forms of production, it may be useful to summarise what we know about this area of Mycenaean technology. Four metals are mentioned in the tablets: gold (*ku-ru-so* = dat. *khrusōi*), silver (*a-ku-ro* = dat. *argurōi*), bronze (*ka-ko* = *khalkos*), and lead (*mo-ri-wo-do* = *moliwdos*, cf. μόλιβδος); conceivably also tin if *ka-so* is related to κασσίτερός, which is far from certain.

§ 7.9.7. Beside the golden chains (?) that we have just seen (§ 7.9.5), gold, as attested in the tablets, seems to have been used mainly for the decoration of pieces of furniture (see § 7.2). There were workers specialised in gold work, the *ku-ru-so-wo-ko* (*khrusoworgoi*). The only mention of silver on the tablets is for the decoration of wheels. Bronze was used for a variety of purposes and no doubt was the most important metal for everyday life in the upper classes. We have no indication about how bronze itself — which was an alloy — was produced, but we know from the tablets that it was used for the fabrication of weapons, some parts of chariots and wheels, vessels, and braziers with their equipment (§ 7.3, 7.6, and 7.9.1-4). The tablets in the PY Jn series record deliveries of quantities of bronze to various workers, but no further information is provided about the technical process itself.

## § 7.10. PERFUMES

ERARD-CERCEAU 1990; KILLEN 1962; MELENA 1976; MELENA 1984; *Perfume*; RUIIGH 1968

The production of perfumes was one of the most important industrial activities in Mycenaean times, as the tablets show. Our main source of information are the tablets of the KN Fh and PY Fr series, together with some tablets in the F, Ga, Gg, Gm, Gv, and G series from Knossos, the Un series from Pylos, and the Ge series from Mycenae.

**§ 7.10.1** Following ERARD-CERCEAU's (1990, 256-274) classification, we find that the tablets record various types of perfume components:

- Spices. Spices are mentioned in connection with both food and perfumed oil, so we may infer that their production was aimed at these two different purposes — their use for seasoning and as scents. The following spices are mentioned in the tablets: *ko-ri-ja-do-no* (*koriandnon*, cf. κορίανδρον) 'coriander', *ku-mi-no* (*kuminon*) 'cumin', *ku-pa-ro* (*kuparos*, cf. κύπερος) 'cyperus', *ma-ra-tu-wa* (*marathwon*, cf. μάραθων) 'fennel', *pa-ko* (*sphakos*, cf. σφάκος) 'sage', *po-ni-ki-jo* (*phoinikion*),<sup>21</sup> *sa-sa-ma* (*sásama*, cf. σήσαμον) 'sesame' and perhaps also henna (*heritis*, cf. *e-ti-we* and *a-e-ti-to*).
- Herbs and flowers. The following are mentioned on the tablets: rush (*ko-no* = *skhoinos*), rose (*wo-do-we* = *wordowen*, an adjective which qualifies oil in various tablets of the PY Fr series, from \**wordon*, cf. ρόδον 'rose'), and perhaps also the iris, if the ideogram \*157 found on the tablets PY Un 249.2, 267.6, and An 616.3 is to be identified with the root of that plant (cf. ERARD-CERCEAU 1990, 269).
- Resins and gums. The ideogram *MU* (= possibly μύρρα, σμύρνα 'myrrh') appears on the KN Fh tablets. The word *ki-ta-no* must refer to the terebinth, if we can compare Hesychius's gloss κρίτανος· τέρμινθος.
- Vegetal oils and wine. Olive oil (*e-ra-wo/e-ra<sub>2</sub>-wo* = *elaiwon*, cf. ἔλαιον and, specially, ideogram \*130 OLEUM) is mentioned several times on tablets related to perfume production. Given that sesame also appears on the tablets, it could well be that sesame oil was used in the perfume industry, but no clear indication is found. The mention of wine on PY Un 267 points to the use of wine in the perfume industry, possibly because of its alcoholic content; herbs and plants may have been soaked in it before being mixed with the oil, as attested in some later sources.

**§ 7.10.2.** As for the process of fabrication of the perfumes, our best source of information is the tablet PY Un 267, which reads as follows (see also below, Chapter 9.40):

- .1    *o-do-ke , a-ko-so-ta*
- .2    *tu-we-ta , a-re-pa-zo-o*
- .3    *tu-we-a , a-re-pa-te*

<sup>21</sup> Various proposals have been made concerning the *po-ni-ki-jo*: *Alkanna tinctoria* L., *Carthamus tinctorius* L., etc. If it is related to φοῖνιξ 'date-palm' it could even refer to dates. See ERARD-CERCEAU (1990, 263-266) and *Diccionario* (s.u.).

- .4 *ze-so-me-no*
- .5 *ko-ri-a<sub>2</sub>-da-na* AROM 6
- .6 *ku-pa-ro<sub>2</sub>* AROM 6 \**15?* 16
- .7 *KAPO* 2 t 5 VIN 20 ME 2
- .8 *LANA* 2 VIN 2

The beginning of the tablet can be translated approximatively like this: 'Thus *a-ko-so-ta* (personal name) gave Thystes, the ointment-maker, scents for the ointment that should be boiled' (*hōs dōke a-ko-so-ta Thuestāi aleiphazoōi thueha aleiphatei ze(s)somenōi*). There follow quantities of coriander, cyperus, iris (?), fruits, wine, honey, and possibly, lanolin (if the reference to wool on the tablet is to be understood in that way; see KILLENS 1962, 67 and ERARD-CERCEAU 1990, 275). This text tells us how the perfume-makers were called in Mycenaean times, *a-re-pa-za-o* = dat. *aleiphazoōi* lit. 'ointment-maker'. This name, as well as the participle *ze-so-me-no* (dat. *ze[s]somenōi*, cf. ζέω 'boil'), provide a clear indication of the main process in the perfume production — boiling the various scents in the oil.<sup>22</sup>

**§ 7.10.3.** All the components mentioned above must have been used in different ways for the production of perfumed oil, as both internal analysis and comparative evidence show (cf. *Perfume*, 11-39). Some of the listed products, like roses or sage, may have been used for obtaining the final fragrance, while others like cyperus were used to thicken the oil and fix the fragrance to it. This would account for the combination of the adjectives *wo-do-we* (*wordowen*) 'rose-scented' and *ku-pa-ro-we* (*kuparowen*) 'cyperus-scented' on PY Fr 1203. Other substances may not have been used for their fragrance but as red-colouring agents; this may have been the case of *po-ni-ki-jo*, if it is to be identified with alkanet, or of *hertis*, if this was the name of henna and, more significantly, of the henna leaves, according to Shelmerdine (*Perfume*, 30-31) — the practice of dying perfumed oil being well attested in Classical times. This would explain the combination of the adjectives *pa-ko-we* (*sphakowen*) 'sage-scented' and *e-ti-we* (*hertiwen*) 'with *hertis*' on PY Fr 1224, for a mixture of fragrances is otherwise not attested on the tablets.

**§ 7.10.4.** To sum up, producing perfumed oil was a complex task that could involve four different processes once the ingredients were ready: 1. soaking

<sup>22</sup> RUIJGH (1968) argued that perfumes were prepared in two ways, either by boiling or simply by stirring the components, which would correspond to the opposition between *zo-a* (*zođ*) and *to-ro-qa* (*strokʷā*) in the Fh series of Knossos, but stirring does not seem to be an attested process for preparing perfumes (cf. ERARD-CERCEAU 1990, 278-279).

the spices or flowers in wine in order to obtain the fragrance; 2. adding some agent to the oil to thicken it and help fix the fragrance; 3. mixing the fragrance with the oil, usually by boiling; 4. adding a colouring agent.

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## CHAPTER 8

# THE LINEAR B INSCRIBED VASES\*

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### § 8.1 NATURE AND DISTRIBUTION

Different as they are from other extant Linear B documents, the inscribed stirrup jars (ISJs) have a number of unique characteristics, which have often made them a focal point in discussions of Late Bronze Age trade and economics, as well as literacy, palaeography, and administrative practices. The nearly 180 examples of known ISJs, dated to roughly LM IIIB (CATLING *et al.* 1980, 93–103), bear texts that were painted with a brush rather than inscribed with a stylus on moist clay, as was the case with the sealing nodules and tablets. Unlike the tablets and perhaps the sealing nodules, the ISJs were never meant to serve as archival documents. Instead, these texts were written on a common type of large coarseware storage/transport vessels of 12–14 litre capacity, known as ‘stirrup jars’ (SJ) because of the shape of their handles. SJs are distributed widely in the Aegean and Levant as containers for olive oil or unguents. The SJ first appears on MM III Crete and remains primarily a Cretan form; mainland Greek potters rarely made large SJs (DAY – HASKELL 1995, 97), but they did produce the much smaller, fineware versions which served as perfumed oil containers similar to the Classical *lekythoi*. Although the pattern of distribution is not as far reaching as that for the uninscribed SJs, the findspots of ISJs (Fig. 8.1) also indicate that these are the only Linear B texts known to have travelled overseas, apparently only from Crete to mainland Greece. Recent ceramic analyses of ISJs suggest that the ISJs are primarily a west Cretan phenomenon, with the greatest proportion of known jars (*ca* 90%) originating from the region around Khania, with a smaller proportion (*ca* 10%) coming from central Crete around Malia and Knossos (DAY – HASKELL 1995; MOMMSEN *et al.* 2002; HASKELL 2004). No ISJ can as yet be definitively shown to be of mainland origin despite the numbers that have been found at several mainland sites, e.g., Mycenae, Tiryns, Eleusis, Kreusis, Orchomenos, Midea and Thebes. One

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notable lacuna in this list, at least to date, is Pylos. Given the strong Cretan-mainland and interregional connections in the Late Bronze Age, the absence of ISJs at Pylos and its implications require further discussion.

### § 8.2 THE MEANING OF THE INSCRIPTIONS

One of the least controversial aspects of the ISJs is the meaning, as opposed to the function, of the inscriptions. The vocabulary is clear, with the words on ISJs being limited to place words, i.e., toponyms or ethnics (TNs), personal names (PNs), and in a few cases, the term *wa-na-ka-te-ro*, an adjective derived from *wa-na-ka* (Classical Greek ὡνάξ), or the syllabogram *wa* which may be its abbreviation (for discussion see VAN ALFEN, 1998, 260). The majority of the inscriptions (nearly two-thirds) are single PNs in the nominative case. The remaining third of the inscriptions all follow a similar formulaic pattern consisting of two personal names and a toponym or ethnic: PN in the nominative + TN + PN in the genitive (*wa-na-ka-te-ro* when it appears replaces this last PN). For example, the inscription TH Z 853 reads: *e-u-da-mo , wa-to , ri-\*82-ta-o*, while on TH Z 839 (Fig. 8.4) we have *ka-u-no o-du-ru-wi-jo , wa-na-ka-te-ro*. The six TNs recorded in the longer ISJ inscriptions — *e-ra, si-ra-ri-jo, \*56-ko-we, da-\*22-to, o-du-ru-wi-jo, wa-to* — all appear in the Knossos tablets. But, while several of the 31 PNs found in all the ISJ inscriptions also appear on tablets from the mainland and Crete, none of the names, unfortunately, appears in a context that suggests unquestionable association with the same or similar names found on the ISJs.

### § 8.3 THE FUNCTION OF THE INSCRIPTIONS

The function of the inscriptions is a more disputed topic than the meaning of the individual elements. Initial explanations sought analogies with presumed Classical or even modern practice. The inscriptions were seen as trademarks of sorts, meant to be read by the consumers and indicating the origin or quality of the contents. This interpretation has now largely been abandoned. Another suggestion is that the inscriptions did not in fact bear any communicative value, but served merely as decoration much like the gibberish found on some later Classical vases. This theory too is oriented towards the consumer, but sees the jar as a commodity separate from its contents. Interest in the aesthetic presentation of the inscriptions even at the expenses of communicative functionality may account for the way in which some of the ISJs were painted or written upon. However, closer and more detailed studies of 1) palaeographic

facts, 2) the correlation between the inscriptions and the design schema of the jars, 3) the nature of the inscriptions in both their longer and shorter forms, and 4) the jars and their trade context (the character of which is yet to be fully defined), have sought to orient the function of the inscriptions not towards the consumer but rather towards administrative recording within the production process of the jars and their contents.

### § 8.3.1 *Palaeography*

Roughly 25% of the more complete ISJ inscriptions are illegible or contain illegible elements (see Fig. 8.2), which supports the theory that the inscriptions were simply decorative. But, it is worth considering that our appraisal of Linear B legibility is based upon the stylus-inscribed tablets. Individual character formation may have varied with the use of different media, like brush and paint, or with differences of scale; characters stand only 1 cm tall or even less on a tablet, but on a jar they can be several centimetres, if not tens of centimetres tall, which could cause some form of distortion. Moreover, writing with a brush and paint may have lent itself to greater carelessness or at least would have made erasing mistakes more difficult than it would have been in incised clay. One can see, for example, when comparing the characters from two words, *o-du-ru-wi-jo* and *wa-na-ka-te-ro*, as they are found on a stirrup jar (TH Z 839) with examples from the same words written on two KN tablets (see Fig. 8.3), that the characters on the stirrup jar are pronouncedly elongated. Moreover, the initial *o* and final *jo* of the TN *o-du-ru-wi-jo* on TH Z 839 betray a freer approach in their sign formation, perhaps noticeable as well in the second character *du*, which includes additional elements that would be difficult to reproduce in the scaled down version on the tablets. Even if one or more characters in an inscription were not perfectly clear, the communicative value of the whole would likely not be lost if the reader knew what to expect. In reading, we may sound out individual elements in a word, but we may also recognise the shapes of whole words. It is this recognition of word shapes and word context that makes reading even the most 'illegible' of handwritings possible. Therefore, 'illegibility' may in fact be a misnomer. Within the closed system of reader/writer expectation, which undoubtedly applied to the ISJ inscriptions, all the ISJ inscriptions should be seen as having a communicative function.

### § 8.3.2 *Design Schema*

Related to the functional legibility of the individual characters is the legibility of the entire inscription as determined by its layout on the jar itself. The

greatest number of ISJ inscriptions were placed in a highly conspicuous and compact field on the shoulder of the jars behind the so-called 'false neck' of the jar (Fig. 8.2). An inscription thus placed would be highly visible and could be read by anyone standing over a jar even if a number of jars were set closely to each other. Functional readability therefore was likely the sole reason for this placement. However with one exception (EL Z 1), the longer inscriptions, comprising roughly one-third of the ISJ corpus, were written continuously around the belly of the jars (Fig. 8.4). Clearly, the functionality of this placement is less obvious since reading such an inscription would require isolating the jar and then moving around it in order to grasp the whole message. Like the few other, shorter inscriptions not set in the shoulder field but elsewhere on the jars, these longer inscriptions often appear to have been created with greater concern for art than for reader convenience. Even so, they still bore bona fide messages, which presumably reached their audiences even if this required moving the jars in order to read the words.

### § 8.3.3 *Formulaic inscriptions*

The key to a decipherment, so to speak, of the function of the ISJ inscriptions, including the more enigmatic single-word inscriptions, is the formulaic nature of Linear B bookkeeping practices. Once it was recognised that the longer ISJ inscriptions (PN + TN + PN) exhibited the identical formula used in a number of KN D-series tablets associated with so-called 'collector' transactions, another explanation for the function of the inscriptions became possible, one that aligned their function with that of the sealing nodules. Like the signs, symbols and inscriptions found on the sealing nodules, the ISJ inscriptions likely served for monitoring and recording the production and delivery of a commodity (in this case oil or unguents) owed to the progressively higher echelons in the economic hierarchy. The first PN in the longer ISJ inscriptions can be taken as the name of a production manager, the TN can indicate the place of production. The second PN would be the name of the 'collector', an individual who presumably had a higher social, political and economic standing than the manager(s) under his control, but was still at a lower level than those who wielded the most political and economic power. As various managers owed oil to the collectors, the collectors in turn owed oil to their superiors. The function of the inscriptions then would be to act as a sort of serial or tracking number, insuring that what was owed was duly recognised and recorded. The short single-word inscriptions were merely abbreviations of the longer formula; only the manager's (?) name was painted on the jar since the other elements (the TN and collector's name) were already known from other sources.

### § 8.3.4 *Trade and Production Contexts*

In this scenario then the functional lifespan of the inscription ended once all obligations had been fulfilled and recorded. Sealing nodules had a similar functional lifespan and were generally discarded once the recording process had been completed. However, since the jars were still usable as oil containers, they could be reused moving from a production/recording context into a trade context. In this latter context the inscriptions would cease to serve any express purpose and could then simply be seen as decoration. Some hoards of ISJs, such as the more than 70 found at Thebes and more than 40 found at Tiryns, may indicate that ISJs were specifically selected and set aside by mainland consumers because of their prestige value or because of the novelty value held by jars which carried written signs, regardless of what the message may have actually said. In this case an inscribed jar would in fact become as much of a commodity as its contents, but not because it was initially conceived as such.

## § 8.4 FUTURE STUDY

Since RAISON's and SACCONI's studies (see bibliography), much new ISJ material has been discovered and new approaches to the study of ISJs have been developed. This is particularly true in the areas of ceramic analysis and the economic interpretation of the inscriptions. Despite considerable progress in our understanding of the ISJ phenomenon, however, a number of issues still remain largely untouched. We still do not understand the reasons for the relatively small number of ISJs *vis-à-vis* the more frequent uninscribed SJs, and we lack a fuller explanation for the painted, non-Linear B signs found on some pots, e.g., TH Z 859. These latter signs may be related to the incised, often undecipherable symbols cut into SJs and other pottery by the traders who handled them for their own trade-related purposes (cf. HIRSCHFELD 1999, *passim*). Also, if ISJs were a specifically Cretan phenomenon, we should be able to explain why that was so. Possible explanations might be found in a Mycenaean adaptation of traditional Minoan/Prehellenic Cretan practice, or in the large and potentially confusing number of managers and collectors involved in the Cretan production/recording process (something not occurring on the mainland?), or even in the much greater distances between production sites and recording centres which called for secure means, such as painted inscriptions, to insure that the essential information about production and delivery was not lost.

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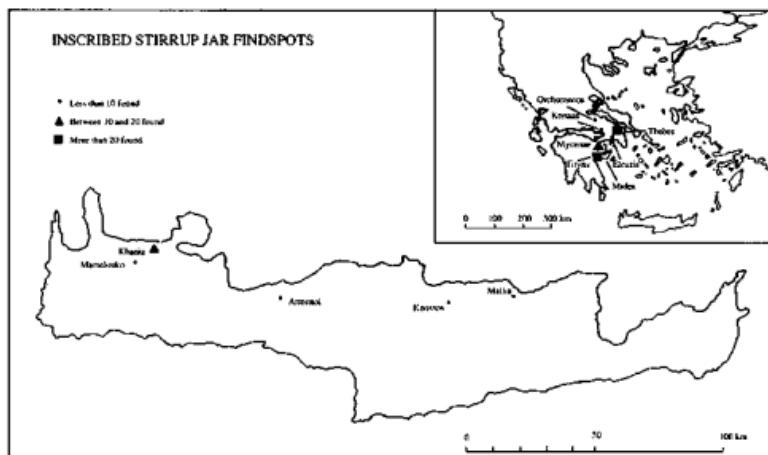
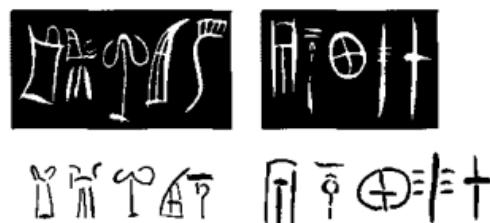


Fig. 8.1. Findspots of ISJs

Fig. 8.2. TH Z 847: *e-[-]-ra* (after SACCONI 1974, 129)



**Fig. 8.3.** *o-du-ru-wi-ro* and *wa-na-ka-te-ro* painted on the vase TH Z 839  
 (above: after SACCONI 1974, 121) and incised on the tablets KN C 902.2 and X 976  
 (below: after CoMIK I, 366, 404)



**Fig. 8.4.** TH Z 839: *ka-u-no o-du-ru-wi-ro , wa-na-ka-te-ro* , (after SACCONI 1974, 121)

## CHAPTER 9

# MYCENAEAN ANTHOLOGY\*

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**§ 9.1.** The 44 LB documents discussed below were selected because they offer interesting glimpses into the Mycenaean world. Preference has been given to reasonably well preserved texts, with, if possible, some complex sentences or expressions. Since most LB documents are just lists of proper names (person or place names), this selection is *not* representative of the most frequent Mycenaean texts. However, a remarkable exception is provided by the three new Thebes tablets reproduced below (§ 9.44-46). These documents found by V. Aravantinos include both several proper names *and* complex sentences.

The texts are arranged according to, *first*, their find place (Cnossos [§ 9.2-18], Mycenae [§ 9.20-23], Pylos [§ 9.24-42] and Thebes [§ 9.44-47]), *second*, their series (e.g. Aa, Ab, Cn, etc.), *third*, their number (the only exception is PY Ta 641, put after PY Ta 711: § 9.36-37).

Here is the list of the selected documents:

- KN** Bg 817, B 988, Ca 895, Fh 5451, Fp 1, Ga 674, Gg 702, Ld 573, Ld 587, L 693, Od 562, Ra 1548, Sd 4409, Sk 8100, So 4440, V 52, Ws 8497;  
**MY** Ge 606, Oe 121, Ue 611, V 659;  
**PY** Ae 134, Ae 303, An 35, Ea 109, Eb 297, Eb 846, Ed 317, Er 312, Es 647, Fr 1184, Ma 378, Sa 790, Ta 711, Ta 641, Tn 316, Ub 1315, Un 267, Un 718, Vn 10;  
**TH** Fq 126, Fq 130, Fq 254[+]255, Wu 75.

For each text the following information is provided:

- (A) The **conventional reference** used in the present chapter (e.g. § 9.2).  
(B) The **complete standard reference** (e.g. **KN Bg 817 + 7858 + 7876 + fr.**), followed by a list of some of the text's characteristics (e.g. clay tablet; dimensions:

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\* The editors received the first version of this chapter in November, 2002.

*ca* 12.8 × *ca* 2.8 × ?; scribe 137; find-spot: Area of Bull Relief; date: last decennia before 1275/1250; location: AMH).

The dimensions of the tablets (in centimeters) give their actual width, height and thickness — if the tablet is incomplete, these data may obviously differ from its original dimensions. These measures are taken from *PNPWM* (PY) and the current editions of MY and TH (see Chapter 2.7.1.3-4 above). The dimensions of the KN tablets are not given by the current editions, but some of them may be found elsewhere; for the other ones, *CoMIK*'s photographs (reproduced at 1 : 1 scale) allow to give the *approximate* dimensions of their height and width.

The find-spots are taken from:

- KN: *CoMIK*; R.J. FIRTH, *Minos* 31-32 (1996-1997), 7-122; R.J. FIRTH - J.L. MELENA, *Minos* 33-34 (1998-1999), 107-133; R.J. FIRTH - J.L. MELENA, *Minos* 35-36 (2000-2001), 315-355;
- MY: the current editions (see Chapter 2.7.1.4 above);
- PY: *Scribes Pylos*;
- TH: the current editions (see Chapter 2.7.1.3 above).

The chronology, relative or absolute, of the tablets presented here may differ from that suggested in Chapter 3 above. Here are the dates I have adopted:

*Cnossos*:

- Room of the Chariot Tablets: very beginning of LM IIIa1 (?), i.e. first decennia after ± 1435/1405 (?);
- find-spots other than the Room of the Chariot Tablets: end of LM IIIb1, i.e. last decennia before ± 1275/1250;

*Mycenae*: end of LH IIIb1, i.e. last decennia before ± 1275/1250;

*Pylos*: transition between LH IIIb2 and LH IIIC, i.e. about 1200/1190;

*Thebes*: • § 9.44-46: end of LH IIIb2, i.e. last decennia before ± 1200/1190;

- § 9.47: end of LH IIIb1, i.e. last decennia before ± 1275/1250.

(C) The **content** (and occasionally some additional general comments).

(D) A **selected bibliography**: the references have been deliberately limited and only a few have been chosen from among the many useful available ones (they are disposed in alphabetical order). For more general references, see Chapter 2 above.

(E) A **facsimile**. Their scale is not identical to that of the original tablets, nor is always homogenous. The facsimiles reproduced here are the work of

E.L. Bennett, Jr. (most of Pylos), L. Godart (Cnossos and Thebes), M. Lang (PY Ub 1315) and A. Sacconi (Mycenae). I would like to thank the facsimiles' authors and/or editors who granted me the permission to reproduce them.

(F) The **edition**, followed by an **apparatus criticus**. The format of the printed texts reflects as closely as possible the actual disposition of the LB inscriptions. The published text always relies on the standard current editions — thanks to José L. Melena, I have been able to obtain a provisional version of the future editions of KN, PY (*PNPWM*) and *Tithemy*<sup>2</sup>. All inscriptions but the Pylos ones have been checked on photographs (several ones, whenever possible). All the Pylos texts were checked on facsimiles and one third of them on photographs (PY Ae 134, Eb 297, 846, Er 312, Ta 641, Tn 316, Un 718).

In the current editions, changes to another size of script are indicated as follows: to a smaller size by /; to a larger one by //. Here, these changes are indicated by smaller or larger letters.

While the current editions use *vac(at)* only when an empty space is really large, *vac(at)* will be used here whenever an empty space at the end of a line seems deliberate, even if it is relatively small.

(G) An **alphabetic Greek transcription**. This transcription is always in *Latin letters* — Greek letters are used only for first millennium and later Greek forms (*h* = the aspiration; *kh* = χ; *ks* = ξ; *ph* = φ; *th* = θ).

The *j-* or *w-* elements of the LB *j-* or *w-* series are *always* transcribed as *j* or *w* — thus, *i-je-re-ja* is rendered as *hijereja*. This differs from the usual transcriptions, where *j-* or *w-* are rendered in a threefold way: (a) *i* or *u*; (b) *j* or *w*; (c) *ø* — e.g. *Documents*<sup>2</sup>, 547 transcribes *i-je-re-ja* as *hiereia* — the first *j* = *ø*; the second = *i*. The transcription adopted here keeps closer to the actual LB spelling. In fact *j-* or *w-* may note either an inherited phoneme — which may or may not be the second element of a diphthong — or a glide (i.e. a transitional sound between two vowels): the first *j* of *i-je-re-ja* is used for a glide, while the second could represent either the second element of a diphthong ([eia]) or a glide prompted by an unwritten diphthong ([eija]). The spellings of *j-* or *w-* in the English *translations* are different: compare the LB Greek transcription *Posidāhejāi* with its translation ‘to (the goddess) Posidaeia’.

Here are the *conventional transcriptions of some syllabograms*:

*q-* series signs: *g<sup>w</sup>-*, *k<sup>w</sup>-* or *k<sup>w</sup>h-*. It is certain that this series was used for the Mycenaean continuation of the ancient Indo-European labiovelars: these consonants were still distinct from the other occlusives. Their precise articulation is not known, however — it could have been *g<sup>w</sup>-*, etc., but also e.g. *b<sup>w</sup>-*, etc., *d<sup>w</sup>-*, etc.

*ra<sub>2</sub>* (¶) and *ro<sub>2</sub>* (Φ): *lja/lla/rja/rra* and *ljo/llo/rjo/rro* — these signs are ‘pseudo-complex’ syllabograms: see below;

*z*- series signs: *d<sup>z</sup>-* or *t<sup>s</sup>-*;

\*65 (¶): *ju*? (its phonetic value is probably *ju* — see *Mémoires IV*, 258-259 —, but this transliteration has not yet been officially adopted).

Since we shall regularly refer to the choices made by the LB scribes between ‘basic’ and ‘secondary’ syllabograms, it seems appropriate to define briefly these two categories: this will help us to understand an important scribal practice (see *Mémoires III*, 91-104 and Chapter 2.3.2 above).

The ‘basic’ LB syllabograms signs may be roughly described as the default choice whenever a scribe wants to write a text. Here is their list: *a e i o u; da de di do du; ja je jo ju*? (see above); *ka ke ki ko ku; ma me mi mo mu; na ne ni no nu; pa pe pi po pu; qa qe qi qo; ra re ri ro ru; sa se si so su; ta te ti to tu; wa we wi; za ze zo*. All the other deciphered syllabograms are ‘secondary’: they *may* (but never *must*) be used instead of the ‘basic’ ones.

In the ‘secondary’ LB syllabograms, we must distinguish three different groups. All of them have different individual characteristics, but they share a common feature: their use is never compulsory — a scribe may thus always use ‘basic’ syllabograms instead of ‘secondary’ ones.

The first group of these ‘secondary’ syllabograms is the ‘doublets’. Their main characteristics are that: (a) they have a more precise phonetic value than the ‘basic’ syllabograms; (b) when used, they replace one (and only one) ‘basic’ syllabogram. Thus, while the ‘basic’ *a* can represent [a], [ai], [au], [ha]..., the ‘doublet’ *a<sub>2</sub>* renders only [ha]. Here is the list of the LB ‘doublets’: *au* (= [au]; *may replace a*), *a<sub>2</sub>* (= [ha]; *may replace a*), *a<sub>3</sub>* (= [ai]; *may replace a*), *pu<sub>2</sub>* (= [phu] — perhaps also [bu]; *may replace pu*), *ra<sub>3</sub>* (= [lai/rai]; *may replace ra*).

There is another category of ‘secondary’ LB syllabograms: the ‘complex’ syllabograms. Their main characteristics are that: (α) they *do not* have a more precise phonetic value than the ‘basic’ syllabograms; (β) when used, they replace *two* ‘basic’ syllabograms (*and not one*); (γ) they all render *two consonants* plus a vowel. Thus, the syllable [dwe] may be written with the *two* ‘basic’ signs *de-we* (with a ‘dummy’ vowel [see below] *e* in *de-*); but this same [dwe] could also be rendered with *one single* syllabogram, the ‘complex’ *dwe*. Here is the list of these ‘complex’ LB syllabograms: *dwe* (*may replace de-we vel sim.*), *dwo* (*may replace do-wo vel sim.*), *nwa* (*may replace nu-wa*), *pte* (*may replace pe-te*), *twe* (*may replace tu-we vel sim.*), *two* (*may replace tu-wo vel sim.*).

The syllabograms *ra*<sub>2</sub>, *ro*<sub>2</sub> and *ta*<sub>2</sub> are generally considered as ‘complex’, but their characteristics differ from those of the ‘complex’ signs presented above: they may replace not only *two*, but also *one* ‘basic’ syllabogram. The clearest examples are provided by *ra*<sub>2</sub>, which alternates not only with *ri-ja*, but also with *ra* — e.g. *ta-ra*<sub>2</sub>-*to* ~ *ta-ra*-*to* (MN of the same person) or *me-re-ti-ra*<sub>2</sub> ~ *me-re-ti-ri-ja* (same trade name: § 9.41). It is thus better *not* to classify them as ‘complex’: I shall conventionally call them ‘pseudo-complex’ and put them in a third group of ‘secondary’ LB syllabograms.

Almost all (if not all) the few undeciphered LB syllabograms are probably ‘doublets’, ‘complex’ or ‘pseudo-complex’ signs.

In a LB sequence a *vowel is called ‘dummy’, ‘dead’ or ‘blind’* if it is supposed not to be pronounced. This happens when a syllabogram is intended to note only the first consonant of a consonantal cluster. For instance, in *ti-ri-po-de*, the *i* of *ti-* is a ‘dummy’ vowel: this word must be read as *tripode* (§ 9.37), with a [tri...] cluster and no *i* pronounced at all in *ti-*.

*Proper names* will be transcribed only if their Greek interpretation seems reasonably certain (alphabetic parallels will be regularly provided if possible).

Whenever it seemed useful, the *facsimiles of the ideograms* have been reproduced in the alphabetic Greek transcription, the translation and the commentary; almost all are taken from *Idéogrammes*. The scale of these facsimiles is not identical to that of the original ideograms, nor is it always homogenous.

*Accentless words separated by a space in the editions of classical Greek texts but written in LB without any word division* (e.g. proclitics or enclitics like *-de*, *o-u-*, *-qe*, etc.) are always transcribed as separated items.

Inversely, a *compound word written as if its two components constituted two autonomous words* (e.g. *ke-re-si-jo we-ke*: § 9.37) is transcribed as a single item (*Krēsijowergēs*).

Since there is some uncertainty in the criteria for the *alphabetic Greek transcription of LB words*, below I adopt the following conventions:

(1) I assume that, at the time of the tablets, Mycenaean Greek:

(1.1) had *already*:

- (1.1.1) lost the stops in word-final position — so, *me-ri*, ‘honey’ is transcribed *meli* and *not* \**melit* (cf. μέλι);
- (1.1.2) shortened the long vowels followed by a group of resonant + consonant (Osthoff’s law) — so, the ending of nominative sing. in -εύς will be transcribed *-eus* and *not* \*-ēus;

- (1.1.3) generalized the long vowel in the agent nouns suffix *-tēr* — so, the dative *-te-ri* will be transcribed *-tēri* and **not** *\*-teri* (cf. *-τήρ*);
- (1.2) had *not yet*:
- (1.2.1) dissimilated the first aspirate of a word with two non adjacent aspirates (Grassmann's law), as shown e.g. by *a<sub>2</sub>-pa-a<sub>2</sub>-de* (TH Wu 94), with two non adjacent *a<sub>2</sub>* = [ha] — so, *e-ke*, 'he has' is transcribed *hekhei* and **not** *ekhei* (cf. *ξχω* < \**segh-*);
  - (1.2.2) lengthened a vowel originally followed by *-ns(-)* ('second' compensatory lengthening, which happened when the nasal disappeared) — so, *pa-si*, 'for all' will be transcribed *pansi* and **not** *pāsi* (cf. *πᾶς*);
- (1.3) still distinguished in the thematic declension (singular) the dative in *-ōi* and the locative in *-oi*. Whenever syntactic reasons suggest that a thematic word was in the locative singular, the ...*o* ending is conventionally transcribed as *-oi* and **not** *-ōi*.
- (2) Mycenaean syntax is frequently ambiguous. Here are the main conventions that I follow:
- (2.1) Since the tablets do use *the number dual* (which explicitly indicates that *two* items are referred to), I shall conventionally transcribe a word as dual if it is followed by the number 'two' even if its form could in theory be read as either plural or dual, — so, *ti-ri-po-de... 2* is transcribed as *tripode... 2* (and **not** as *tripodes... 2*, which would also be possible).
  - (2.2) When *an entry has an ambiguous inflectional case* but is used in parallel with a syntactically and morphologically clear entry, I conventionally assume that the ambiguous entry is in the same case as the clear one — so, in § 9.21, *ko-wo* is transcribed as *korwōi*, 'to the son' (and **not** as *korwos*, 'the son', which is also possible), because it is symmetric to the clear dative *ka-ke-wi*, *khalkēwi* or *Khalkēwi*.
  - (2.3) The tablets make an extensive use of *the nominative of rubric*, i.e. a nominative case without any syntactic relation to any other word in the text (just as in modern lists: 'oil; vinegar; mustard'). Therefore, I conventionally assume that if ambiguous words look like nominatives of rubric, they are in fact nominatives — see (2.2) above, however.
  - (2.4) Although some LB forms in ...*a*, ...*e* or ...*o* could in theory be *ablatives or instrumentals singular* (cases which are no longer

used in alph. Gr.) in \*...ā, \*...ē or \*...ō, I conventionally assume that they render datives or locatives.

- (3) In a written LB word, two vowels may directly follow each other. This may reflect a diphthong (e.g. *a-ro-u-ra*, *aroura*), but also two vowels which are or were separated by an aspiration (e.g. *pa-we-a*, *pharweha* < \**pharwesa* — cf. the spelling *pa-we-a<sub>2</sub>*, with the ‘doublet’ syllabogram (see above) *a<sub>2</sub>* (= [ha]), which explicitly spells the aspiration. A problem arises in vowel groups which are not diphthongs and whose etymology is not certain (e.g. the word for ‘slave’, *do-e-ro*, may represent either *doelos* or *dohelos*). In what follows, these groups will be transcribed as if separated by an aspiration *only if* this aspiration is etymologically certain.

**(H) A translation.** The absolute values of the LB weights and measures are taken from *Documents*<sup>2</sup>, 53-60, 393-394 (see also § 9.43.9). Every ideogram will be written in small capitals (e.g. MEN, translation of VIR). The ideograms GRA and HORD will always be rendered respectively as WHEAT (i.e. wheat grain) and BARLEY (i.e. barley grain). P. HALSTEAD, ABSA 90 (1995), 233 considers that WHEAT could represent ‘one or more of the glume wheats’, i.e. emmer (*Triticum dicoccum* Schübl.), einkorn (*Triticum monococcum* L.) and spelt (*Triticum spelta* L.) — he makes however clear that ‘emmer is the only glume wheat definitely attested as a crop from sites... which have produced Linear B records’. The only kind of barley found in late Bronze Age Greece that he quotes is hulled barley (*Hordeum vulgare* L.).

**(I) A commentary.** Its aim is to introduce the reader to some basic features and/or problems in the interpretation of the LB texts. Most tablets presented below are well known and were frequently studied, so a *really* long commentary seemed superfluous. This is not the case of the new Thebes tablets, published at the end of 2001: consequently, their commentary (§ 9.43-46) is exceptionally detailed.

It is obvious that cross-references to the other chapters of this book could be regularly made for many parts of the commentary. In fact they proved to be too numerous to be viable, and the reader is asked to consult the indexes of the two volumes.

#### SPECIAL ABBREVIATIONS:

- Alph. Gr. alphabetic Greek  
 AMH Archaeological Museum of Heraklion (Crete)

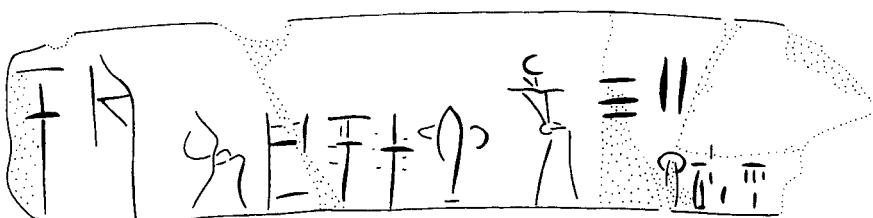
AMN	Archaeological Museum of Nauplion
AMT	Archaeological Museum of Thebes
e.g.	<i>exempli gratia</i> ('for example')
GN	god or goddess name
<i>hap. leg.</i>	<i>hapax legomenon</i> ('word found only once')
Hom.	Homer(ic)
i.e.	<i>id est</i> ('that is [to say]')
id.	idem
<i>Il.</i>	<i>Iliad</i>
1.	line(s)
LB	Linear B
lit.	literal(ly)
MN	man's or woman's name
NAMA	National Archaeological Museum (Athens)
<i>Od.</i>	<i>Odyssey</i>
pers. com.	personal communication
plur.	plural
PN	place-name — ethnic adjectives (i.e. adjectives derived from a place-name) are not labelled as PN
<i>scr. cont.</i>	<i>scriptio continua</i> (i.e. words written without any separation)
sing.	singular
<i>vel sim.</i>	<i>vel simile</i> ('or similar')
[ ], [ ], < >, { }, , , inf. mut., lat. dex., lat. inf., vac(at)	(in LB texts) see Chapter 2.4.1.2-3 above
[ ]	outside LB texts, square brackets enclose a presumed phonetic pronunciation
~	opposite to
*	reconstructed form
**	form considered as unacceptable.

## 1. CNOSSOS

**§ 9.2. KN Bg 817 + 7858 + 7876 + fr.** (clay tablet; dimensions: *ca* 12.8 × *ca* 2.8 × ?; scribe 137; find-spot: Area of Bull Relief; date: last decennia before 1275/1250; location: AMH).

**Content:** totalling record of adults, plus boy(s) at school. One of the tasks of the Mycenaean administration was to manage the people working for the palaces. Men, women and children were thus carefully recorded.

**Selected bibliography:** *Documents*<sup>2</sup>, 170, 420-421; *Handbuch*, 507.



**Fig. 9.1.** KN Bg 817 + 7858 + 7876 + fr. (CoMIK I, 317)

to-so ku-su-to-ro-qa VIR 32 ko-wo , di [

-to-ro- over [[-pa-te]] (see below). • ‘ko-wo , di’ over [[          ]]; the small *ko-* is written just under the two units of ‘32’. The large empty zone at the right of ‘32’ suggests that the number following ‘di [’ is the only missing item of this text.

*Tos(s)oi (?) ksun(s)trok<sup>w</sup>(h)ā: VIR 32; korwoi (?) di<daskalei>: [ ].*

‘So many in total: 32 MEN; boy(s) in ap<prenticeship>: [ ].’

***Tos(s)oi (?)*, ‘so many’:** cf. τόσ(σ)ος; the word could be in the neuter singular *tos(s)on* instead of the masculine plural. • ***ku-su-to-ro-qa*, ‘total’:** *ksunstrok<sup>w</sup>hā* (?; cf. συστροφή, ‘collection’) or *ksuntrok<sup>w</sup>ā* (??; cf. τρέπω, ‘turn’) — there is no possible connexion with τροφή, ‘food’: § 9.46. The text originally written was *ku-su-pa-te*, *ksumpantes*, ‘all together’, but the scribe changed his mind, erased *ku-su-pa-te* in the wet clay and replaced it with a synonym. The LB scribes regularly make such corrections (because they made a mistake, got a new information, changed their mind...). It is often possible to read these erased signs. The case of *ku-su-to-ro-qa* is by no means certain. A nominative fits the context (‘total’), but other cases could have been used (‘in total’: locative, dative, etc.): the LB spelling precludes any certainty. • ***korwoi (?)*:** the word could be a sing.; cf. κόρος/κοῦρος, ‘boy’. • ***di*** is the abbreviation of *di-da-ka-re* (known elsewhere at KN), *didaskalei*, ‘at the school master’s’ (cf. διδάσκαλος). LB texts are mostly written in a highly concise style. Hence the regular use of abbreviations, where the word is replaced with its first syllabogram. For this locative in -ei, cf. adverbs like Hom. ἀθεσί, ‘without god’ or classic οἴκει, ‘at home’. Children (and women as well) under apprenticeship are regularly registered in the KN tablets, while curiously this mention never occurs elsewhere. *Od.* 22.422 records female maids ‘taught’ (διδάσκω) in Ulysses’ palace. • Most KN Bg tablets deal with the *po-ni-ki-jo*, *phoinikijon* stuff, which

was likely a red dying substance (E.D. FOSTER, *Minos* 16 [1977], 52-66), but it is not certain that the people of our text were involved in dying or similar activities.

**§ 9.3. KN B (1) 988 + 5761 + 7040 + 7601 + frr.** (clay tablet; dimensions [see OLIVIER below]: 17.0 × 3.5 × 1.5; scribe —; find-spot: Area of Bull Relief; date: last decennia before 1275/1250; location: AMH).

**Content:** purchase of a slave. This kind of document, which explicitly records a purchase (using the verb *πρίαμαι*, ‘buy’), is exceptional in the LB archives.

**Selected bibliography:** J.-P. OLIVIER, in *Studies Chadwick*, 479-498.



**Fig. 9.2.** KN B (1) 988 + 5761 + 7040 + 7601 + fr.  
(CoMIK I, 408 — this facsimile does not show the fragment III-36 which joins now the fragments 988 and 5761 in the middle of the tablet)

- |                      |  |        |
|----------------------|--|--------|
| <b>a</b><br><b>b</b> | pa-qo-si-jo , si-ra<-ko > , qi-ri-ja-to ,<br>ka-ra-na-ko , ko-ma[-we-]tō , do-e-ṛō , | [      |
|                      |  | VIR 1[ |

Palimpsest. • .a was written after most of .b. • .a *si-ra<-ko> qi-ri-ja-to*: cf. *si-ra-ko qi-ri-ja-to* (KN Ai 5976; B 822) and see below. The current editions read *si-ra qi-ri-ja-to*. • .b *ko-ma[-we-]tō*: cf. *ko-ma-we-to* elsewhere. • 1[: a reading 2[ is excluded by the remnants of the sign in the break.

[.b] *ka-ra-na-ko*, *Komā*[wen]*tō* *doēlos*: [.a] *pa-qo-sijōi* (?) *si-ra<-ko> kʷrijato*: VIR 1[.]

‘[.b] *ka-ra-na-ko*, slave of *Koma*[wens]: [.a] *si-ra<-ko>* arranged the purchase for *pa-qo-sios* (?):1[ ] MAN.’

The scribe began to write at the bottom of the tablet: hence, .b has to be read before .a. Almost all the tablets with lines .a .b must be read this way. • This

text provides a good example of the ambiguities of LB documents. I give first the analysis of every word; afterwards, the syntax of the whole text is discussed.

- ***ka-ra-na-ko***: *hap. leg.*; very probably MN of the slave bought; this information is written in larger signs than the rest of the tablet.
- ***Komā[wen]tos***: genitive of a MN known elsewhere; obvious name of the seller, etymologically built on an adjective whose alphabetic form is κομήεις — the suffix -went- expresses the possession of the characteristic indicated by the preceding radical, so the lit. meaning of the adjective \**komāwens* is ‘having [= -went-] hair [= κόμη]’, i.e. ‘long-haired’.
- ***doēlos***: cf. δοῦλος, ‘slave’.
- ***pa-qo-sijōi* (?)**: MN in -ιος known elsewhere; on its case, see below.
- ***si-ra***: *hap. leg.*; *si-ra qi-ri-ja-to* obviously alternates with *si-ra-ko qi-ri-ja-to* found in the two strictly parallel texts KN Ai 5976 (scribe 204) and B 822 (scribe —) — these three tablets come from the North Passage Area, which includes the Area of Bull Relief. The current interpretation considers *si-ra* ~ *si-ra-ko* as a trade name or an adverb *vel sim.* This fails to provide any satisfactory Greek reading, however, and overlooks the fact that *si-ra-ko* is a certain MN at the nominative in KN Db 8352 (scribe 117). It seems thus better to consider *si-ra-ko* as the nominative of a MN in KN Ai 5976 and B 822 too. This suggests that *si-ra*, which is perfectly symmetric to *si-ra-ko*, should be a form of the same MN. The pair *si-ra* ~ *si-ra-ko* cannot easily be explained as a nominative (*si-ra*) ~ genitive (*si-ra-ko*), since both forms are written just before the same verb, *kʷrijato*, lit. ‘he bought’, and have thus presumably the same function in the sentence. Perhaps could they be variants due to the use of different suffixes (with endings -ā-s or -ak-s [see § 9.15 about a spelling -ra of /-rāks/ at the end of a word] in *si-ra* ~ -o-s or -ako-s in *si-ra-ko*) — for variants in the suffixes of MN referring to the same person, see § 9.43.8. Finally, an error is also possible: *si-ra* has perhaps been written instead of *si-ra<-ko>* — mistakes of this kind do happen in the LB documents (e.g. *o-na* written instead of *o-na-to* in PY Ea 460). This last solution has been conventionally chosen here.
- ***kʷrijato***: cf. πρίατο/ἐπρίατο, ‘he bought’ — Homer uses πρίατο only apropos of the purchase of slaves. The omission of the augment is the rule in LB (for a clear exception, see § 9.33).
- How should we interpret ***pa-qo-si-jo si-ra<-ko> kʷrijato***? The current translation is ‘*pa-qo-sios si-ra(<-ko>)* bought’, with *pa-qo-sios* subject of *kʷrijato* and *si-ra(<-ko>)* qualifying either the subject or the verb. We have seen that this interpretation is difficult since *si-ra<-ko>* is probably a MN. Moreover it overlooks a basic fact: in our three parallel texts, *si-ra-ko/si-ra<-ko>* always directly precedes *kʷrijato*. This repeated collocation suggests that *si-ra-ko/si-ra<-ko>* is the subject of the verb. Such an analysis may be reinforced by KN B 822, where the two words *si-ra-ko qi-ri-ja-to* are deliberately written

in signs smaller than those used for the preceding and following items (even though there was adequate space). • In our three texts, the group *si-ra-ko/si-ra<-ko> kʷrijato* is directly preceded by three different words, respectively *pa-qo-si-jo*, *Jko* and *lpi-ro*. Their symmetric collocation suggests that their nature and function are the same. Now, *pa-qo-si-jo* is a certain MN and he cannot be but the new owner of a slave: so must then be *Jko* and *lpi-ro*. These three names could be either nominatives of rubric (§ 9.1) — like the names of the slaves bought — or datives ('for So-and-so'): the latter possibility has been conventionally preferred here. • If so, the only possible interpretation of *si-ra-ko/si-ra<-ko>* is the MN of a middleman involved in these purchases of slaves. It is obvious that these transactions were controlled by the palace — otherwise, they would not have been recorded. *si-ra-ko/si-ra<-ko>* could have been a private individual, whose job was to manage purchases of slaves, or an officer, acting like a contemporary notary. • This brings us to the verb *kʷrijato*. Its basic meaning is of course 'he bought'. But since its subject is likely not the real buyer, but the middleman involved in the transaction (?), its use should be factitive. Hence a translation of *pa-qo-sijōi (?) si-ra<-ko> kʷrijato* as 'si-ra<-ko> arranged the purchase for *pa-qo-sios (?)*'.

**§ 9.4. KN Ca 895 + fr.** (clay tablet; dimensions: *ca* 13.4 × *ca* 2.7 × ?; scribe —; find-spot: Area of Bull Relief; date: last decennia before 1275/1250; location: AMH).

**Content:** equids' inventory. On the role of this text in the confirmation of the decipherment, cf. *Decipherment*, 85-86. On this tablet the word occurs twice always followed by equids' ideograms (for instance ). It was thus tempting to equate with , so A.J. EVANS, *The Palace of Minos at Knossos*, Oxford, Clarendon Press, 1922-35, IV, 799 n. 3 observed apropos of this very text that 'the later Cypriot syllabary offers *po-lo* as equivalent... and those who believe that the Minoan Cretans were a Greek-speaking people will doubtless turn to πῶλος for comparison.' This was a wonderful intuition because the signs are to be read as *po-ro*, i.e. *pōlos vel sim.*, but since Evans believed that the language of LB could not be Greek, he did not pursue this idea further.

**Selected bibliography:** *Avviamento*, 182-183; *Handbuch*, 507; *Documents*<sup>2</sup>, 210-211; *Idéogrammes*, 63-76; *Interpretation*, 181-182.

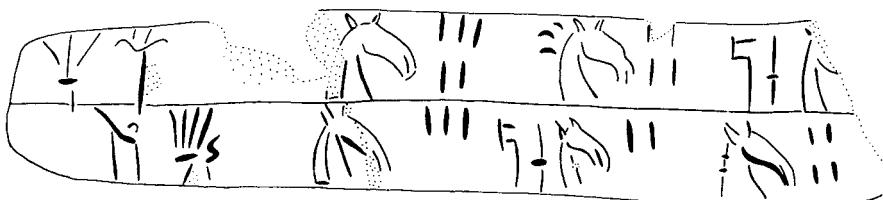


Fig. 9.3. KN Ca 895 + fr. (CoMIK I, 363)

.1	i- <i>qo</i>	EQU <sup>f</sup> 5	EQU <sup>m</sup> 4	po-ro	EQU[
.2	o-no	EQU <sup>f</sup> 3	po-ro EQU 2	EQU <sup>m</sup> 4	[

.1 The left part of EQU<sup>f</sup> (ἢ) is damaged. • EQU<sup>m</sup> is characterised by a mane (ἢ), instead of the double bar marking the male sex, which occurs in the same place as the mane on 1. 2 (ἢ).

- .1 *Ikk<sup>w</sup>oi* ἢ 5, ἢ 4 — *pōlos* (?) ἢ [ ].  
 .2 *Onoi* ἢ 3 — *pōloī* ἢ 2, ἢ 4 [ ].

- .1 Horses: 5 SHE-EQUIDS, 4 HE-EQUIDS — foal(s): [ ] EQUID(S)[ ].  
 .2 Asses: 3 SHE-EQUIDS — asses' foals: 2 EQUIDS, 4 HE-EQUIDS [ ].

*Ikk<sup>w</sup>oi*: cf. ἵππος, ‘horse’. Horses were used to draw chariots — interestingly, the Mycenaean word for ‘chariot’ is *ikk<sup>w</sup>ijā*, ‘horse <chariot>’ (§ 9.14). The aspiration of ἵππος is not etymological: the word comes from the Indo-European \*ekwos. Since some alph. Gr. data suggest that its aspiration could have been introduced rather recently in Greek (cf. *Mémoires I*, 242-243), it is tempting to suppose that the LB word for ‘horse’ was still non aspirated. In fact, the TH Fq 252.4, etc. form *e-pi-qo-i*, *epikk<sup>w</sup>oīhi*, ‘to the horsemen’ shows that the aspiration had not yet been introduced in the Mycenaean word for ‘horse’: an aspirated form should have been written \**e-pi-i-qo-i*, \**epihikk<sup>w</sup>oīhi*. Notice that the secondary aspiration of two other LB words connected with transportation, ‘wheel’, *armo* and ‘reins’, *anhijai* (?), was also probably absent in LB (§ 9.16, 9.39). This suggest that the changes started in a non-Mycenaean or post-Mycenaean group which tended to introduce an initial aspiration in words which began with a vowel (hypercorrection?) and which was strongly concerned with transportation. A similar sociolinguistic phenomenon, though attested much earlier, may account for the different treatments of initial prevocalic \*y- which

is continued by [h], but also in a few words by [d<sup>z</sup>], cf. e.g. the word for ‘pair’ which occurs in the Mycenaean dative plur. *d<sup>z</sup>eugessi* (*ze-u-ke-si*) < \*yeugessi (cf. ζεῦγος). • *pōlos* means here ‘young of any animal’ as in alph. Gr. On l. 2, the word is presumably in the plural because 6 foals are recorded (2 + 4); l. 1, since the number following EQUID(S)[ ] is not known, there may be any number of *pōlos*. • *Onoi*: cf. ὄνος.

**§ 9.5. KN Fh 5451 + 5496 + frr. (4)** (clay tablet; dimensions: ca 9.3 × ca 1.9 × ?; scribe 141; find-spot: Room of the Column Bases; date: last decennia before 1275/1250; location: AMH).

**Content:** olive oil delivery. The production of oil was an important Mycenaean industry (J.L. MELENA, *Minos* 18 [1983], 89-123). Textual LB evidence proves that olive oil was a major component of the Mycenaean perfumes (§ 9.33). Archaeology shows that oil was used for lighting; it was certainly used for food too and presumably as a cleaning device. This tablet explicitly refers to Amnisos, an important place located a few km to the North-East of Cnossos (S. HILLER, *Kadmos* 21 [1982], 33-63).

**Selected bibliography:** *Aspects*, 134-137; E.D. FOSTER, *Minos* 16 (1977), 19-51; L. GODART, in *Studies Chadwick*, 201-210; *Handbuch*, 514; *Texte*, 155-160; *Textos*, 46.

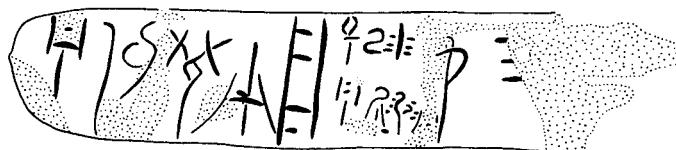


Fig. 9.4. KN Fh 5451 + 5496 + frr. (4) (CoMIK III, 80)

.a za-we-te [  
.b a-mi-ni-si-ja a-pu-do-ší OLE 30[

*Amnisijā apudošís tāwetes: OLE 30[.*

‘Delivery from the place Amnisos for this year: 864[ ] litres OIL.’

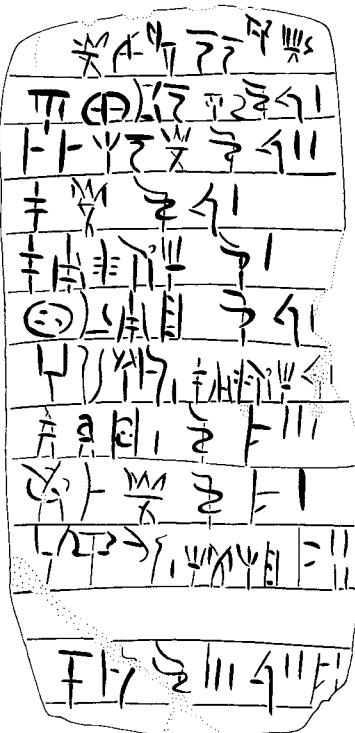
*Amnisijā*: this ethnic of the PN Ἀμνισός likely agrees with *apudošís*. • *apudošís*: cf. ἀπόδοσις. This term expresses the ‘delivery’ and can be used whenever goods are brought to the palaces either as payment of taxes or to be worked

on by craftsmen (see also § 9.33). *apu-*: cf. ἀπο- and (Arcado-Cypriot and Aeolic) ἀπν-. • *t<sup>ē</sup>awetēs*: cf. τῆτες, ‘of this year’. This adverb shows that the Mycenaean administration worked on an annual basis — cf. also other expressions used elsewhere: *pe-ru-si-nu-wo*, *perusinwos*, ‘of last year’ (§ 9.34); *to-to we-to*, *totto wetos*, ‘this year’; *we-te-i-we-te-i*, *wetehiwetehi*, ‘every year’.

**§ 9.6. KN Fp (1) 1 + 31** (clay tablet; dimensions [*Scribes Cnossos*, 84]: 6.0 × 12.7 × 1.4; scribe 138; find-spot: the Clay Chest; date: last decennia before 1275/1250; location: AMH).

**Content:** list of olive oil offerings to deities and a cult servant.

**Selected bibliography:** *Avviamento*, 188-189; J. CHADWICK, in *Cambridge Colloquium*, 27-30; *Documents*<sup>2</sup>, 305-307, 475; *Handbuch*, 515-516; *Interpretation*, 236-237; *Introduction*, 152-153; *Mémoires II*, 88; *Mentions*; *Opfergaben*, 21-26; *Po-ti-ni-ja*, 148-155; *Texte*, 160-162; *Textos*, 46-47; *Welt*, 97-98.



**Fig. 9.5.** KN Fp (1) 1 + 31 (*CoMIK I*, 1)

- .1a me-no  
 .1b de-u-ki-jo-jo  
 .2 di-ka-ta-jo di-we OLE s 1  
 .3 da-da-re-jo-de OLE s 2  
 .4 pa-de OLE s 1 *vac.*  
 .5 pa-si-te-o-i OLE 1 *vac.*  
 .6 qe-ra-si-ja OLE s 1[  
 .7 a-mi-ni-so , pa-si-te-o-i s 1[  
 .8 e-ri-nu , OLE v 3 *vac.*  
 .9 \*47-da-de OLE v 1 *vac.*  
 .10 a-ne-mo , i-je-re-ja v 4  
 .11 *vacat*  
 .12 to-so OLE 3 s 2 v 2  
 .13 *vacat*

.2 -*ka-* perhaps over [ ]. • .6-7 One of these two s 1[ must be restored as s 2 to get the total of 1. 12. • .9 \*47- perhaps over [ ].

- .1 *de-u-k-ijojo mēnhos* (?):  
 .2-6 *Diktajōi Diwei*: OLE s 1;  
 [.3] *Daidalejonde*: OLE s 2;  
 [.4] *pa-de*: OLE s 1;  
 [.5] *pansi thehoihi*: OLE 1;  
 [.6] *qe-ra-s-ijāi*: OLE s 1[ ].  
 .7-10 *Amnisos* (?):  
*pansi thehoihi*: s 1[ ];  
 [.8] *Erinus*: OLE v 3;  
 [.9] \*47-da-de: OLE v 1;  
 [.10] *Anemōn hijerejāi*: v 4.  
 .12 *Tos(s)on*: OLE 3 s 2 v 2.

- .1 In the month of \**de-u-ko-*:  
 .2-6 to the Dictaean Zeus: 9.6 litres OIL;  
 [.3] to Daedalus' sanctuary (?): 19.2 litres OIL;  
 [.4] *pa-de*: 9.6 litres OIL;  
 [.5] to all the gods: 28.8 litres OIL;  
 [.6] to *qe-ra-s-ia*: 9.6[ ] litres OIL.  
 .7-10 Amnisos (?):  
 to all the gods: 9.6[ ] litres;  
 [.8] Erinys: 4.8 litres OIL;

- [.9] to \*47-da: 1.6 litre OIL;  
 [.10] to the priestess of the Winds: 6.4 litres.  
**.12** So much: 108.8 litres OIL.'

This tablet begins with a **date**: the name of the month when the offerings were made. Unlike many Near-Eastern archives, the LB texts never mention the *year* when they were written. However a *month* indication, as here, is sometimes given. Another form of dating which uses a formula stating ‘when’ (*o-te, hote*) some event took place is also possible, but exceptional: only four examples are known (see § 9.36, 9.44-46). • The text ends with the **total** amount of oil offered — the scribes regularly append such totals at the end of their lists.

• The **oil ideogram** is written almost always just before the quantities, but it was omitted on l. 7 and 10. • **.1 de-u-k-ijojo**: month name (*hap. leg.*). For the genitive in the expression of time, cf. νυκτός, ‘by night’. Most LB genitives sing. of thematic forms end in ...-o-jo (cf. -οιο). There are certain forms in ...-o (i.e. likely ...-ō) however: see § 9.43.7. • **me-no, mēnhos (?)**: the Greek word for ‘month’ (μήν *vel sim.*) comes from an old Indo-European word for ‘moon’, \*mēn-s — the basic calendar reference was thus the lunar month (hence the use of a drawing of the ‘moon’, LUNA [Ⓛ], to express ideographically the ‘month’ in LB). The genitive sing. \*mēnsos became μηνός, μῆννος *vel sim.* in alph. Gr. Two alternative processes have been postulated to explain μηνός, etc.: (1) \*mēnsos > (2) \*mēsnos > (3) \*mēhnos > (4) \*mē(n)nos — or (1) \*mēnsos > (2-3bis) \*mēnhos > (4) \*mē(n)nos. How should we transcribe the LB genitive sing. *me-no*? Form (1), \*mēnsos, is excluded: it would have been written \*me-so (cf. *pansi* written *pa-si*: see below). Form (2), \*mēsnos, is unlikely too, as shown by the word for ‘shoulder’, \*ōmsos, which is supposed to have evolved in the same way as \*mēnsos. If it was still at the \*ōsmos stage we would expect a spelling \*o-so-mo (cf. *dosmos*, written *do-so-mo*), while we find ...-o-m... in the compound *e-po-mi-jo*, ‘shoulder-pieces’ (§ 9.15). We are then left with the forms (3), (2-3bis) and (4). Form (4) is undoubtedly possible. The validity of forms (3) and (2-3bis) depends on whatever spelling rules we are ready to accept for the clusters [hn] and [nh]. The word for ‘hunters’, *ku-na-ke-ta-i*, *kunhāgetāhi* (dative plur.; cf. κυνηγέτης) with the root \*sāg-> hāg- of ἥγεομαι, suggests that [nh] followed by a vowel was spelled just as [n] followed by a vowel and this makes the form (2-3bis) possible too — in *o-da-a<sub>2</sub>*, if read as *hō(s) d'ar hāi* (?) (§ 9.30), the [rh] sequence in *ar hāi* (?) is not located in the same word: thus it cannot be compared with the internal cluster [nh] above. I have conventionally chosen the transcription (2-3bis), *mēnhos* (?) here. • Two places delivered oil: the first (l. 2-6) was so obvious to the scribe that no name was given; it was probably the palatial centre itself,

Cnossos. The second place (l. 7-10) is Amnisos (§ 9.5). • **.2-10 Use of different cases to express the same function:** in this text, the name of the recipients appear in three different cases: (a) **datives**, meaning that the oil is ‘given to’ gods or persons: *Diwei* and *pansi thehoihi*; (b) allative **accusatives**, the oil being ‘sent to’ certain places: *Daidalejonde* and \*47-*da-de* — the accusative is followed by the allative postposition *-de* (cf. Hom. Οὐλυμπόνδε, ‘to Olympus’); (c) **nominatives of rubric** (§ 9.1): *pa-de* and *Erinus*. People have been tempted to interpret *pa-de* and *e-ri-nu* as datives in *-i* (endings in \*...*dei* and \*...*nui*) without notation of the second element of a diphthong. This idea seems problematic, however. Since *e-ri-nu* is certainly a stem in *-uς*, its dative should have ended in \*...*uwei* (< \*...*u-ei*) or conceivably (?) in \*...*uwi* (< \*...*u-i*) and is in fact written ...*u-we* at KN (*Erinuwei*: § 9.17). See moreover the nominative *ko-ru*, dative *ko-ru-we* (§ 9.44) and the nominative *i-ju<sup>2</sup>*, *(h)ijus<sup>2</sup>*, ‘son’, dative *i-je-we*, *(h)ijewei* (§ 9.38 l. v.3B). *pa-de* is likely to be a stem in *-ς*: compare its certain dative *pa-de-i* (KN Ga 953.2: scribe 219), which has an ending ...*dehi* (< \*...*des-i*) and not a final diphthong \*...*dei* (which would be written ...*de*). The use of three different cases to express the same function is by no means isolated in LB: for instance, in the PY Es series, the recipient of taxation items, the god Poseidon, may be written by scribe 1 in the *dative* (*po-se-da-o-ne*: § 9.32), but also in the *nominative* (*po-se-da-o*: PY Es 653.1) and even in the *genitive* (*po-se-da-o-no*: PY Es 649.1) — see also § 9.31, 9.42, 9.44-46. We are unable to assess the real case of two recipients of this tablet, *qe-ra-si-ja* and *i-je-re-ja*: they could be nominatives or datives. Here, they have conventionally been interpreted as datives. • **.2 Diktajōi:** cf. Δικταῖος, adjective of the mountain name Δίκτη. • ***Diwei***, ‘to Zeus’: most athematic sing. LB datives end in ...*e*, i.e. ...*ei*, with the inherited Indo-European desinence which will be replaced with ...*i* in alph. Gr. (there are several instances of these *i*-forms in LB: § 9.21). • **.3 Daidalejonde**, ‘to Daedalus’ sanctuary (?)’: this allative (see above) implies that the oil was sent to a place linked with Daedalus. It is tempting to understand *Daidalejon-* as Δαιδάλειον, ‘Daedalus’ sanctuary’ — the only Daedalus’ shrine known so far was located in Attica and Daedalus was honoured as a hero, not as a god. The suffix used here is *-ειος*, while in Pylos we find *-ιος* used with a similar function (§ 9.38). • **.4 pa-de**: GN, apparently Prehellenic (see above). • **.5 pansi thehoihi**, ‘to all the gods’: cf. πᾶς and θεός; these two words are always written in *scr. cont.* (*pa-si-te-o-i*) by all the scribes. Since the same phenomenon appears in other GNs (§ 9.17), it could be explained by a tendency to the univerbation of divine syntagms — compare ‘madonna’, from Italian *madonna*, ‘my lady’, etc. *Theoihi*: dative-locative plur. (< \*-oisi). When an *-o-* or *-a-* stem word ends in ...*o-i* or ...*a-i*, this points to a dative-locative (‘for’, ‘at’) plur. and is to be read as *-oiihi* or *-ahi* (cf. -οισι or -ἄσι/-ῆσι). The instrumental (‘with’: this case is no longer used in alph. Gr.) plur. of these stems may end

either in *-ois* and (rarely) *-ais*, written ...*o* and ...*a* in LB, or in *-ophi* (rarely) and *-āphi*, written ...*o-pi* and ...*a-pi* (§ 9.9). • .6 *qe-ra-s-ijāi*: GN known elsewhere at KN. • .7 *Amnīsos* (?): nominative or locative; cf. Ἀμνισός. • .8 *Erinus*: cf. Ἐρινύς; the Eriny, avenging deity, is known only in the Cnossos LB texts; on its case, see above. On the Eriny, see A. MARTINA, in *Atti II*, 331-343. • .9 \*47-*da-de*: probably PN. • .10 *Anemōn hijerejāi*: cf. ἄνεμος and ιέρεια. • .2-10 **Quantities of oil given**: Cnossos (?; l. 2-6) gives considerably more than Amnisos (l. 7-10). The proportions are as follows: each single deity, 2 ~ 1; 'all the gods', 3 ~ 1; the places *Daidalejonde* and \*47-*da-de*, 12 ~ 1. The internal proportions are not the same either: 'all the gods' receive three times as much as a single deity at Cnossos (?), but only twice as much at Amnisos. Zeus does not get the highest quantity but this is not an isolated feature: in KH Gq 5, Dionysus gets twice as much honey as Zeus and see § 9.38 for a similar phenomenon at PY. It becomes then clear that the Mycenaean Zeus had not yet the pre-eminent place that he occupied later. • **Tos(s)on**: cf. § 9.2.

**§ 9.7. KN Ga (1) 674** (clay tablet; dimensions: *ca* 10.4 × *ca* 2.1 × ?; scribe 135; find-spot: near Door of Magazine VIII; date: last decennia before 1275/1250; location: AMH).

**Content:** offering (?) of about 1000 litres coriander.

**Selected bibliography:** E.D. FOSTER, *Minos* 16 (1977), 19-51; J.L. MELENA, *Minos* 15 (1976), 133-163; *Opfergabe*, 57-59.



Fig. 9.6. KN Ga (1) 674 (*CoMIK I*, 254)

- .a ] pe-ma
- .b ]mā-ri-ne-we , ko-ri-ja-do-no , AROM 10 vac.

]*Mallinēwei* (?), *korijadnon* (?), *sperma*: AROM 10.

']To Mällineus (?), coriander (?), seed: 960 litres of AROMATIC STUFF.'

]*Mallinēwei* (?): this recipient has clear textiles connections. His name obviously ends in -εύς; its radical comes perhaps from the word for 'flock of

wool', μάλλος; on the dative in ...*ei*, see § 9.6. We cannot but compare *ŋa-ri-ne-wo wo-i-ko-de*, *Mallinēwos* (?) *woikonde*, 'to the premises of Mallineus (?)' (KN As 1519.11) with *po-ti-ni-ja wo-ko-de*, *Potnijās woikonde*, 'to the premises of Potnia' (TH Of 36.2). This parallelism suggests that Mallineus (?) could have the same status as the Potnia. And since Potnia is probably a deity in TH Of (cf. e.g. the certain parallel GN *e-ma-a<sub>2</sub>* in Of 31.3 [same scribe]), then, Mallineus (?) could be a GN. Notice too that *]ma-ri-ne-we-ja-i*, *]Mallinēwejāhi* (?), ']*for the women belonging to Mallineus (?)*' is strictly parallel to the GN *ko-ma-we-te-ja*, *Komāwentejāi* (§ 9.38) in TH Of 35. Cf. also the offering of coriander to deities (see below). The 'premises' alluded to (lit. 'house'; cf. οἶκος) must have obviously included industrial buildings. • ***korijadnon*** (?), 'coriander': cf. κορίαννον and (gloss) κορίανδρον, 'coriander' — this word is probably a loan of unknown origin. The case may be nominative of rubric (§ 9.1; as conventionally adopted here) or genitive (*korijadnō*: on certain thematic LB genitives sing. in ...*o*, i.e. likely -*ō*, see § 9.43.7) qualifying *sperma*. The seed of this spice was surely used in the perfume industry (§ 9.40) and possibly for medicinal purposes as well — it seems to have been unknown in the classical Greek oil industry. In the same series, coriander is given to deities (KN Ga 953) and KN Ga 675 delivers exactly the same amount of coriander as here to *wa-na-ka-te*, *wanaktei*, 'the king' (cf. ἄντεξ). • ***sperma***, 'seed' (cf. σπέρμα): this is the normal spelling in Crete. In the continental LB texts, we find *spermo* (with a very few exceptions: § 9.31).

**§ 9.8. KN Gg (1) 702** (clay tablet; dimensions [*Scribes Cnossos*, 50]: 8.5 × 2.1 × 1.0; scribe 103; find-spot: Gallery of Jewel Fresco; date: last decennia before 1275/1250; location: AMH).

**Content:** jars of honey offered to several deities.

**Selected bibliography:** Avviamento, 192-193; Decipherment, 159-160; Documents<sup>2</sup>, 310, 475; Handbuch, 516; Idéogrammes, 259-263; Interpretation, 238-239; Mentions; Opfergaben, 44-48; Po-ti-ni-ja, 64-66; J. REDONDO, Minos 24 (1989), 187-198; Textos, 47; Welt, 98-99.

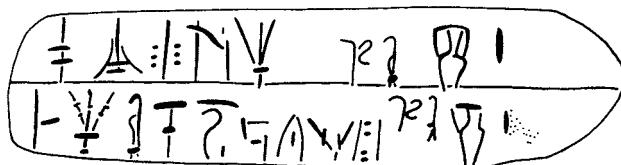


Fig. 9.7. KN Gg (1) 702 (*CoMIK I*, 267)

.1	pa-si-te-o-i	me-ri	*209 <sup>VAS</sup> 1 vac.
.2a		me-ri	
.2b	da-pu <sub>2</sub> -ri-to-jo , po-ti-ni-ja		*209 <sup>VAS</sup> 1 vac.

- .1 *Pansi thehoihi: meli* ॥ 1;  
 .2 *daburinthojo* (?) *Potnijāi: meli* ॥ 1.

- ‘.1 To all the gods: honey, 1 AMPHORA;  
 .2 to the Mistress of the (?) labyrinth (??): honey, 1 AMPHORA.’

**Pansi thehoihi**, ‘To all the gods’: § 9.6. • **da-pu<sub>2</sub>-ri-to-jo, daburinthojo** (??): cf. *λαβύρινθος*, ‘labyrinth’, the famous mythical construction made by Daedalus for king Minos and where the Minotaur lived. This interpretation of *da-pu<sub>2</sub>-ri-to-jo* is the standard one, but we may wonder if it is justified. Indeed, there are several problems. The first concerns the sign *da-* (not \**ra-!*) at the beginning of the word. It is true that *λαβύρινθος* is certainly Prehellenic and this could explain *da-* (cf. the alternations in Prehellenic words like *δάφνη* ~ *λάφνη*, ‘sweet bay, *Laurus nobilis*'; ‘Οδυσσεύς’ ~ ‘Ολυσσεύς’, ‘Ulysses’, etc.). Then, there is the ‘doublet’ syllabogram (§ 9.1) *pu<sub>2</sub>*. It specifically renders [phu] when it occurs in a clear context (as in *pu<sub>2</sub>-te-re, phutēres*, ‘planters’: cf. φυτεύω, ‘plant’) — one has supposed that *pu<sub>2</sub>* could also note [bu], but none of the examples is really certain. Moreover, the LB spelling may regularly conceal several phonemes: in theory *da-pu<sub>2</sub>-ri-to-jo* could begin with \**Da(i)phull/r... vel sim.* and some of these possibilities would make its relation to *λαβύρινθος* problematic. Finally, there is a presumably Prehellenic Cretan MN *da-pu<sub>2</sub>-ra-zo* whose beginning is strangely similar to *da-pu<sub>2</sub>-ri-to-jo*, although a connexion with *λαβύρινθος* seems never to have been considered. Even if *da-pu<sub>2</sub>-ri-to-jo* is really the LB form corresponding to *λαβύρινθος*, we do not know if it is just a PN or the word for ‘labyrinth’. On the thematic genitive sing. in ...*o-jo*, see § 9.6. • **Potnijāi**, ‘to the Mistress’: this is the name of an undoubtedly major Greek goddess. It is tempting to suppose that there was only one Mycenaean Potnia: there is no certain example of Potnia accompanied by the name of the deity concerned (see § 9.17, however), but ‘Potnia’ may be associated with various PNs (in the genitive; put before Potnia) or adjectives (put after Potnia). Whenever it is associated with a modifier, Potnia is a certain GN. When Potnia appears alone in LB, things are less clear-cut: it may be a certain GN (§ 9.38 r.2B) but also, perhaps, the title of the human queen. The origin of the form Πότνια is clearly Indo-European (cf. Sanskrit *pátnī-*, same formation and meaning) and the word meant etymologically ‘the Mistress’. On the LB Potnia, see e.g. *Po-ti-ni-ja*; C. TRÜMPY, in *Potnia*, 411-442. • **meli** (cf. μέλι): honey was the main sweetener in antiquity, since sugar was unknown. It was obviously used in cookery, but also in

the perfume industry (§ 9.40). This text shows that honey was offered to Mycenaean deities — the same happened in first millennium Greece.

**§ 9.9. KN Ld (1) 573** (clay tablet; dimensions: *ca* 15.0 × *ca* 2.6 × ?; scribe 116; find-spot: Magazine XV; date: last decennia before 1275/1250; location: AMH).

**Content:** inventory of cloth pieces (see also § 9.10, 9.12). The Mycenaean economy of Crete included an extremely important textile industry. In many places, small groups of women manufactured textiles under the palace's control. The main stuff used was wool — compare Pylos, where it was linen. This tablet records the end of the fabrication process, when the finished items (pieces of cloth) are registered in the palace's magazines.

**Selected bibliography:** *Anthologia*, 117; *Avviamento*, 196-197; *Documents*<sup>2</sup>, 318, 487; *Handbuch*, 521; *Interpretation*, 292-293; J.T. KILLEN, in *Colloquium Mycenaicum*, 151-181; *Textos*, 56; Chapter 7.7 above.

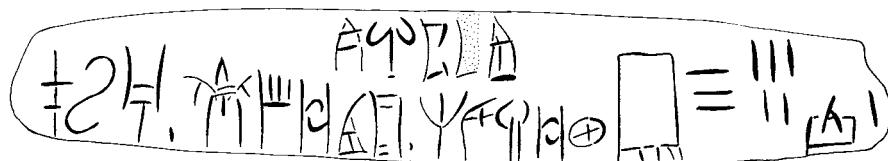


Fig. 9.8. KN Ld (1) 573 (*CoMIK I*, 206)

- .a e-ru-ta-raq-pi
- .b pa-we-a , ke-se-nu-wi-ja , re-u-ko-nu-ka TELA<sup>3</sup> 35 \*158 1

.b 35 \*158 1 probably over [ ]. • *re-u-ko-nu-ka*: the size of the signs is decreasing.

*Pharweha ksenwija leukōnukha eruthrāphi*: TELA<sup>3</sup> 35, 1.

'Cloths of export type, with white "nails", with red <decorations>: 35 CLOTHS<sup>3</sup>, 1 1.'

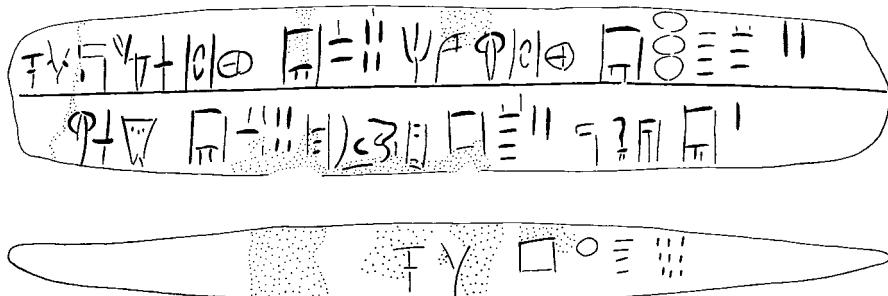
**Pharweha**: cf. φᾶρος, 'cloth'. • **ksenwija**: cf. ξένιος/ξείνιος, 'of guest'. The word means probably 'for foreigners', i.e. 'for export' (see above Chapter 6.9.1).

- *leukōnukha*, ‘with white “nails”’: cf. ὄνυξ, ‘nail’, used here in some technical sense.
- *eruthrāphi*, ‘with red <decorations>’: this instrumental feminine plur. of ἐρυθρός, ‘red’ occurs several times in the description of cloth pieces in KN Ld. It likely indicates that some unspecified red decorations were put on the cloths. The LB -*phi* desinence is only used in the plural. It expresses several functions: instrumental (‘with’), locative (‘at’) and possibly ablative (‘from’).
- The ideogram TELA (☷) clearly means ‘piece of cloth’ — it probably represented originally an upright loom. The superscript number, if there is one (e.g. TELA<sup>3</sup>), indicates the number of vertical strokes which often appear at the bottom of the drawing. This characteristic is obviously significant and had probably some technical sense.
- The meaning of the ideogram \*158 (☱) is unknown — it could perhaps represent the container of the finished items (???).

**§ 9.10. KN Ld (1) 587 + 589 + 596 + 8262** (clay tablet; dimensions: *ca* 16.7 × *ca* 3.2 × ?; scribe 116 [but see below]; find-spot: Magazine XV; date: last decennia before 1275/1250; location: AMH).

**Content:** partial (?) totalling record of the cloth inventory of the ‘set’ KN Ld (1) (see also § 9.9). There are no less than five different kinds of cloths registered.

**Selected bibliography:** *Avviamento*, 196-197; *Documents*<sup>2</sup>, 319, 487; *Interpretation*, 298; J.T. KILLEN, in *Colloquium Mycenaicum*, 151-179; J.L. MELENA, in *Tractata*, 211-212, 224-226; *Textos*, 56; Chapter 7.7 above.



**Fig. 9.9-10.** KN Ld (1) 587 + 589 + 596 + 8262 (*CoMIK I*, 212)

- .1 to-sa , po-ki-ro-nu-ka TELA<sup>2</sup> 24 re-u-ko-nu-ka TELA<sup>2</sup> 372 vac.  
.2 ko-ro-ta<sub>2</sub> TELA<sup>2</sup> 14 \*56-ra-ku-ja TELA<sup>x</sup> 42 po-ri-wa TELA<sup>2</sup> 1 vac.

*lat. inf.* vac. [ ] vac. [ ]to-ṣa TELA 149 vac.

**.1-2** All the numbers are partly or completely over [ ]], except for the last number of l. 2 (TELA<sup>2</sup> 1).

[.] *Tos(s)a:*

*poikilōnukha:* TELA<sup>2</sup> 24 — *leukōnukha:* TELA<sup>2</sup> 372 — [.] *ko-ro-ta<sub>2</sub>:* TELA<sup>2</sup> 14 — *barakuja* (?): TELA<sup>x</sup> 42 — *poliwa:* TELA<sup>2</sup> 1;  
*lat. inf.* [ ]*tos(s)a:* TELA 149.

[.] So many:

with multicoloured “nails”: 24 CLOTHS<sup>2</sup> — with white “nails”: 372 CLOTHS<sup>2</sup> — [.] spun/dyed (?): 14 CLOTHS<sup>2</sup> — of turquoise (?)  
 colour: 42 CLOTHS<sup>x</sup> — grey: 1 CLOTH<sup>2</sup>;

*lat. inf.* [ ]so many: 149 CLOTHS.'

***Tos(s)a* and all the following adjectives** agree with an implicit *pharweha*, ‘cloths’ (§ 9.9). • ***tos(s)a:*** § 9.2. • ***poikilōnukha, leukōnukha*,** ‘with multicoloured or white “nails”’: § 9.9. • ***ko-ro-ta<sub>2</sub>:*** derivative of a verbal adjective from κλώθω, ‘spin’ or χρώζω, ‘dye’, with some technical sense; there is a form *ko-ro-to* used in textile contexts elsewhere; *ko-ro-ta<sub>2</sub>* is written with the ‘pseudo-complex’ syllabogram (§ 9.1) *ta<sub>2</sub>*. • **\*56-ra-ku-ja** presumably refers to the colour of the cloths; if identical with *pa-ra-ku-ja*, it could perhaps be compared to terms like σμάραγδος, ‘emerald’ or βαρακίς γλαύκινον ἴματιον, ‘bluish green piece of cloth’ (Hesychius) (?). *pa-ra-ku-ja* is clearly derived from the noun *pa-ra-ku-we* (dative sing.), which is the name of a precious material used in the luxury furniture of PY Ta. • ***poliwa:*** cf. πολιός, ‘grey’. This neuter plur. does not match the *single* piece of cloth recorded; a sing. would have been appropriate, but the scribe mistakenly used a plural as in the five preceding words: this kind of error may occur anywhere in the LB texts. • ***lat. inf.* ]*tos(s)a:*** other KN Ld tablets of scribe 116 have a ‘total’ entry on their edge. In Ld 598, this entry (40) matches exactly the sum of the cloths listed (1 + 37 + 2). Ld 584 is too mutilated to be sure. But here, in Ld 587, the total on the edge (149) does not correspond to the sum of the preceding numbers ( $24 + 372 + 14 + 42 + 1 = 453$ ). Since the tablets begins (l. 1) with the totalizing word *tos(s)a*, the second ]*tos(s)a* entry of the *lat. inf.* needs to be explained. It was perhaps written before almost all the numbers of the verso were corrected. Another possibility is that ]*tos(s)a* introduced a *supplementary* total which was perhaps preceded by some additional information. Anyway, I wonder if the recto and the *lat. inf.* were not written by two different hands — *Scribes Knossos*, 58-60 makes clear that the texts of ‘scribe 116’ were actually written by at least two persons.

**§ 9.11. KN L 693** (clay tablet; dimensions [*Scribes Cnossos*, 47]: 11.0 × 2.7 × 1.2; scribe 103; find-spot: N. W. Passage (Long Corridor flank-ing Magazine XIII); date: last decennia before 1275/1250; location: AMH).

**Content:** record of bronze and garments. The real nature of the operation recorded depends on the meaning of the word *qe-te-o*: ‘to be paid (?)’ or ‘to be delivered (??)’.

**Selected bibliography:** *Aspects*, 140-141; *Avviamento*, 204-205; *Documents*<sup>2</sup>, 320-321, 487-488; A. HEUBECK, *Kadmos* 25 (1986), 141-146; *Introduction*, 98-99; J.T. KILLEN, in *Colloquium Mycenaicum*, 172-173; *Mémoires II*, 302; *Textos*, 56.

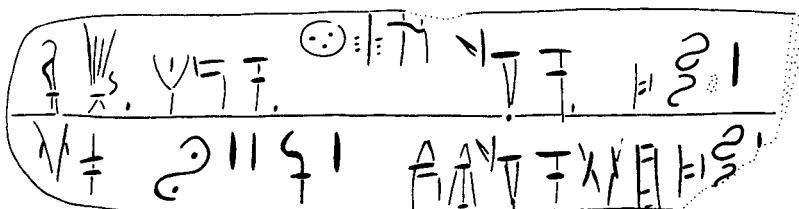


Fig. 9.11. KN L 693 (*CoMIK I*, 263)

.1a qe-te-o

.1b ri-no , re-po-to , ki-to , AES M 1 [

.2 sa-pa P 2 Q 1 e-pi-ki-to-ni-ja AES M 1[

.2 -ni- over [ja] — the scribe had first written the last sign of the word and forgotten the last but one. • AES over [ ].

.1 *Linon lepton (kʷeitehon [?])*:

*khitōn* (?): AES M 1 —

.2 *sa-pa*: P 2 Q 1 — *epikhítōnijā*: AES M 1[.

‘.1 Fine linen (to be paid [?]):

tunic: 1 kg BRONZE —

.2 *sa-pa*: 45 gr — item (?) put over the tunic: 1[ ] kg BRONZE.’

***Linon lepton (kʷeitehon [?])***: these three words likely characterise all the textiles registered afterwards. Each of them was thus made of ‘fine linen’ (*linon*

*lepton*: cf. λίνον and λεπτός) and had ‘to be paid (?)’ (*k<sup>w</sup>eitehon*: see below). • Although there is no explicit indication of the **number of textiles**, there could have been only one garment of each type, since *ki-to* is an obvious sing. Hence the reading of *e-pi-ki-to-ni-ja* as a feminine sing. instead of a neuter plur. • Since the bronze weight is duly mentioned, the palace is supposed to ‘pay (?)’ in bronze the pieces of textiles. • **qe-te-o**: the current reading of this transaction term is *k<sup>w</sup>eitehon*, ‘to be paid (?)’ (cf. τίνω, ‘pay’ and [ἀπο]τιστέον). A meaning such as ‘to be delivered (???)’ would perhaps better fit all the contexts, but it cannot be given a satisfactory Greek interpretation. • ***khitōn* (?)**: the word for ‘tunic’ is certainly borrowed from the Semitic languages, cf. Akkadian *kitû*, *kitinnû*, ‘linen; linen item or garment’. The alph. Gr. forms are χιτών, κιτών, κιτών and even (late) χιθών — what was exactly the LB form is not certain. • **.2 sa-pa**: name of a (small or inexpensive: cf. the quantity of bronze ‘to be paid [?]’) textile item; cf. the loan σαβάνον, ‘linen textile’ (??). The ending of *sa-pa* is ambiguous: either -ā or (?) -aps written with a ‘dummy’ vowel (§ 9.1) in -pa (the latter possibility was suggested by J.L. Melena [pers. com.]). The scribe apparently forgot to write the BRONZE ideogram before the weight. • ***epikhitōnijā***: compound in ἐπι- certainly pointing to an item worn ‘on the tunic’, either a real garment or some ornament. The LB form has no relation with the *diminutive* χιτόνιον, ‘frock, shift’.

**§ 9.12. KN Od (1) 562** (clay tablet; dimensions [*Scribes Cnossos*, 46]: 13.0 × 3.2 × 1.0; scribe 103; find-spot: Magazine XII; date: last decennia before 1275/1250; location: AMH).

**Content:** deliveries of about 600 kilograms of wool to a workshop (one Mycenaean primary unit of wool weighed *ca* 3 kg). The tablet records the beginning of the manufacturing, when wool is brought to the textile workers (see also § 9.9-10). This stage was part of an important work structure called *ta-ra-si-ja*, *talasijā*, lit. ‘weighed quantity (of items to be processed)’ (cf. ταλασία, ‘wool processing’: *Aspects*, 109-112) — the Mycenaean *talasijā* can be compared with the corvée, a form of forced or statutory work.

**Selected bibliography:** *Anthologia*, 103-104; *Aspects*, 77-78; J.T. KILLEN, in *Economy*, 162-163; *Textos*, 62.

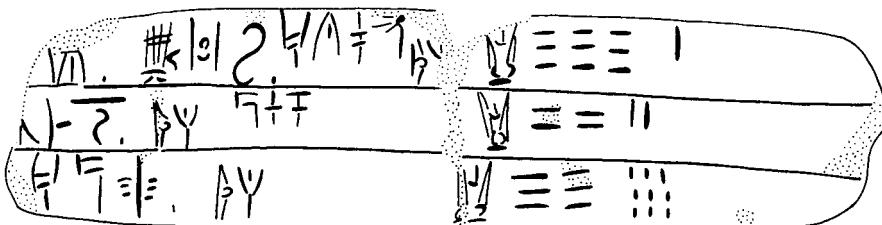


Fig. 9.12. KN Od (1) 562 (CoMIK I, 202)

- .1a a-ti-pa-mo  
 .1b ]o-pi , no-nu-we , pe-re LANA 91 vac.  
 .2a po-ro-to  
 .2b ]si-da-jo , pe-re LANA 42 vac.  
 .3 a-po-te , pe-re LANA 69 vac.
- .1 ]Opi no-nu-wei:  
*Antiphāmos pherei:* LANA 91;  
 .2 ]si-da-jo pherei (*prōton [??]*): LANA 42;  
 .3 *a-po-te pherei:* LANA 69.
- .1 'At no-nu-'s working-place:  
 Antiphamos brings: 273 kg WOOL;  
 .2 ]si-da-jo brings (first <delivery> [??]): 126 kg WOOL;  
 .3 *a-po-te* brings: 207 kg WOOL.'

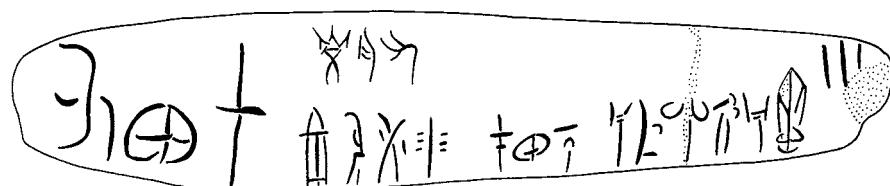
.1 ]*Opi*, ‘at’, ‘chez’; elsewhere ‘over’: cf. ἐπί, ‘upon’, ὄπισθεν, ‘behind’. This preposition introduces here the name of the person in charge of a textile workshop (a huge quantity of wool is listed). • *no-nu-wei*: this *hap. leg.* is the MN of the head of the workshop. Under her/his supervision, the wool had probably to be transformed into cloths. We do know that one TELA+TE cloth required 7 primary units of wool, i.e. *ca* 21 kg (TE is the abbreviation of *te-pa*, the name of a very heavy piece of cloth whose Greek interpretation is unknown; a relationship with the probable loan τάπης, ‘carpet, rug’ is possible but unprovable). Now, the 91 and 42 wool units of l. 1-2 match exactly the quantities needed for 13 and 6 TELA+TE respectively ( $13 \times 7 = 91$ ;  $6 \times 7 = 42$ ). Hence, it is likely that these deliveries were meant to make several TELA+TE cloths. The third delivery, with the 69 units of wool brought by *a-po-te*, is one unit short of what is needed to make 10 TELA+TE cloths. On the dative in ...*ei*, see § 9.6. • .1-2 *Antiphāmos* and ]*si-da-jo* are certain MNs (known elsewhere;

cf. the MN Ἀντίφημος): each of them ‘brings’ the wool to *no-nu-*. • ***pherei***: cf. φέρω. • **.2 *po-ro-to***: *hap. leg.*; the nature and function of this word are difficult. It could be either a MN (cf. the MNs Πρῶτος, Πρωτώ, Πρώτων) or an adjective/adverb. If it is a MN, the wool of l. 2 was perhaps delivered by *Jsi-da-jo* to *no-nu-* through *po-ro-to* (??). Another possibility has been conventionally adopted here: *po-ro-to* would be understood as *prōton* (?), ‘first <delivery>’ (??)’ (cf. πρῶτον). This is suggested by MY X 713 with its *a-pudo-si po-ro-te-ra, apudosis prōterā*, ‘first delivery’. If so, *Jsi-da-jo* would be expected to bring more wool later. This may seem strange, but note that he brings less than half the quantity of that delivered by *Antiphāmos*. • **.3 *a-po-te***: MN — *a-po-te* is a certain MN in KN Le 641.1 (same scribe as our tablet; *a-po-te* is directly followed by the verb *deksaṭo*, ‘he received’) and here it is used in parallel with two certain MNs. A PN or an adverb in *-then* (cf. -θεν) are much less likely.

**§ 9.13. KN Ra (1) 1548** (clay tablet; dimensions: *ca* 14.3 × *ca* 2.9 × ?; scribe 126; find-spot: Corridor of Sword Tablets; date: last decennia before 1275/1250; location: AMH).

**Content:** daggers made by a cutler. The tablets of this series were found together with fragments of weapons. The Mycenaean Greek elites were distinctively warriors: arms, often richly decorated, were regularly put in their tombs.

**Selected bibliography:** Avviamento, 198-199; A. BERNABÉ, in *Rome Colloquium* (forthcoming); A.M. BIRASCHI, *PP* 181 (1978), 281-287; *Documents*<sup>2</sup>, 360-361, 515; S. HILLER, in *Mykenaika*, 304-306; *Idéogrammes*, 49-55; *Interpretation*, 335-337; *Introduction*, 84; J.L. MELENA, in *Studies Chadwick*, 417-424; *Mémoires III*, 259; *Textos*, 63-64; Chapter 7.6.8 above.



**Fig. 9.13.** KN Ra (1) 1548 (*CoMIK II*, 166)

**a** de-so-mo

**b** ku-ka-ro pi-ri-je-te pa-ka-na a-ra-ru-wo-a PUG 3

*ku-ka-ro, prije(n)tēr (?)*: *phasgana arārwoha desmois (?)*: 3.

‘*ku-ka-ro*, ivory sawyer (?)’; daggers fitted with cross-belts (?)’; 3 DAGGERS.’

***ku-ka-ro***: MN known elsewhere. • ***pi-ri-je-te***: trade name in *-tēr*. Mycenaean daggers and swords could be luxury items ornated with ivory, which was *sawn up* for this purpose. This makes attractive the interpretation of *pi-ri-je-te* as *prije(n)tēr* (?), lit. ‘sawyer (?)’ (cf. the noun πρίων, ‘saw’ and the verb πρίω, ‘saw’), with the specialised meaning of ‘ivory sawyer (?)’. • ***phasgana***: cf. φάσγανον; a transcription *sphagana* is possible in theory. For the meaning ‘daggers’, see below. • ***arārwoha***: cf. ἀραρίσκω, ‘fit’. The suffix of the active perfect participle was still \*-wos- (and -woh- before a vowel) in LB. Later, this was replaced with \*-wot- and finally -ot- (πε-παιδευ-κ-ότ-a). • ***desmois* (?)**: cf. δεσμός, ‘band; bond’; the word could be a sing.; it may refer to ‘cross-belts’ or ‘handles’ (?). On *-ois*, see § 9.6. • **PUG** (and *phasgana*): the design of the ideogram 3 suggests that the recorded items are ‘daggers’ instead of ‘swords’. • If *ku-ka-ro* was an ivory sawyer (?), he probably specialised in adding ivory ornaments to the haft and/or cross-belt of the daggers.

**§ 9.14. KN Sd 4409 + 4481 + frr. (3)** (clay tablet; dimensions: *ca* 19.3 × *ca* 3.9 × ?; scribes 128?/—; find-spot: Arsenal; date: last decennia before 1275/1250; location: AMH).

**Content:** description of a chariot frame without its wheels. When not in use, the wheels were removed and stored separately (on this practice, see *Documents*<sup>2</sup>, 361) — see § 9.16 for a wheel inventory and also § 9.39. Mycenaean chariots were not used as tanks in battle-fields, but as prestige means of transport. These two-wheel and two-horse vehicles were driven by a driver and there was enough room for one passenger.

**Selected bibliography:** *Documents*<sup>2</sup>, 366, 515-516; *Idéogrammes*, 76-139; *Introduction*, 166-167; *Mémoires III*, 262-263, 288-292, 302-303; *Streitwagen*, 17-44; Chapter 7.3, 7.8 above.

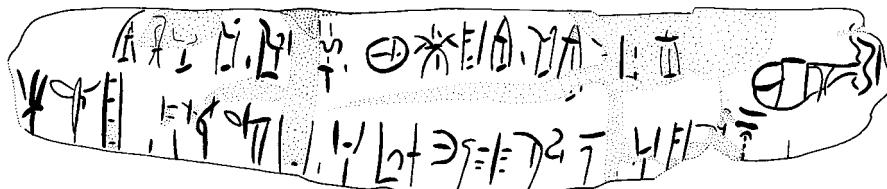


Fig. 9.14. KN Sd 4409 + 4481 + frr. (3) (*CoMIK II*, 207)

- .a wi-ri-ne-o , o-po-qo , ka-ke-ja-pi , o-pi-̄-ja-pi CUR 1  
 .b [ ]i-qi-ja , po-ni-ki-ja , a-ra-ro-mo-te-me-na , a-ja-me-na , vac.

.a-.b The second *-na* and CUR were written by a different scribe from 128? (pers. com. of J.-P. Olivier). Thus, scribe 128? forgot to write some signs, but his text was checked and completed by a colleague (or supervisor). • .b The beginning of the text is probably complete. • CUR 1 is written half-way between .a and .b.

[.b] [ ]*Ikkʷijā phoinikijā, arārmotmenā, ajāimenā*, [.a] *wrīnehois opōkʷois, khalkejāphi opihijāphi*:  1.

‘[.b] [ ]Chariot, crimson, completely assembled, inlaid (?), [.a] with leather blinkers, with bronze “attached ornaments (?)”’: 1 CHARIOT.’

About .b to be read before .a, see § 9.3. • *Ikkʷijā*: lit. ‘horse <chariot>’. The feminine substantive for ‘chariot’ which *ikkʷijā* etymologically concords with is never written in the LB S-series: *ikkʷijā* had thus become a plain substantive. See also § 9.4. • *phoinikijā*, ‘crimson’ (cf. φοινίκιος): the chariot body was probably covered with leather, which was itself painted (cf. the ‘red hides’ of § 9.39). • *arārmotmenā*: cf. ἀρμόττω, ‘fit together’ (the alph. Gr. form has the same secondary aspiration as the noun of the ‘chariot’, ἄρμα: see § 9.16); ‘completely assembled’ refers to the chariot’s body, i.e. everything but the wheels — if ‘not assembled’, the chariot is called *a-na-mo-to, anarmostos* (the first part of this compound adjective is the so-called ‘alpha privative’: it means ‘without’ and has here its typical *prevocalic* form *an-*). This suggests that the LB form has not yet an initial aspiration). • *ajāimenā*, ‘inlaid (? )’: perfect passive participle of a verb unknown in alph. Gr. (see J.L. GARCÍA-RAMÓN, *Minos* 29-30 [1994-95], 335-346). • *wrīnehois*: cf. βῖνός, ‘leather’. A dual is unlikely, since there were four blinkers (two for each of the two horses of the chariot). On *-ois*, see § 9.6. • *opōkʷois*, ‘with blinkers’: cf. *opi*, ‘on’ (§ 9.12) and ὄψ, ‘eye’ — lit. ‘over-eye’ (compare παρ-ώπια, ‘blinkers’). Here, the blinkers are made of leather (as usual), but the tablets list also horn ones. • *khalkejāphi*: cf. χάλκειος. • *opihijāphi*, ‘attached ornaments (? )’: this plur. noun is a compound of *opi* (see above), with a *-hijā*- second part likely linked with the root of ι-μάς, ‘strap’ (< \*si-). Since these lit. ‘items put on (*opi-*) straps (? )’ were made not only of bronze as here but also of horn, it is tempting to suppose that they were not structural parts of the harness, but only ornaments meant to be attached to some of its parts. On the *-phi* ending, see § 9.9.

**§ 9.15. KN Sk 8100** (clay tablet; dimensions: *ca* 9.9 × *ca* 3.3 × ?; scribe 206; find-spot: Area West of the Arsenal; date: last decennia before 1275/1250; location: AMH).

**Content:** list of pieces of military equipment. More than ten different parts of body-armour are listed, beginning with one helmet and its fittings and followed by the different parts of the corselet itself. For the warrior spirit of the Mycenaeans, see § 9.13.

**Selected bibliography:** *Avviamento*, 204-205; *Documents*<sup>2</sup>, 524; A. GRECO, in E. ROVA (ed.), *Patavina Orientalia Selecta*, Padua, SARGON, 2000, 199-220; A. HEUBECK, in *O-o-pe-ro-si*, 285-296; *Idéogrammes*, 19-47; *Interpretation*, 331-335; J.T. KILLEN, *Kadmos* 24 (1985), 30-31; *Mémoires III*, 324-326; *Welt*, 86-87; Chapter 7.6.2 above.

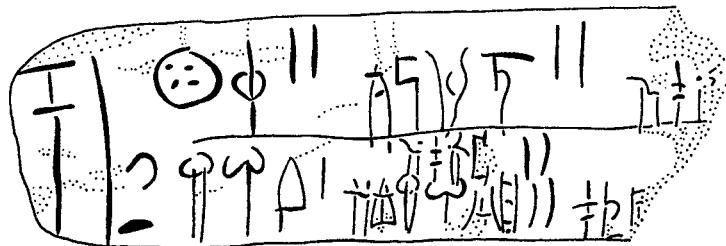


Fig. 9.15. Sk 8100 (*CoMIK IV*, 16)

.A	qe-ro <sub>2</sub>	2	e-po-mi-jo	2	o-pa-wo[-ta]
.Ba			o-pa-wo-ta	2	[
.Bb	to-ra ko-ru GAL	1	o-pi-ko-ru-si-ja	2	pa-ra-wa[-jo] 2 (?)

**.B** The scribe may perhaps (?) have meant *o-pi-ko-ru-si-ja* ‘*o-pa-wo-ta*’ 4. • *pa-ra-wa[-jo], o-pa-wo[-ta]*: cf. *pa-ra-wa-jo*, *o-pa-wo-ta* elsewhere. • *pa-ra-wa[-jo] 2 (?)*: the number is of course not certain but it is likely, since *pa-ra-wa-jo* are ‘cheek-pieces’ (see below).

[.B] *Thōrāks: korus, ⌂ 1 — opikorusija 2 — opaworta 2 — parāwa[jō 2 (?)] — [.A] qe-ro<sub>2</sub> 2 — epōmhijō (?) 2 — opawor[ta ]*.

[.B] Corselet: helmet, 1 HELMET — 2 pieces for helmet — 2 hanging pieces — [2 (?) ch]eek-pieces — [.A] 2 *qe-ro<sub>2</sub>* — 2 shoulder-pieces — [ han]ging pieces.’

.B must be read before .A (§ 9.3). • **B *thōrāks*** (cf. θώραξ): the spelling *to-ra* seems to be current at KN, but *to-ra-ka*, written with a ‘dummy’ vowel (§ 9.1) in *-ka*, is found at TI. • ***korus***, ♀ 1, ‘helmet, 1 HELMET’: the repetition of the same item written both phonetically and ideographically (‘double writing’) may seem strange, but we do the same today on cheques when we write the amount of money both in letters and in numbers. Cf. κόρυς. • ***opikorusija***, ‘pieces for helmet’: lit. ‘items to be put on (*opi-*: § 9.12) the helmet (-*korusija*)’. What were they exactly is uncertain. • ***opaworta***, ‘hanging pieces’: cf. *opi-* and ἀείρω, ‘lift’ < \**awer-*. Since these items are listed between other pieces belonging to the helmet, they too were probably attached to the helmet. Perhaps they were used to protect the neck. • ***parāwa[jō]***, ‘[ch]eek-pieces’: cf. Hom. παρήιον, ‘cheek-ornament’. • **A *qe-ro<sub>2</sub>***: nominative dual or plur.; the word is written with the ‘pseudo-complex’ syllabogram (§ 9.1) *ro<sub>2</sub>*. *qe-ro<sub>2</sub>* clearly points to some part of the corselet, but which one, and how can it be transcribed? A connection with ψέλιον, ‘armlet’ seems excluded: a LB form related to the latter word, *pa-sa-ro*, *psalō*, ‘two chains’ (dual), does not begin with a labiovelar like *qe-ro<sub>2</sub>*. Several other readings are possible, however, implying connections with words of which we know or suppose that they started with a labiovelar, e.g.: (a) σπολάς· χιτωνίσκος βαθὺς σκύτινος, δι βύρσινος θώραξ, ‘thick leather short frock, the leather corselet’ and στέλλα· ζῶσμα, ‘loin-cloth’ (Hesychius); (b) γύαλον, ‘breast- or back-piece’ of the Homeric corselet. • **e-po-mi-jo, epōmhijō (?)**, ‘two shoulder-pieces’: pieces of corselet put on (ἐπι-) the shoulders (ὦμος < \**ōmso-s*). The meaning of this compound is obvious, but the transcription of its second part is not. While *-o-mi-* cannot possibly be read *\*-ōmsi-* (it would be written *\*-o-si-*), nor *\*-ōsmi-* (it would be written *\*-o-si-mi-*), it could represent *\*-ōhmi-*, *\*-ōmhi-* or *\*-ōmi-* (\**-ōmhi-* has been conventionally adopted here; see § 9.6 for more details). Cf. the adjective ἐπώμιος, ‘on the shoulders’. The word could be a dual or a plur. (§ 9.1).

**§ 9.16. KN So (1) 4440 + 8700 + 8702 + frr.** (clay tablet; dimensions: *ca* 18.4 × *ca* 3.3 × ?; scribe 130; find-spot: Arsenal; date: last decennia before 1275/1250; location: AMH).

**Content:** wheel inventory. These wheels were put on chariot frames like those recorded in § 9.14. The palatial production of wheels was probably a part of the Cnossos *talasijā* system (§ 9.12).

**Selected bibliography:** *Documents*<sup>2</sup>, 372, 518; *Idéogrammes*, 139-149; *Interpretation*, 320-322; *Introduction*, 164-165; J.T. KILLEN, in *Economy*, 166-169, 177-178; *Mémoires III*, 289-292, 307-310; *Scripta Ruijgh I*, 142-144; *Streitwagen*, 71-94; Chapter 7.3 above.

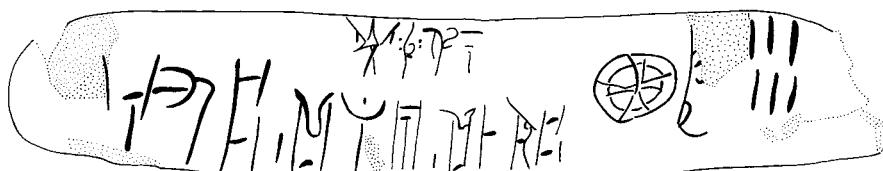


Fig. 9.16. KN So (1) 4440 + 8700 + 8702 + frr. (CoMIK II, 221)

- .a de-do-me-na
- .b vac. a-mo-ta , pte-re-wa , o-da-twe-ta ROTA ZE 6 vac.[

ROTA ZE 6 are written half-way between .a and .b.

*Armota ptelewās, odatwenta, dedomena: ☺ D<sup>Z</sup>E(ugos) 6 [.*

‘Wheels of elm-wood, provided with “teeth”, delivered: 6 PAI(rs) OF WHEELS [.]

**Armota** (sing. *armo*): this word could point to the wheels together with their axle. Its etymological meaning (from the root used in ἀραρίσκω, ‘fit’) must have been ‘set of assembled parts’. The LB ideograms for wheels are almost always four-spoked and not solid. The only exception occurs in Tiryns, where one scribe consistently writes the WHEEL ideogram without any spoke: here, we could have solid wheels. The forms of the spoked WHEEL ideograms may vary, although we are unable to discover significant correlations between these differences and the descriptions of the wheels: cf. *Idéogrammes* 139-149, LXXIII-LXXXVIII. The meaning of the word changed between the Mycenaean period and the first millennium: compare LB *armo*, ‘wheel’ ~ alph. Gr. ἄρμα, ‘chariot’. *Armo* was the name of *a part* of the chariot while ἄρμα applied to *the whole* item. There was probably no aspiration in LB *armo*: despite the number of their occurrences, *a-mo(-ta)* and its derivatives are *never* written with an initial ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]). This provides the second of the three examples of LB words connected with transportation which seem not to have the secondary aspiration which occurs in alph. Gr. (see the words for ‘horse’, *ikk<sup>w</sup>os* and ‘reins, *anhijai* [?]: § 9.4, 9.39). • **pte-re-wa, ptelewās:** cf. πτελέα, ‘elm’; the word is written with the ‘complex’ syllabogram (§ 9.1) *pte* replacing *pe-te*. Different kinds of timber are listed in the LB texts which record wheels. At KN, ‘elm’ and ‘willow’ (*e-ri-ka, helikā*: cf. Arcadian ἐλίκη). At PY, ‘cypress’ (*ku-pa-ri-se-ja, kuparisseja*: cf. κυπαρίσσινος). • **o-da-twe-ta, odatwenta:** the

word is written with the ‘complex’ syllabogram (§ 9.1) *twe* replacing *tu-we vel sim.* The LB texts put the wheels in two basic categories. They are described either as ‘provided with “teeth”’ (*odatwenta*, cf. ὀδούς/ὀδών, ‘tooth’ — on -*went-*, see § 9.3) or as ‘provided with a “fringe”’ (*te-mi-dwe-ta*, *termidwenta*, cf. τερμιόεις, ‘fringed’ and τέρμις πούς, ‘foot’ i.e. ‘lowest part’ [Hesychius]; notice the ‘complex’ syllabogram [§ 9.1] *dwe* replacing *de-we vel sim.*). The meaning of these two technical terms is not obvious. They may refer to one of various characteristics, e.g.: (a) the way in which the spokes were joined to the felloe, either with sharp-pointed (tooth-like...) spokes inserted into the felloe or with spokes fixed to the felloe by two bordering pieces of wood (?); (b) the type of tyre, which may be ‘serrated’ (?: *odatwenta*) or ‘extra-large’ (?: *termidwenta*) — the Mari archives deal with bronze ‘spikes’ or ‘nails’ put on the wheel tyres: they were obviously used to ensure a better grip for the wheels (J.-M. DURAND, *Archives royales de Mari XXI. Textes administratifs des salles 134 et 160 du palais de Mari*, Paris, Librairie orientaliste Paul Geuthner, S.A., 1983, 289, 312–313 n° 273). • ***dedomena***, ‘delivered’: the verb δίδωμι never means ‘give a present’ in our LB texts. It is used to express the ‘delivery’ of raw or finished material which was either brought to or supplied by the palaces (because it had been ordered; or was a form of tax payment; or was handed to people for further work; ...). • ***D<sup>2</sup>E(ugos)***, ‘PAI(r)’: in documents dealing with horses (KN Sc) or wheels (KN So), the abbreviation *ZE* is contrasted with *MO*. Since a Mycenaean chariot had a pair of wheels and of horses, *ZE* must stand for the ‘pair’ (cf. ζεῦγος), while *MO* must mean ‘single’, \**monwos* (cf. μόνος/μοῦνος).

**§ 9.17. KN V 52 + 52 bis + 8285** (clay tablet; dimensions: *ca* 10.7 × *ca* 3.0 × ?; scribe —; find-spot: Room of the Chariot Tablets; date: first decennia after ± 1435/1405 [?]; location: AMH).

**Content:** list of several deities, all followed by the number ‘1’. Since one of their names, at least, is clearly a dative, they are probably the recipients of some unspecified offering (but see below).

**Selected bibliography:** *Avviamento*, 206–207; *Documents*<sup>2</sup>, 311–312, 476; J. GULITZIO – K. PLUTA – T.G. PALAIMA, in *Potnia*, 453–461; *Handbuch*, 528–529; *Interpretation*, 239, 489; *Mentions*; *Opfergaben*, 68–69; *Po-ti-ni-ja*, 67–69; *Textos*, 74; *World*, 88–89.



Fig. 9.17-18. KN V 52 + 52 bis + 8285 (CoMIK I, 31)

- .1 a-ta-na-po-ti-ni-ja 1      u[                  ]vest. [  
 .2       e-nu-wa-ri-jo 1 pa-ja-wo-ne 1 po-se-da[-o-ne  
*lat. inf.* [[e-ri-nu-we , pe- $\varrho$ ]    [

This tablet was broken before conflagration. • .1 ]vest. [: perhaps ]- $\varphi$ [.  
 • u[: there is enough room for u[-po-jo-po-ti-ni-ja (??; cf. PY Fn 187.8).  
 J.L. Melena (pers. com.) proposes to restore u[-pe-ro<sub>2</sub>-ne — cf. Ἑπερίων (??), ]pe-ro<sub>2</sub>-[ in an offering context (KN E 842.3) and see below. • .2. po-  
 se-da[-o-ne: cf. po-se-da-o-ne elsewhere. • *lat. inf.*: pe- $\varrho$ , pe- $\varrho$ <sub>2</sub> or PE 1.  
 J.L. Melena (pers. com.) would be tempted to read u- just before pe- $\varrho$  vel  
 sim.

- .1 *Athānās* (?) *Potnijāi* 1 — u[                  ]vest. [ ] —  
 .2 *Enuwaliyōjōi* 1 — *Pajāwonei* 1 — *Poseidā[hōnei*      ]  
*lat. inf.* [[Erinuwei, pe- $\varrho$ ]    [.]

- .1 To the Mistress of Athana (?) 1 — to u[                  ]vest. [ ] —  
 .2 to Enyalios 1 — to Paean 1 — to Poseid[on      ]  
*lat. inf.* [[to the Erinys, pe- $\varrho$ ]    [.]

**a-ta-na-**: hap. leg.; PN (?) or GN (??) obviously linked with *Potnijāi*. (a) If PN (?), *a-ta-na-* could only be a genitive sing. *Athānās* (?) — a plural form of Ἀθῆναι would thus be impossible. Outside Attica, there were several towns called Ἀθῆναι in ancient Greece and historical PN can appear both in the

singular and in the plural (e.g. the same town of Argolis is known as the singular Μυκήνη and as the plural Μυκῆναι). A town *Athānā* (?) could thus well have existed in Mycenaean Crete. (b) If GN (?: see § 9.8), we should read *Athānāi* (??) *Potnijāi*, ‘to Mistress Athana (??)’ — cf. *Il.* 6.305: πότνι· Ἀθηναίη. About the *scr. cont.*, see § 9.6. • ***Potnijāi***: see § 9.8. • **.2 *Enuwaliōi***, ‘to Enyalios’: Homer uses this term as an epithet or as the name of the War-god Ares; here, it is plainly a GN. • ***Pajāwonei***: cf. the Hom. GN Παιήων, ‘Paean’ (the later form is Παιάν), the physician of the gods, later identified with Apollo; on the dative in ...*ei*, see § 9.6. The direct association of two deities who may be a warrior (Enyalios) and a physician (Paean) is perhaps significant, but this is far from certain. Anyway, the *Room of the Chariot Tablets* has a distinctive martial ambiance — see especially the Sc series, which records armours, chariots and horses. • ***Poseidā[hōnei]***, ‘to Poseid[on]’: cf. Ποσειδάων, Ποσειδῶν. Poseidon plays a less important role in the Cnossos LB texts than in Pylos. • ***lat. inf.* [ ] *Erinuwei* [ ]**: a reading *Erinuweis* (nominative plural) is possible in theory (there were often several Erinys in the first millennium), but the indisputable singular *Erinus* used in KN Fp 15.8 (§ 9.6) and the clear dative *Pajāwonei* here make it improbable. It must be a dative sing.; on the dative in ...*ei*, see above. • There are various possibilities for the reading of the last erased signs: (a) [ *pe-ρο* ]/[ *pe-ρο₂* ]: perhaps MN like *pe-ρο(-qe)* in KN As 605.2 (??); (b) [ *PE* !]: the abbreviation *PE* may be used for a measure or for the name of some aromatic stuff (§ 9.20) perhaps offered here to the deities (??); (c) see the apparatus criticus about a possible [ *u-pe-ρο* ] *vel sim.*

**§ 9.18. KN Ws 8497** (clay nodule; dimensions: *ca* 2.8 × *ca* 1.5 × ?; scribe —; find-spot: Area of the Room of the Bügelkannes; date: last decennia before 1275/1250; location: AMH 129).

**Content:** identification of one bathtub (see below). This small piece of clay was pressed down around a string: it was presumably used to show that the vessel with which it was associated had been checked. The person in charge has impressed his seal on face .*a* — the same imprint is found on another nodule, KN Ws 8153, dealing with textiles. The bathtub registered here was in bronze, which was rarer and much more expensive than clay, the most commonly used material.

**Selected bibliography:** *Handbuch*, 529; A. HEUBECK, *Schrift (Archaeologia Homerica III, X)*, Göttingen, Vandenhoeck & Ruprecht, 1979, 49; *Idéogrammes*, 176-177, 271-273; J.-P. OLIVIER, *ABSA* 62 (1967), 291; O. PANAGL, *Die Sprache* 23 (1977), 49-52; I.K. PROBONAS, in *Mykenaika*, 539-542.



Fig. 9.19-21. KN Ws 8497 (CoMIK IV, 64)

.**α** <sup>AES\*246<sup>VAS</sup></sup> *supra sigillum*

.**β** *ke-ni-qa*

.**γ** *a-sa-mi-to*

.**α** <sup>AES\*246<sup>VAS</sup></sup>: the current editions read AES \*246, but in fact AES and \*246<sup>VAS</sup> form a *monogram*, i.e. a deliberate combination of several LB signs written on a vertical axis — and not on a horizontal one as usual. Here, the ideogram for ‘bronze’ (𦥑), AES, is put above \*246<sup>VAS</sup> (𦥑): 𦥑 — compare both uses in § 9.38, with AUR \*213<sup>VAS</sup> ~ the monogram AUR\*213<sup>VAS</sup>. • .**β** -qa and the rest of face β over 𦥑, unless there is a [·] after -qa.

[.α] 𦥑 — [.β] *khernik<sup>w</sup>s* (?) [.γ] *asaminthos* (?)

‘[.α] <sup>BRONZE</sup>**BATHTUB** — [.γ] *bath* (?) [.β] *of basin type* (?)’

This small clay lump has the typical prismatic form of most Mycenaean nodules. The side with the seal impression is always numbered .α, because it was the first inscribed. Then, the other sign(s), if any, was/were added. • .**α** This <sup>BRONZE</sup>**BATHTUB** ideogram (see below), unknown elsewhere, has a parallelepipedic shape. <sup>BRONZE</sup>**BATHTUB** was written after the seal was impressed on face .α. • Although the words on sides .β-γ may give the impression that two different kinds of vessels were listed (see below), the <sup>BRONZE</sup>**BATHTUB** ideogram shows only one of them (𦥑). We will thus have to discover if and how <sup>BRONZE</sup>**BATHTUB**, *ke-ni-qa* and *a-sa-mi-to* could possibly describe only one single vessel. • .**β** *ke-ni-qa* is obviously a member of the lexical family of χέρνιβον, ‘vessel for washing the hands, basin’, χέρνιψ, ‘water for washing the hands’, etc. (these compounds use the roots χείρ, ‘hand’ and víπτω, ‘wash’ < \*nig<sup>w</sup>-). There are at least three possible transcriptions of *ke-ni-qa* (for a fourth, see below): (a) a nominative/accusative neuter plur. *khernig<sup>w</sup>a*, ‘vessels for hand washing, basins’; (b) a nominative sing. *khernik<sup>w</sup>s*, written with a ‘dummy’ vowel (§ 9.1) a in -qa — on its meaning, see below; (c) an accusative sing. or plur. *khernig<sup>w</sup>a(s)* of the *khernik<sup>w</sup>s* in (b). The transcription in (c) may be safely discarded, because there is no syntactic reason to have an accusative here. The

transcription in (b) is only possible if we reject the later meaning of χέρνιψ, ‘water for hand washing’ and hypothesise another sense: ‘vessel for hand washing, basin’. This is possible, since compounds of the χέρνιψ type can demonstrably have an agent meaning in Greek. The transcription in (a) agrees perfectly with the LB spelling rules and the meaning of χέρνιβον. • .γ *a-sa-mi-to* is obviously a form of ἀσάμινθος, ‘bathtub’, a feminine word of typical pre-Hellenic origin. In theory it could be a sing. or a plur. — but it should be a nominative like *ke-ni-qa* (see above). • There are several ways to combine these various possibilities. (1) *khernigʷa* (?) / *khernikʷs* (?) — *asaminthoi* (?) / *asaminthos* (?), ‘vessel(s) for hand washing/basin(s) (?) — bathtub(s) (?)’. This is the standard interpretation. It assumes that there are several vessels — at least one *khernikʷs* (?) and one *asaminthos* (?). But an important difficulty now arises. It is not difficult to suppose that our nodule accompanied several: (a) identical items — see e.g. the nodule § 9.47 with at least two pigs; (b) different items grouped in one single set — this happens in KN K 93, where a set of at least three different vessels is recorded through one single complex ideogram (\*226<sup>VAS</sup>: ). But it is difficult to imagine that our nodule registered *several different items* and indicated them with an *ideogram which represented only one of them*. (2) The other interpretations suppose that there was *only one vessel recorded here* and that it was a *special kind of bathtub*. This has not been proposed as yet but is not difficult to admit if a satisfactory explanation is at hand. Archaeology shows that the standard form of Mycenaean bathtubs was quite different from our  shown here. And this is confirmed by the LB data, with the ideogram ALV(eus) of the BATHTUB (: PY Tn 996; see *Idéogrammes*, 178-180). Moreover, PY Tn 996 implies that the scribes knew several Mycenaean bathtub models, since the ideogram  is preceded by the adjective *re-wo-te-re-jo, lewotrejō* (dual), ‘for bathing’ (sic). It becomes thus tempting to interpret the nexus <sup>BRONZE</sup>BATHTUB *ke-ni-qa a-sa-mi-to* as the description of *one bronze vessel* () which was a bathtub (?) of hand-washing/basin type (?) — instead of this cumbersome expression, I will conventionally use ‘bathtub (?) of basin type (?)’. If so, we need to provide a satisfactory Greek interpretation of *ke-ni-qa a-sa-mi-to*. (2.1) A first attempt could be *khernigʷā* (?) *asaminthos* (?), ‘bathtub (= *asaminthos* [?]) of basin type (= *khernigʷā* [?])’. *Khernigʷā* (?) would be a feminine adjective qualifying *asaminthos* (?). It is true we are waiting for a two-termination form (-os, -os, -on) in a LB compound adjective, but a three-termination one (-os, -ā, -on) is attested in the feminine *a-na(-i)-ta, anaitā*, ‘not inlaid (?)’ (in KN Sf, qualifying at least twice a ‘chariot’, *ikkʷijā*). An alph. Gr. adjective corresponding to this supposed *khernigʷos* (?) does not exist, but the old athematic substantive χέρνιψ has produced several thematic alph. Gr. derivatives (including χέρνιβον): there could thus perhaps have been a Mycenaean *khernigʷos*. Anyway, there was

another LB derivate of  $\chi\acute{\epsilon}\rho\nu\psi$ : the vessel name *khernik<sup>w</sup>tēwe(s)* (*ke-ni-qe-te-we*, plur. or dual: MY Wt 503 — ‘House of the Sphinxes’, see § 9.22). For the word order in *khernik<sup>w</sup>ā* (?) *asamintos* (?), cf. e.g. *ne-wa po-qe-wi-ja, newai phorg<sup>w</sup>ēwijai*, ‘new halters’ (§ 9.39). For other LB examples of vessels differentiated by adjectives, see e.g. the ‘ewer’ *qe-ra-na, qe-r-anā*, qualified either by *wa-na-se-wi-ja, wanassēwījā*, ‘of wanasseus type (?)’ or by *a-mo-te-wi-ja, armotēwījā*, ‘of cartwright type (?)’ (§ 9.36). (2.2) A morphological variant of the former interpretation is *khernik<sup>w</sup>s* (?) *asamintos* (?) — same meaning as in (2.1). This solution was suggested by A. Morpurgo Davies (pers. com.): *khernik<sup>w</sup>s* could be a compound acting as adjective (cf. Hom. κορυθάιξ, ‘with waving plume’; παραβλώψ, ‘looking askance, squinting’, etc.) and qualifying *asamintos*. There is no example of an adjectival use of  $\chi\acute{\epsilon}\rho\nu\psi$ , but this is not a strong objection. (2.3) A further possibility, ‘picturesque but certainly wrong’, was also mentioned by A. Morpurgo Davies (pers. com.): we would have here both the pre-Greek word (*asamintos*) and its Greek translation (*khernik<sup>w</sup>s*). On the whole, the interpretations (2.1) and (2.2) seem to be well appropriate to the available data; (2.2) has been conventionally chosen here. Things would of course become different if *ke-ni-qa* had to be read *ke-ni-qa-[·]* (??). • We must finally try to discover what the main characteristic of our ‘bathtub (?) of basin type (?)’ was. It may seem tempting to suppose that it was just a reduced size bathtub. This is difficult, however, because the LB designations of small vessels use either an adjective like *me-wi-jo, mewijos*, ‘smaller’ (§ 9.37) or diminutives like *qe-ti-ja, k<sup>w</sup>ethija*, ‘small jars’ (§ 9.22). Moreover, the shape of our BRONZE BATHTUB (☞) is definitely not a smaller version of the ideogram ALV (☞). It is then better to suppose that the major difference between our ☞ and ☞ was not so much one of dimensions as one of shape which made it like a ‘vessel for hand-washing/basin’ — PY Tn 996 bears the ideogram \*219<sup>VAS</sup> (☞) which resembles to ☞, but it has handles and the name of its vessel is *pi-a<sub>2</sub>-ra, phihalai* (plur.; cf. φιάλη, ‘pan’); Mycenaean bronze vessels of the type of \*219<sup>VAS</sup> have been discovered, but their diameter does not exceed 50 cm (see *Idéogrammes*, 223-224).

## 2. MYCENAE

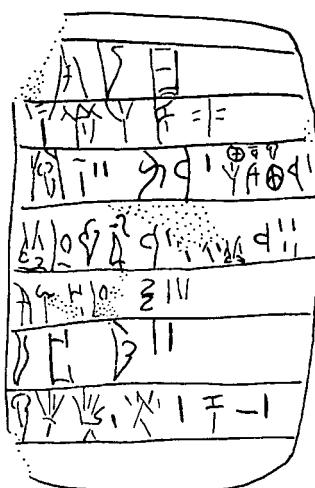
**§ 9.19.** ‘House of the Oil Merchant’, ‘House of the Sphinxes’, etc. are names conventionally given to buildings located outside the citadel of Mycenae and where LB tablets were found. These designations may be misleading because they could suggest that these ‘houses’ were purely residential. Actually, several textual clues show that these ‘houses’ hosted some real *public* administration offices: the tablet § 9.20 explicitly mentions a word derived from the Mycenaean word for tax (*dosmos*: § 9.20); MY Oe 110 has the word *talasijā*, which

belongs to the complex palatial system of work distribution (§ 9.12); several MNs appear in tablets found in different ‘houses’ (e.g. § 9.23): this shows the existence of a common system of worker management; MY Ge 604 repeatedly mentions ‘debts’ (*ophelos*: § 9.34), etc. This administrative ambiance is now enhanced by MY Ui 2, recently found in the ‘Petsas house’, whose palatial context is plain and which is securely dated from the XIV<sup>th</sup> century (see K.S. SHELTON, *Minos* 37-38 [2002-2003], 387-396). The official nature of these ‘houses’ does not preclude that they were *also* used as residential areas by the officers in charge of the palatial administration. For general studies on the MY LB texts, see *MT II*; *MT III*; ‘Ivory Houses’, 257-276; Chapter 5.2.2 above.

**§ 9.20. MY Ge 606 + fr.** (clay tablet; dimensions: 6.3 × 9.6 × 0.9 cm; scribe 57; find-spot: ‘House of the Sphinxes’, Room 6; date: last decennia before 1275/1250; location: NAMA 7 704).

**Content:** taxation consisting of aromatic products (mostly seeds). In common with most States, ancient and modern, the Mycenaean kingdoms got their income largely through taxation. The LB name for ‘tax’ is *do-so-mo, dosmos* (cf. Arcadian ἀπυδοσμός, ‘sale’). Since the economy was premonetary, taxes were not computed in money, but in quantities of goods (finished or raw).

**Selected bibliography:** *Aspects*, 188-193; *Handbuch*, 517; *Interpretation*, 273-274; J.T. KILLEEN, in *Res Mycenaeeae*, 216-232; J.L. MELENA, *Minos* 18 (1983), 92-94; *MT II*, 68-69, 82, 100-102, 110; *Textos*, 48; M. WYLOCK, *SMEA* 15 (1972), 105-146; § 9.19.



**Fig. 9.22.** MY Ge 606 + fr. (*Micene*, 56)

- .0 *vacat*
- .1 [do-]si-mi-ja *vac.*
- .2 a-ke-re-u-te *vac.*
- .3a ka-na-ko
- .3b AROM+KO T 2 KU v 1 re-u-ka v 1
- .4 ma-ra-tu-wo v 1 sa-sa-ma v 4
- .5 e-ru-ta-ra M 3 *vac.*
- .6 mi-ta PE 2 *vac.*
- .7 ko-i-no , DE 1 \*!?! 11
- .8 *vacat*

.1 There is room for only one sign at the beginning of the line. [do-]si-mi-ja: cf. *do-si-mi-ja* elsewhere. • .5 [ ] after *e-ru-ta-ra* and under M 3.

‘.1-2 [Do]smija [.2] a-ke-r-euthen:

- .3-7 AROM+KO(*rijadna*) T 2 — KU(*mīnon/-na*) v 1 — *knākos leukā* v 1 — [.4] *marathwon* v 1 — *sāsama* v 4 — [.5] *eruthrā* M 3 — [.6] *minthā* PE 2 — [.7] *skhoinos* DE 1 — \*!?! 11.

‘.1-2 Taxation items [.2] from the place *a-ke-r-eus*:

- .3-7 19.2 litres AROMATIC STUFF+CO(*riander*) — 1.6 litre CU(min) — 1.6 litre white safflower — [.4] 1.6 litre fennel — 6.4 litres sesame — [.5] 3 kg red <safflower (??)> — [.6] 2 PE of mint — [.7] 1 DE sweet rush — 11 \*!?!.’

Several names of plants mentioned in this tablet are certain or probable borrowings: from the Semitic languages, *kumīnon*, *sāsama*; from unknown languages, *korijadnon*, *marathwon*, *minthā*. • The products listed here were presumably used in cookery as spices and/or in medicine or even (despite their small quantities) in the perfume industry as aromatics (see below). • .1 [Do]smija, ‘taxation items’: on the LB word for ‘tax’, see above. • .2 *a-ke-r-euthen*: PN (*hap. leg.*) in -εύς whose ethnic *a-ke-re-wi-jo* occurs as MN elsewhere in MY Ge. There are several LB PNs ending in -*a-ke-re-u*, -*agreus* (< ἀγρός, ‘field; country’). • .3 AROM+KO(*rijadna*): the AROMATIC STUFF ideogram (𦫨) is ligatured with the abbreviation *ko* (𦫨) of *ko-ri-ja/a₂-da-na*, ‘coriander’ (see § 9.7). • KU(*mīnon/-na*), ‘CU(min)’: abbreviation of *ku-mi-no/-na* (cf. κύμινον). Cumin seed was presumably used in cookery, for the making of perfumes and perhaps in medicine. • *knākos leukā*, ‘white safflower’: cf. κνήκος. We cannot read \*\*[.3b] *leukā* [.3a] *knākos*: cf. *knākos leukā* elsewhere. There are two sorts of safflower known in the LB tablets of Mycenaean: the white one, which is measured by volume and

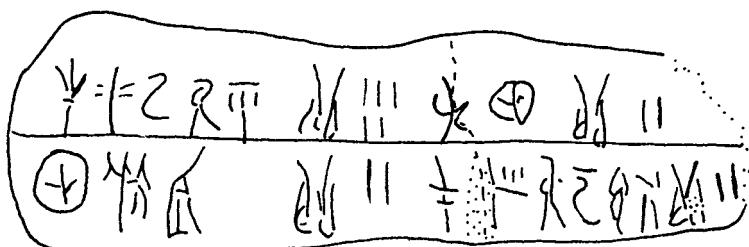
must therefore be seed; the red one, which is weighed and must be another part of the plant. Safflower must have been used in cookery and medicine.

- **.4 marathwon**, ‘fennel’: cf. μάραθον. Fennel was presumably used in cookery and perhaps in medicine.
- **sāsama**, ‘sesame’: cf. σήσαμον (the LB form could be a plur. like *ku-mi-na*, lit. ‘cumins’; there is a late σησάμη, however). Sesame seed was presumably used in cookery.
- **.5 eruthrā** (cf. ἐρυθρός) could be used here instead of *knākos eruthrā* (*ka-na-ko e-ru-ta-ra*), ‘red safflower’ unless it is the name of another plant.
- **.6 minthā PE 2**: mint (cf. μίνθη) was possibly used in medicine and perhaps in cookery. *PE* is obviously linked with mint at MY, but its reading and meaning are unknown (measure or plant type).
- **.7 ko-i-no**, *skhoinos*, ‘sweet rush’: cf. σχοῖνος. Elsewhere the word is always written *ko-no*. Σχοῖνος could in theory be *Cymbopogon schoenanthus* Sprengel, but this plant grows in an area which goes from Northern Africa to Arabia and India: it could only be here if it was imported. A better possibility is *Acorus calamus* L., which grows in Greece: its use at Mycenae would be much more natural. Sweet rush could have been used in the perfume industry and perhaps in cookery.
- **\*!?**: perhaps some part of cyperus (J.L. MELENA, *Emerita* 42 [1974], 332-334).
- **DE**: abbreviation — perhaps of *DE(smā)* (???), ‘BUN(dle)’ (???).

**§ 9.21. MY Oe 121** (clay tablet; dimensions: 10.8 × 3.5 × 1.2 cm; scribe 56; find-spot: ‘House of the Oil Merchant’, Room 2; date: last decennia before 1275/1250; location: NAMA 7 684).

**Content:** delivery of wool to several people; the last two are certainly males; the gender of the first two is not certain. The first recipient (not known elsewhere in the Mycenaean texts) gets twice and a half more wool than the following ones. If the third recipient is really a ‘smith’ (and not ‘Mr. Smith’), the amounts of wool were likely given as payment and not for manufacturing.

**Selected bibliography:** *Aspects*, 93-95; *MT II*, 58-59, 85, 97-99, 111; *Textos*, 62; § 9.19.



**Fig. 9.23.** MY Oe 121 (*Micene*, 37)

- .1 i-te-we-ri-di LANA 5 ku-ka LANA 2 [  
 .2 ka-ke-wi LANA 2 pa-se-ri-jo-ko-wo LANA 2 [  
 ]

.2 No word divider nor space between *pa-se-ri-jo* and *ko-wo*.

- .1 *i-te-we-ri-di*: LANA 5 — *ku-k-āi*: LANA 2 — [ ]  
 .2 *khalkēwi* (?): LANA 2 — *pa-se-ri-jo korwōi*: LANA 2 [.]

- .1 To *i-te-we-r-is*: 15 kg WOOL — to *ku-ka*: 6 kg WOOL — [ ]  
 .2 to the smith (?): 6 kg WOOL — to the son of *pa-se-r...: 6 kg WOOL*[.]

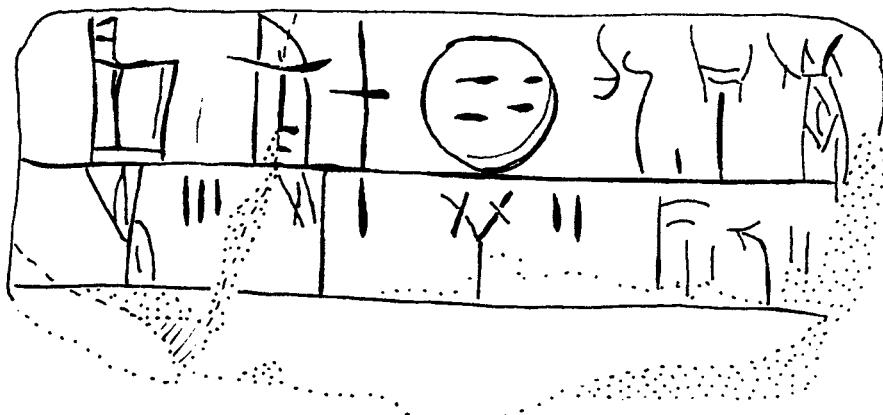
*i-te-we-ri-di*, *ku-k-āi*: *hap. leg.*; *i-te-we-ri-di* is a probable dative; both words are very likely MNs (feminine or masculine), but *i-te-we-ri-di* could perhaps be a trade name beginning with *histēw-*, ‘weaver’. On this athematic dative sing. in ...*i*, see § 9.6. • *khalkēwi* (?): this word could be a MN (‘Mr. Smith’), as in PY Jn 750.8, or a trade name (cf. *χαλκεύς*). • *pa-se-ri-jo*: *hap. leg.* Since it is directly followed by *korwōi*, ‘son’ (see below), *pa-se-ri-jo* must come from a MN but can be interpreted in two ways. (a) *pa-se-ri-jo* could be the genitive sing. in ...*o* of a MN (athematic or [?] thematic — on certain thematic genitives sing. in ...*o* in LB, see § 9.43.7): *pa-se-ri-jo korwōi*, ‘to the son of *pa-se-r...* (?). Cf. in LB *pe-ri-me-de-o i-\*65*, *Perimēdehos (h)ijus*?, ‘the son of Perimedes’ (PY Aq 64.7) or *o-te-ra tu-ka-te-re*, *o-te-r-ās thugat(e)rei*, to the daughter of *o-te-ra*’ (MY Oe 106.2: same ‘house’ as our tablet); in Homer, *υῖος Καπανῆος*, ‘the son of Capaneus’ (*Il.* 5.319). (b) *pa-se-ri-jo* could be the dative sing. of an adjective in -*ioς* derived from a MN \**pa-se-r(os)*: *pa-se-r-ijōi korwōi*, ‘to the *pa-se-r-ian* son (?). Cf. the parallel of *Καπανήιος υῖος* (*Il.* 4.367), lit. ‘the Capanean son’, with *Καπανήιος*, adjective derived from *Καπανεύς*. • *korwōi*: § 9.2. In most of its LB uses, *korwos* means just ‘boy’ and refers to anonymous young people. But here, our *korwos* gets the same amount of wool as two obvious adults, *ku-ka* and ‘the smith (?). This *korwos* is thus probably an adult too and the meaning of the word here must not be ‘boy’, but ‘son’ — the same may happen with *κόρος/κοῦρος*; other LB examples of this use are provided e.g. by KN Ai 115, PY Ad 295 (the latter text uses *korwos* both as ‘son’ and as ‘boy’), etc. The most frequent LB nouns for ‘son’ are *i-\*65*, *i-ju?*, *(h)ijus?* and *-\*65*, *-ju?*, *jus?* (§ 9.43.6). On the *scr. cont.* of *pa-se-ri-jo* and *korwōi*, see § 9.43.6 (*Skaiwījō jus?*).

**§ 9.22. MY Ue 611** (clay tablet; dimensions: 11.2 × 5.2 × 1.3 cm; *recto*: scribe 60 — *verso*: scribe —; find-spot: ‘House of the Sphinxes’, Room 6; date: last decennia before 1275/1250; location: NAMA 7 709).

**Content:** list of several vessels (recto); consecration ceremony (?) involving food (verso). The two sides of this tablet are apparently independent: this is not frequent, but may happen (§ 9.26). In the very ‘house’ where this tablet was found, room 1 was full of domestic vessels (about 1 000 items, with no fewer than 19 different kinds of pots), carefully sorted out by category. Moreover, on the threshold of this same room, seven nodules bearing vessel names were found — several of them are mentioned in MY Ue 611. It seems obvious then that the recto of this tablet is an inventory of vases coming in or out of the ‘House of the Sphinxes’. It is unfortunate that the scribe of this tablet did not add the ideograms of the vessels as was done, for instance, by scribe 2 of Pylos — see § 9.36-37.

**Selected bibliography:** D. ANDERSON, *Minos* 29-30 (1994-95), 295-322; *Documents*<sup>2</sup>, 331-332, 495-496; *Handbuch*, 527-528; *Interpretation*, 364-365; *Mémoires III*, 234-235; *MT II*, 74-75, 86-87, 102-105, 111-112; J.-P. OLIVIER, *Kadmos* 8 (1969), 46-53; J.-P. OLIVIER – F. VANDENABEELE, *BCH* 94 (1970), 302-303, 309; R. PALMER, *Wine in the Mycenaean Palace Economy*, Liège – Austin, Université de Liège – University of Texas at Austin, 1994, 179-180; O. PANAGL, *ŽA* 22 (1972), 71-84; C. SHERMERDINE, in *Floreat*, 571-572; C. VARÍAS GARCÍA, in *Rome Colloquium* (forthcoming); Chapter 7.9 above; § 9.19.



Fig. 9.24-25. MY Ue 611 (*Micene*, 60)

.0       ]       vacat  
 .1   ]pe-ra   4   a-po-re-we 2   pe-ri-ke 3   vac.  
 .2   ]ka-ra-te-ra 1   po-ro-ko-wo 4   a-ta-ra 10   vac.  
 .3   ]pa-ke-te-re 30   ka-na-to 5   qe-ti-ja 10   vac.  
 .4   ]qe-to 2   ti-ri-po-di-ko 8   ka-ra-ti-ri-jo ?  
 .5                  ]   [  
        inf. mut.

v.1   \*188 (?) <1 (???)> pi-ro-qe-mo , a-ke []  
 .2   OLIV+TI 3   OLIV 1   NI 2   VIN S 2 [ ]  
 .3                  vacat       [  
        inf. mut.

r. Probably less than one cm of clay is missing on the left. • .4 '7': perhaps only '5'. • v. The whole verso is a palimpsest. • v.1 The sign \*188 (☒) at the very beginning of this line is a difficult *hap. leg.* It has been supposed that its upper part is a sign belonging to an erased text, e.g. *ja*, but the good macro-photograph published by J.-P. OLIVIER makes this difficult to accept because every part of ☒ seems perfectly neat and the sign is not erased. Since it is otherwise unknown, \*188 was initially interpreted as an ideogram: I wonder whether this may not be the best solution. It is true that ☒ is not followed by a numeral or word divider (see below), but this curious feature could perhaps be explained by the inadvertent omission of the number '1' — such an omission may occur

exceptionally (as e.g. in some KN Sc tablets after BIG, EQU, TUN or ZE) or regularly (as in the KN B tablets of scribe 104). Hence the hypothetical restitution <1 (???)>. About the possible (???) meanings of , see below. • After \*188, the vertical line in the facsimile is a part of an erased sign which was probably not a word divider nor the number ‘1’. • As it stands, the text of v.1 is complete at the right end. • v.3 Perhaps trace of an erased s under the s of l. 2.

- .1 ]*Pellai* 4 — *amphorēwe* 2 — *pelikes* 3 —
- .2 ]*krātēr* 1 — *prokhowoi* 4 — *antla* 10 —
- .3 ]*pa-ke-tēres* 30 — *kanasthoi* 5 — *kʷethija* 10 —
- .4 ]*kʷethō* 2 — *tripodiskoi* 8 — *ka-ra-ti-r-ijoi* 7 [ ].

v.  <1 (???)>; *Philogʷhermos hagei* (??) [:] OLIV+TI 3 — OLIV 1 — NI(*kuleon*) 2 — VIN s 2 [.

- .1 ‘4 [ ]*pellai* vessels — 2 amphoras — 3 *pelikes* vessels —
- .2 1 [ ]mixing-bowl — 4 pouring jugs — 10 buckets —
- .3 30 [ ]*pa-ke-tēres* — 5 *kanasthoi* vessels — 10 small jars —
- .4 2 [ ]jars — 8 small tripods — ? *ka-ra-ti-r-ijoi* [ ].

v. ‘ <: 1 (???)>; Philothermos performs a consecration (??) [:] 288 litres OLIVES+TI — 96 litres OLIVES — 192 litres FI(gs) — 19.2 litres[ ] WINE.’

.1 ]*Pellai*: cf. πέλλα, name of several vessels. One generally reads [*Ku*]*pella* (??), ‘[c]ups (??)’, with one sign missing in the small gap, but the large size of *pe* and *ra* seems to preclude a *ku* at the very beginning of the line. • *amphorēwe*: dual or plur. (§ 9.1); cf. ἀμφορεύς. The form *amphoreus* is used in continental LB, while the etymological one, *amphiphoreus*, ‘<jar> with handles on both sides’, occurs at KN (see § 9.43.6). • *pelikes*: cf. πέλιξ, name of several vessels. • .2 ]*ka-ra-te-ra*, ‘mixing-bowl’ (cf. κράτηρ) is to be read either ]*krātēr*, with the final *-r* exceptionally written *-ra* (with a ‘dummy’ vowel: § 9.1), or, much less likely, ]*krātēra*, sing. accusative. • *prokhowoi*, ‘pouring jugs’: cf. πρόχοις, ‘vessel for pouring out’. • *antla*: cf. ἄντλον, ‘bucket’. • .3 ]*pa-ke-tēres*: ]*pāktēres*, ‘cheese-drainers (?)’ (cf. ἀντίπηξ, ‘wheeled cradle’) or, more likely since there is no certain example of baskets in this text, ]*sphaktēres*, ‘bowls for catching the blood of the victim (?)’ (cf. σφαγεῖον, ‘id.’ and names of vessels in -τήρ like *krātēr*). • *kanasthoi*, ‘kanasthoi vessels’: cf. κάνασθον, name of a terracotta vase in a VI<sup>th</sup> BC inscription. • .3-4 *kʷethija*, ]*kʷethō*, ‘small jars, jars’: cf. πίθος, ‘wine-jar’; ]*kʷethō*: dual or plur. (§ 9.1). • *tripodiskoi*:

cf. τριποδίσκος. • *ka-ra-ti-r-ijoi*: name of some vessel; several Greek readings are possible. • v.1 : on the interpretations of this sign, see below. • *Philog"hermos*: *hap. leg.*; MN (?); cf. φιλόθερμος. • *a-ke* is usually supposed to come from ἄγω, ‘lead’, but the context seems to exclude this possibility: in alph. Gr., the direct complements of ἄγω are normally living creatures which are totally absent here. A more plausible interpretation could be based on a reconstructed verb *hagō*, ‘perform a consecration’: cf. ἄζοματ, ‘stand in awe of’, ἅγιος, ‘sacred’. We could then read *hagei* (?), ‘performs a consecration’ (?). Since *a-ke* is not written with the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]), we cannot be certain, however, whether the word had an initial aspiration. For another possible use of this very *hagō*, see § 9.38. If a consecration is meant here, the olives, figs and wine could e.g. be used in the ceremony and/or given to the priest. • It is time to come back to the mysterious *hap. leg.* sign found at the very beginning of l. v.1. If it is a real ideogram (?; see above), it should have a meaning. It could perhaps show an object related to the ‘consecration’ (?) alluded to (?) in our tablet. Could have something to do with the ideogram (= \*304) written in KN K 93? In this text, \*304 is one of the four items (with \*301<sup>VAS</sup>, \*302<sup>VAS</sup> and \*303<sup>VAS</sup>) which constitute another ideogram, \*226<sup>VAS</sup>: see § 9.18; the meaning of \*304 is unknown (cf. *Idéogrammes*, 271-273, 301). The two signs and are not too different, though certainly not identical — and KN K 93 deals with vessels just as the recto of MY Ue 611. Another possibility is suggested by the resemblance of with a chair, a throne or even perhaps some kind of altar (???) — there was in fact a *to-no-e-ke-te-ri-jo* festival or religious ceremony at Pylos: this name likely begins with the LB name for the chair, *to-no*, *thornos* (cf. θόρνος). All these suggestions, however, are highly speculative. • v.1-2 The proportions of the four items are 15 ~ 5 ~ 10 ~ 1. • v.2 There are two different kinds of olives involved here, the normal one, **OLIV(ES)**, and another, **OLIV(ES)+TI**, where *TI* is the abbreviation of a word qualifying the fruit; its reading and meaning are unknown (cf. perhaps τιθασός, ‘cultivated’). • **NI(kuleon)**: cf. νικύλεον, ‘fig’; since Linear A uses the same abbreviation to express apparently the same item, *NI(kuleon)* is presumably a Minoan loan.

**§ 9.23. MY V 659** (clay tablet; dimensions: 7.7 × 11.4 × 0.8 cm; scribe 61; find-spot: ‘West House’, Room 5; date: last decennia before 1275/1250; location: AMN 13 850).

**Content:** list of women and girls — some of the girls are listed together with their mother. On the purpose of this document, see below.

**Selected bibliography:** *Avviamento*, 212-213; P. CHANTRAIN, in *Atti I*, 574-577; *Études*, 293-294; A. HEUBECK, *SMEA* 4 (1967), 35-39; J.T. KILLEN, *ŽA* 31 (1981), 45; *MT III*, 50, 64-65; *Textos*, 74-75; § 9.19.

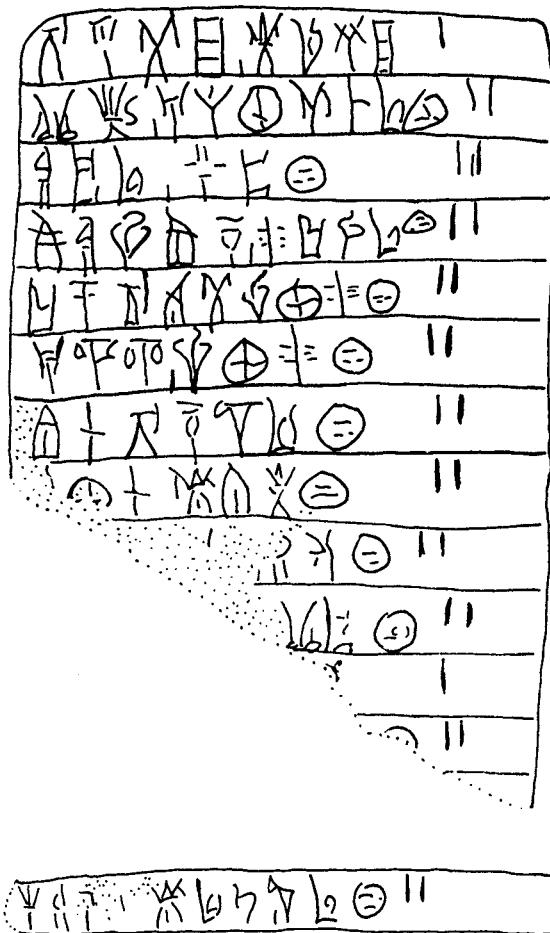


Fig. 9.26-27. MY V 659 (*Micene*, 70)

- .1 wo-di-je-ja , de-mi-ni-ja 1 vac.
- .2 ma-no , a-re-ka-sa-da-ra-{ka} 2 vac.
- .3 ri-su-ra , qo-ta-qe 2 vac.

- .4 e-ri-tu-pi-na , te-o-do-ra‘-qe’ 2 vac.  
 .5 o-to-wo-wi-je tu-ka-te-qe 2 vac.  
 .6 a-ne-a<sub>2</sub> , tu-ka-te-qe 2 vac.  
 .7 pi-ro-wo-na ki-ra-qe 2 vac.  
 .8 pu-ka-ro ke-ti-de-qe 2 vac.  
 .9 [ ]-ri-mo-qe 2 vac.  
 .10 [ ]ma-ta-qe 2 vac.  
 .11 [ ]\*82 1 vac.  
 .12 [ ]-qe 2 vac.  
 .13 [ ]vac.  
*inf. mut.*

*lat. dex.* ], i-ri-[·] ! ke-ra-so , ki-ra-qe 2 vac.

- .2 *a-re-ka-sa-da-ra-{ka}*: error for *a-re-ka-sa-da-ra-<qe>* (*qe* [⊕] and *ka* [⊕] have similar forms and may sometimes be confused); ‘2’ perhaps over [ ]. • .3 *qo-ta-qe* over [ko- · ] or perhaps [ko-*mq̥* ] (cf. the feminine MN *ko-mata* in MY Fo 101.6 and *]ma-ta-qe*, l. 10 [?]). • .4 *e-ri-* over [ · -*mq̥* ]. • .9 *]ri-mo-qe*: perhaps *]p̥-ri-mo-qe* (with trace at the left). • .10 *ko-]ma-ta-qe?* (see above). • .11 \*82 almost certain (*a-na-]\*82*? cf. the feminine MN *a-na-\*82* in MY Fo 101.2). • The part lost at the bottom of the tablet must have been small.

- .1 *Wordijeja*: (?)  
*de-mi-ni-ja*: 1;  
 .2 *ma-no Aleksandrā <kʷe>*: 2;  
 .3 *ri-su-ra qo-ta kʷe*: 2;  
 .4 *e-ri-tu-pi-na Theodōrā kʷe*: 2;  
 .5 *Orthwo-wi-je thugatēr kʷe*: 2;  
 .6 *a-ne-a<sub>2</sub> thugatēr kʷe*: 2;  
 .7 *Philowoinā gillā (?) kʷe*: 2;  
 .8 *pu-ka-ro ke-ti-de kʷe*: 2;  
 .9 [ ]-ri-mo *kʷe*: 2;  
 .10 [ ]ma-ta *kʷe*: 2;  
 .11 [ ]\*82: 1;  
 .12 [ ]*kʷe*: 2;  
 .13 [ ]  
*inf. mut.*

*lat. dex.* ] *i-ri-[·]*: !; *Kerasō gillā (?) kʷe*: 2.

## ‘.1 Wordieia: (?)

<i>de-mi-ni-ja:</i>	1;
<b>.2</b> <i>ma-no</i> and Alexandra:	2;
<b>.3</b> <i>ri-su-ra</i> and <i>qo-ta:</i>	2;
<b>.4</b> <i>e-ri-tu-pi-na</i> and Theodora:	2;
<b>.5</b> Orthwo-wi-je and (her) daughter:	2;
<b>.6</b> <i>a-ne-a<sub>2</sub></i> and (her) daughter:	2;
<b>.7</b> Philowoina and (her) little girl (?):	2;
<b>.8</b> <i>pu-ka-ro</i> and <i>ke-ti-de:</i>	2;
<b>.9</b> [ ] and [ ]- <i>ri-mo:</i>	2;
<b>.10</b> [ ] and [ ]- <i>ma-ta:</i>	2;
<b>.11</b> [ ]*82:	1;
<b>.12</b> [ ] and [ ]:	2;
<b>.13</b> [ ]	

*inf. mut.*

*lat. dex.* ] *i-ri-[·]:* 1; Keraso and (her) little girl (?): 2.'

This text shows a clear difference between the **word divider** and the sign for the **numeral ‘one’**: they are both small vertical lines, but the word divider is written in the lower part of the line (,), while the number is higher up ('). The difference is not always so clear-cut elsewhere. • **1 Wordijeja:** MN known elsewhere; cf. the MN Ποδιεύς. On its function here, see below. • ***de-mi-ni-ja*** is usually understood as indicating the items that the text is concerned with. In fact *demnija*, ‘bedding’ is now the certain transcription of *de-mi-ni-ja* at PY — δέμνια is mostly a plur. in alph. Gr. If so, one ‘bedding’ was allocated to the woman named *Wordijeja* and we should understand an implicit *demnija* in each of the subsequent lines: the text would accordingly list the number of bedding sets issued and their recipients. This is the current interpretation. However, it is not easy to understand why *two* bedding sets should be allocated to a mother ‘and (her) little girl (?)’ (see below). Moreover, the certain nominatives of the female recorded (cf. *thugatēr*) agree better with a simple list of personnel than with some distribution to all of them, where datives would be more at home (although nominatives could not be excluded of course: § 9.6). Finally, if the tablet was really intended to compute the number of *demnija*, ‘bedding sets’, given to several people, *demnija* should be expected to be the very first word of the text. An alternative interpretation is possible, however. The heading of the text need not be *Wordijeja de-mi-ni-ja*, but could be *Wordijeja* only. *Wordijeja* could then be the woman in charge of the operation recorded here and we do not need to think in terms of a dozen of implicit *demnija*. If so, the tablet would no more register beddings, but people (some

records of personnel regularly lack the ideograms of MUL or VIR after each MN: see e.g. KN As 1517). *de-mi-ni-ja* can be the name of the first woman in the list — *de-ŋi-ŋi-jo* may be a MN in KN Fh 5431; for other registrations of only one unit in this text, see l. 11 and (?) *lat. dex.* Since the numbers refer to women listed, the difficulty caused by the ‘little girl (?)’ disappears. This interpretation has been conventionally chosen here. • .2-5 *ma-no, Aleksandrā, ri-su-ra, qo-ta, e-ri-tu-pi-na, Theodōrā, Orthwo-wi-je, a-ne-a<sub>2</sub>, Philowoinā, pu-ka-ro, ke-ti-de, etc.*: MNs. Most names are *hap. leg.*, but *ma-no, a-ne-a<sub>2</sub>, pu-ka-ro* and *Kerasō* are all listed in another MY tablet (Fo 101; scribe 53; ‘House of the Oil Merchant’), while *Philowoinā* is known at PY. They must all be women names, as Alexandra or Theodora — this fits with the mention of ‘daughters’. These women and girls probably worked for the palace: some clear datives in MY Fo 101 show that they *received* several amounts of oil (but in our text, their names are in the nominative: see above). Most females of MY V 659 may have been organised into teams of two persons who worked together for a purpose — which was obvious enough for the writer, but not for us. There may perhaps be parallel crews (of mainly 2 men) in MY Au 102 (scribe 52) — but the purpose of that tablet is unknown too. Some of these feminine MNs have a clear Greek interpretation — cf. Ἀλεξάνδρα, Θεοδώρα and the masculine MNs Κέρασος and Φίλοινος —, but most of them are ambiguous and/or difficult. • .3 *k<sup>w</sup>e*: cf. τε, ‘and’. *K<sup>w</sup>e* is an enclitic, i.e. an element without accent and accentually linked to the previous word. In alph. Gr. editions, enclitics are always separated from the preceding words by a space, but the LB scribes wrote them differently: they always join them to the previous word (§ 9.1). • .5 *Orthwo-wi-je*: cf. ὁρθός, ‘straight’ (< \*worthwos, with dissimilation of the first \*w). The second part of this compound is puzzling (perhaps \*-wijēs, from the root \*wei-, ‘rush’ — cf. the future εἰσομαι < \*Feíso-mai [??] — and [??] a feminine ending in -ης). • *thugatēr*: cf. θυγάτηρ. • .7 *Philowoinā*: cf. the MN Φίλοινος, built on φίλος, ‘loving’ and οἶνος/Φοῖνος, ‘wine’ (these MNs mean etymologically ‘the one who is fond of wine’). Three females with their daughters and a ‘little girl (?)’ are grouped together l. 5-7. • *ki-ra, gillā* (?), ‘little girl (?)’: *ki-ra* is found only in this tablet. It occurs twice, always in second place and co-ordinated to a previous MN by *k<sup>w</sup>e*, ‘and’. In our text, this is paralleled only by another word, also used twice in second place and co-ordinated to a previous MN by *k<sup>w</sup>e*: *thugatēr*, ‘daughter’. It is tempting to suppose that *ki-ra* has a meaning similar to that of *thugatēr* — and *gillā* (?), ‘little girl (?)’ seems appropriate enough, cf. νεογιλλός, ‘new-born’. • *lat. dex.*: it is exceedingly rare to find a tablet with a full text written on its right or left edge. Here, the text begins in the left (broken) part of the right edge and stops well before the edge’s end. Probably there was not enough

room on the recto of the tablet for the two last lines. So the scribe decided not to rule the verso but simply to write the last two entries on the right edge.

• *Kerasō*: cf. κέρασος, ‘cherry-tree’ and the MN Κέρασος.

### 3. PYLOS

**§ 9.24. PY Ae 134** (clay tablet; dimensions: 16.1 × 2.6 × 1.3 cm; scribe 42; find-spot: Archives Room Complex 3189 3226 -28; date: about 1200/1190; location: NAMA).

**Content:** location and occupation of a shepherd.

**Selected bibliography:** *Anthologia*, 75-84; *Avviamento*, 106-107; *Decipherment*, 158 (with photograph: pl. II); *Documents*<sup>2</sup>, 169-170 (with photograph: pl. II); *Handbuch*, 502-503; *Interpretation*, 126-127; *Mémoires I*, 175-176.

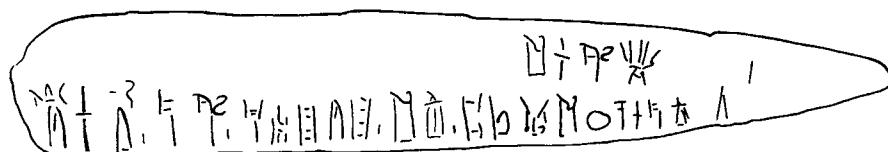


Fig. 9.28. PY Ae 134 (PT II, 17)

- .a o-ro-me-no
- .b ke-ro-wo , po-me , a-si-ja-ti-ja , o-pi , ta-ra- ma-<ta>-o qe-to-ro-po-pi VIR 1 vac.

Probably palimpsest; certain traces of erasure before *o-ro-me-no* and under *o-pi*; the *o-* of *o-pi* is written on [t̪]: instead of *o-pi* the scribe wrote the beginning of *ta-ra-ma-<ta>-o* but corrected himself afterwards. • *ta-ra-ma-<ta>-o*, cf. *ta-ra-ma-ta-o* elsewhere.

*ke-ro-wo, poimēn a-si-ja-t-ijāi, opi ta-ra-ma-<tā>o kʷetropopphi (h)oromenos:*  
VIR 1.

‘*ke-ro-wo*, shepherd at *a-si-ja-t-ia*, watching over the cattle of Thalama<ta>s:  
1 MAN.’

This tablet must be considered together with PY Ae 27, 108, 489, all of which follow the same pattern. • *ke-ro-wo*: MN known elsewhere. • *poimēn*: cf. ποιμήν.  
• *a-si-ja-t-ijāi*: PN. The ‘Further Province’ of the Pylian kingdom (see Chapter

§ 5.3.4 above) had seven districts. *a-si-ja-t-ia* was the capital of one of them. • *opi*: see § 9.12. • *ta-ra-ma-: MN in *-tās*. *ta-ra-ma-tās* occurs in two other tablets of the PY Ae series as responsible for, or owner (?) of, flocks. Here and in Ae 108, the animals mentioned are ‘quadrupeds’; in Ae 489, they could be goats, since the man registered there is an *a<sub>3</sub>-]ki-pa-ta, ai]gipa(s)tās*, ‘goat-herd’. • *kʷetropopphi*, ‘quadrupeds’, i.e. ‘cattle’: cf. τετράπος, ‘id.’ (Dorian of Crete) and the adjective τετράποντος, ‘four-footed’. To express ‘cattle’, alph. Gr. generally uses πρόβατα, which until now occurs in LB texts only in the MN *po-ro-qa-ta-jo*, if to be read as *Progʷataios*. On the *-phi* ending, see § 9.9. • (*h*)*oromenos*: cf. ὄρουραι, ‘keep watch’ (< \*s[w]or-). (*H*)*oromenos* cannot be the participle of δράω, ‘see’, because the contraction of two vowels etymologically separated by \*y (\*...ā-yo- in \*[s]wōrā-yo-) is post-Mycenaean. • *opi... (h)oromenos*: *Od.* 14.104 uses ἐπὶ... ὄρουραι to refer to Ulysses’ herders who are watching over the goats.*

**§ 9.25. PY Ae 303** (clay tablet; dimensions: 15.5 × 2.6 × 1.3 cm; scribe 42; find-spot: Archives Room Complex 1371 2300 -41; date: about 1200/1190; location: NAMA).

**Content:** slaves involved with sacred gold.

**Selected bibliography:** *Avviamento*, 106-107; *Decipherment*, 71; *Documents*<sup>2</sup>, 166; *Handbuch*, 503; *Interpretation*, 127, 490; *Introduction*, 104-105; J.T. KILLEN, in *Mykenaika*, 378; *Textos*, 22-23.

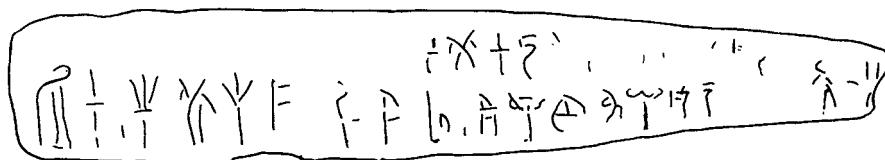


Fig. 9.29. PY Ae 303 (PT II, 34)

- |    |  |
|----|--|
| .a | i-je-ro-jo   |
| .b | pu-ro , i-je-re-ja , do-e-ra , e-ne-ka , ku-ru-so-jo MUL 14[ |

There are just a few millimetres lost at the extreme right of the tablet. • .a *i-je-ro-jo* and the rest of the line over *[e-ne-ka ku-ru-so-jo i-je-ro-jo]*: the scribe decided first to write *e-ne-ka*, etc. in line a., but he changed his mind afterwards and distributed it in both l. b. and a., beginning with l. b. • .b ‘, *do-e-ra*, *e-ne-ka*, *ku-ru-*’ over erased zone.

*Puloi* (?), *hijerejās* (?) *doelai*, *eneka khrusojo hijerojo*: MUL 14[.]

‘At (?) Pylos, slaves of (?) the priestess, on account (?) of sacred gold: 14[ ] WOMEN.’

*Puloi* (?): cf. Πύλος. Instead of a locative (or a dative in *-ōi*: § 9.1), a nominative is possible. • The meaning of all the other words taken individually seems crystal-clear in this text, but their **syntax** is much more difficult to grasp. The interpretation proposed above supposes that the slaves belong to the priestess and that they have some duty to perform in relation to the sacred gold. At least one other interpretation could be possible, however: ‘At (?) Pylos, (for) the priestess (?), slaves in exchange (?) for sacred gold’. Some amount of gold would then be given to the priestess as price for the 14[ female slaves. Whatever the interpretation, the mention of a precious metal such as gold, of no less than fourteen slaves, of a prominent religious figure (see below) and of Pylos, the very heart of the Messenian State, shows that the event recorded concerned the elite of Pylian society.

• *i-je-re-ja* is not associated with a MN, so it cannot be understood as ‘*a priestess*’, but as ‘*the priestess*’ — there are other Pylos texts where this very important lady is just called by her title, without any supplementary detail (but her name is given twice in PY Ep 704: *e-ri-ta*). • *doelai*: see § 9.3. • *e-ne-ka*, ‘on account of’: this spelling has totally undermined the traditional etymology of ἔνεκα from \*\**henweka*. The most probable etymology of the word is an adverb in -a with the same root (\**enek-*) as the infinitive ἐν-εγκ-εῖν, ‘bear, carry’ — its meaning implying the idea of ‘reach’ (J.L. GARCÍA-RAMÓN, in A. BLANC – E. DUPRAZ [eds], *Procédés synchroniques de la langue poétique grecque et latine* [forthcoming]). Notice that the Mycenaean *e-ne-ka* is ordered *before* its complement, while usually the reverse occurs in alph. Gr. If the initial aspiration of ἔνεκα was due to analogy with οὐνεκα (and the long first syllable of Hom. εῖνεκα to metrical lengthening), a form corresponding to οῦνεκα did likely not exist in Mycenaean. Hence, *e-ne-ka* probably had no aspiration. • *khrusojo hijerojo*: cf. χρυσός and ιερός. On the thematic genitive sing. in ...o-jo, see § 9.6.

**§ 9.26. PY An 35** (clay tablet; dimensions: 11.1 × 10.1 × 1.8 cm; scribe 3/— [?]; find-spot: Archives Room Complex 3/34; date: about 1200/1190; location: NAMA).

**Content:** this tablet has two parts, separated by a blank line and apparently independent — on this feature, see § 9.22. L. 1-3 list masons’ assignments in four towns of the Pylian kingdom; l. 5-6 give the price paid for a delivery of alum.

**Selected bibliography:** *Aspects*, 132-133; L. BAUMBACH, in *Tractata*, 49-54; *Documents*<sup>2</sup>, 174, 422; *Dosmoi*, 106-107; *Interpretation*, 133-134, 260; *Mémoires II*, 290; *Perfume*, 136-137.

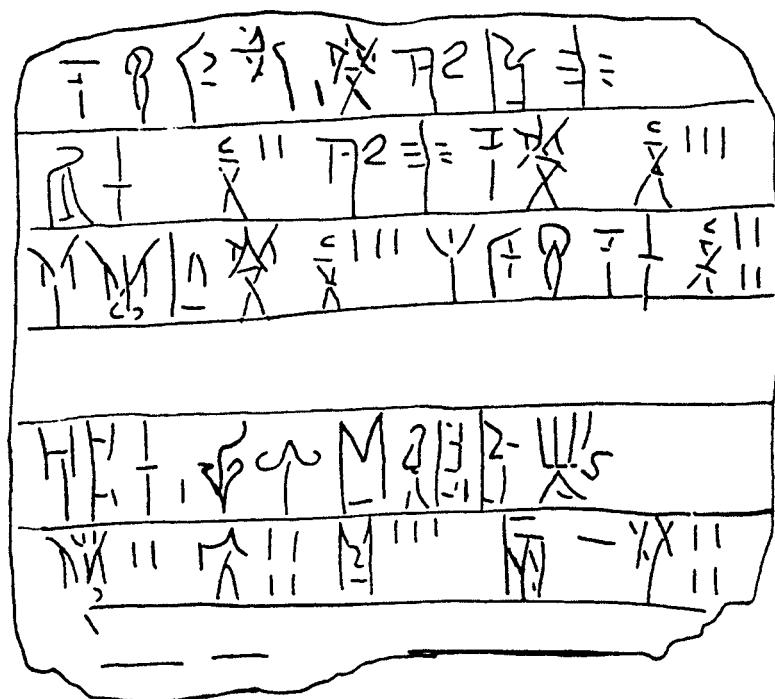


Fig. 9.30. PY An 35 (PT II, 4)

- .1 to-ko-do-mo , de-me-o-te *vac.*
- .2 pu-ro VIR 2 me-te-to-de VIR 3
- .3 sa-ma-ra-de VIR 3 re-u-ko-to-ro VIR 4
- .4 *vacat*
- .5 a-ta-ro , tu-ru-pte-ri-ja , o-no *vac.*
- .6 LANA 2 CAP<sup>f</sup> 4 \*146 3 VIN 10 NI 4
- .7 *vacat*

Cut underneath. • .4 There are holes at the top before *-ru-* and at the bottom between *o-* and *-no*. • L. 5-6 were possibly written by another hand. • .6 \*146 3: the original text was \*146 6.

**1** *Thoikhodomoi demehontes*:

.2-3 *Puloi* (?): VIR 2; *me-te-to-de*: VIR 3; [.3] *sa-ma-ra-de*: VIR 3; *Leuktroi* (?): VIR 4.

.5-6 *a-ta-ro*, *struptērijās onon*: [.6] LANA 2 — CAP<sup>f</sup> 4 — \*146 3 — VIN 10 — *NI(kuleon)* 4.

**.1** Masons going to build:

.2-3 at (?) Pylos: 2 MEN; to *me-te-to*: 3 MEN; [.3] to *sa-ma-ra*: 3 MEN; at (?) Leuctron: 4 MEN.

.5-6 *a-ta-ro*, price (?) of alum: [.6] 6 kg WOOL — 4 SHE-GOATS — 3 GARMENTS \*146 — 288 litres WINE — 384 litres FI(gs).’

**.1** *Thoikhodomoi*, ‘masons’: cf. τοιχοδομέω, ‘build walls’ (< \*dhoigho-).

• **demehontes**, ‘going to build’: cf. δέμω, ‘build’. This participle provides the only known example of the future of δέμω — alph. Gr. never uses this tense in this verb. • .2-3 *Puloi* (?) and *Leuktroi* (?): instead of these locatives, datives in -ōi (§ 9.1) or nominatives of rubric would be equally possible. Pylos was the capital of the kingdom, while Leuctron (Λεῦκτρον) was the capital of its ‘Further Province’ (see Chapter 5.3.4 above). The masons were obviously on the spot in these two places, while they had still to reach the other localities.

• **me-te-to, sa-ma-ra**: PNs. *sa-ma-ra* was the capital of one of the seven districts of the ‘Further Province’. *me-te-to* is possibly a town of the ‘Hither Province’. On the allative postposition -de, see § 9.6. • .5-6 This section is written after a blank line and has no recognisable connection with the previous one — its scribe need not be the same as l. 1-3. • .5 *a-ta-ro*: probably MN (*hap. leg.*). • **tu-ru-ptē-ri-ja, struptērijās**: cf. στυπτηρία, ‘alum’; the word is written with the ‘complex’ syllabogram (§ 9.1) *pte* replacing *pe-te*. This stuff had several uses: mainly for dyeing and tawing purposes, but also e.g. as fire retardant. The quantity of alum is not given — the scribe did perhaps not know (?). • **onon**, ‘price (?)’: cf. ὄνιος, ‘useful’ and δύνημι, ‘profit’. This term was apparently the name for the ‘price’ (etymologically: the ‘advantage’) given in exchange for some goods. • .6 *NI(kuleon)*, ‘figs’: § 9.22.

**§ 9.27. PY Ea 109** (clay tablet; dimensions: 18.0 × 2.6 × 1.4 cm; scribe 43; find-spot: Archives Room Complex I227 -35; date: around 1200/1190; location: NAMA).

**Content:** registration of a parcel of land with its holder. A large part of the Pylos tablets is concerned with land management.

**Selected bibliography:** *Censimenti*, 71-84; S. DEGER-JALKOTZY, in *Studies Bennett*, 97-122; *Mémoires IV*, 115-151; *Scripta Ruijgh II*, 36-42.

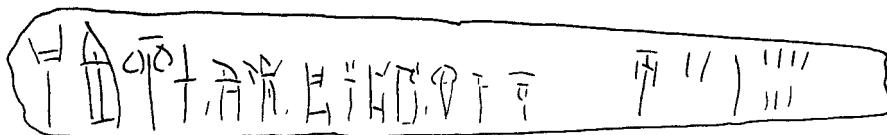


Fig. 9.31. PY Ea 109 (PT II, 15)

a-pi-a<sub>2</sub>-ro , e-ke , su-qo-ta-o , ko-to-na      GRA 2 T 5 vac.

Tablet cut at right. • T 5 has been corrected from T 7.

*Amphihalos hekhei sugʷōtāo ktoinān:* GRA 2 T 5.

'Amphialos holds a land parcel of the swineherd: (surface of) 240 litres WHEAT.'

**a-pi-a<sub>2</sub>-ro, Amphihalos:** MN known elsewhere; the 'doublet' syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) explicitly spells the aspiration; cf. the MN Αμφίαλος. • **hekhei:** cf. ἔχω. • **sugʷōtāo:** cf. συβότης, 'swineherd'. Since the PY tablets never give the MN of this 'swineherd', we may suppose either that he was the senior-swineherd (compare 'the priestess': § 9.25) or, less likely, that *sugʷōtās* was in fact a MN (cf. the MN Συβότας). • **ktoinān,** 'land parcel': this word survives in Rhodian (κτοίνā) with the sense 'a territorial unit', while one of the meanings given by Hesychius is more restricted and seems nearer to the LB use (δῆμος μεμερισμένος, 'subdivided district'). • **WHEAT:** in the landholding tablets, WHEAT, i.e. 'wheat seed', is used as a surface measure, just as in Near-Eastern Bronze Age countries or in classical Greece. In these contexts, WHEAT will then conventionally be translated here as '(surface of)... litres WHEAT'. The Mycenaean rate of sowing may have been high — *ca* 175 litres to the hectare as in classical Greece —, low — *ca* 30 litres, as in some second millennium Near-Eastern cultures — or anything inbetween. We may illustrate the two extremes with two Pylos examples: the smallest plot of land (an area of 1 v WHEAT, viz. 1.6 litre) and the king's *temenos* (an area of 30 primary units WHEAT, viz. 2 880 litres: § 9.31). These surfaces would vary from respectively *ca* 0.91 are (= 91 square meters) and *ca* 16.46 hectares (= 164 600 square meters) if we reckoned with *ca* 175 litres to the hectare, to *ca* 5.33 ares (= 533 square meters) and *ca* 96 hectares (= 960 000 square meters) if we reckoned with *ca* 30 litres to the hectare — see Y. DUHOUX, *Kadmos* 13 (1974), 27-33.

**§ 9.28. PY Eb 297** (clay tablet; dimensions: 25.8 × 5.1 × 2.5 cm; scribe 41; find-spot: Archives Room Complex 2300; date: around 1200/1190; location: NAMA).

**Content:** dispute between the priestess and a group of ‘landholders’ about the legal status of a piece of land. This text is an individual document which was later inserted into a larger one, the semi-recapitulative tablet PY Ep 704.5-6 — in its turn this was totalled in the recapitulative tablet PY Ed 317 (§ 9.30).

**Selected bibliography:** *Aspects*, 9-27; *Avviamento*, 124-125; M. CARPENTER, *Minos* 18 (1983), 81-88; *Censimenti*, 84-103; *Decipherment*, 159; M. DEL FREO, *Revue de Philologie* 75 (2001), 27-44; *Documents*<sup>2</sup>, pl. III, 256-257, 449; *Dosmoi*, 149-151; *Études*, 364-366; *Interpretation*, 211-212; *Manuale*, 257; *Mémoires* III, 146-147; *Welt*, 60-61.

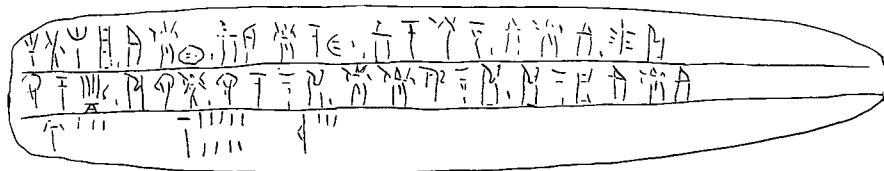


Fig. 9.32. PY Eb 297 (PT II, 38)

- .1 i-je-re-ja , e-ke-qe , e-u-ke-to-qe , e-to-ni-jo , e-ke-e , te-o vac.
- .2 ko-to-no-o-ko-de , ko-to-na-o , ke-ke-me-na-o , o-na-ta , e-ke-e vac.
- .3      GRA 3            T 9            v 3            vac.

.2 Traces of erasure under the first *ko-* and between *-de* and *ko-*. • .3 The units after T were not written at the same time (perhaps this is also true for those written after GRA). • Traces of erasure starting from v 3 and as far as under the *-me-* of 1. 2.

[.1] *Hijereja hekhei -qe eukhetoī kʷe hetōnijon (?) hekhehen thehōi (?)*, [.2] *ktoino-hokhoi de ktōināhōn ke-ke-menāhōn onāta hekhehen*: [.3] GRA 3 T 9 v 3.

‘[.1] The priestess holds *-qe* and claims to hold a “usufruct (?)” for the deity (?), [.2] but the “landholders” <say> that it is “leases (?)” of *ke-ke-menā* land parcels that she holds: [.3] (surface of) 379.2 litres WHEAT.’

.1 ***Hijereja***, ‘the priestess’: § 9.25. • ***hekhei -qe***: in this sequence, *-qe* is apparently an enclitic element (§ 9.23) put after the verb *ἔχω*, ‘have’. It has been understood in various ways: connective particle *kʷe*, ‘and’; modal particle

*ken* (*sic*); particle introducing its sentence; adverb *k<sup>w</sup>ē*, ‘in some way; under condition’; etc. • *k<sup>w</sup>e* (in *eukhetoi k<sup>w</sup>e*): § 9.23. • *eukhetoi*: cf. εὐχοματι, ‘pray, profess loudly’. The ending *-toi* (as in Arcado-Cypriot) corresponds to Attic *-ται*. • *hetōnijon* (?), *onāta*: these terms obviously express the legal status of these landholdings. The first status was clearly more advantageous for the holder than the second, but we do not know their exact meaning. *Onāton* meant etymologically ‘what is beneficial (?)’, cf. ὀνητός, ‘profitable’ and ὀνίνημι, ‘profit’ — hence the conventional translation of ‘lease (?)’. *e-to-ni-jo* is a compound whose second part comes from *onon* (§ 9.26; cf. ὄνιος, ‘useful’). Its first part could come from the root of ἔτος, ‘true’ (?; < \*seto-) or of ἔτι, ‘still’ (?). Here, it has been conventionally read as *hetōnijon* (?), with an etymological meaning ‘what is truly beneficial (?)’, and translated as ‘usufruct (?)’. • *hekhen*: cf. ξεω — this precontract form will give later ξειν *vel sim.* • *te-o*: could be a dative (*thehōi*: ‘for the deity’) or an accusative subject of the verb (*thehon*: ‘claims that the deity holds a “usufruct” [?]’). The deity could be male or female. • .2 *ktoinohokhoi*: the ‘landholders’ obviously constituted an association and several tablets give the names of some of its members (e.g. § 9.29). We nevertheless ignore its precise powers and role. In the semi-recapitulative tablet PY Ep 704.5 (see above), the ‘landholders’ are replaced with the *dāmos* (on the *dāmos*, see § 9.29). In our tablet, the ‘landholders’ are the subject of an implicit verb, which is explicitly given in PY Ep 704.5, where the *dāmos pa-si, phāsi*, ‘says’. • *ktoināhōn*: § 9.27. This precontract ending in *-āhōn* of the genitive feminine plur. will become first *-āōv* and then *-ōv*. • *ke-ke-menāhōn*: this perfect participle is one of the two main technical words qualifying land plots at PY and elsewhere — the other one is the present participle *ki-ti-me-na* (known only at PY). The interpretation of these two words is hotly debated. The transcription of *ki-ti-me-na* is not in doubt: it represents *ktimenā*, from the root \**ktei-*, ‘settle’ — cf. Hom. ἐύκτιμενος, ‘well settled, well cultivated’. The transcription of *ke-ke-me-na* is much more difficult. One of the best possibilities is *khekhemenā* (?), from a verb \**khikhēmi* *vel sim.* (cf. the root \**ghē-*, ‘be empty; lack’ and, with an important semantic evolution, κιχάνω, ‘reach’). *ke-ke-menā* and *ktimenā* are usually understood as respectively ‘public (?)’ (< ‘being empty [?]’ ) ~ ‘private (?)’ (< ‘brought into cultivation’). This interpretation relies on two characteristics: the *ke-ke-menā* land is frequently held ‘from the damos’ (*paro dāmoi* [?]: § 9.29), i.e. a collective board, while the *ktimenā* land is always held from individual people. One of the other explanations is ‘under cultivation (??)’ (*ktimenā*) ~ ‘fallow (??)’ (< ‘empty’: *khekhemenā* [?]). This interpretation provides a nice opposition between two well known categories of land and offers an easy translation but an important objection is that we have no example of *ktimenā* land held ‘from the damos’. Another difficulty is that we do not

understand why the palace should register the actual agricultural status of the land plots, since the land was bound to be either half fallow and half cultivated every year or totally cultivated/fallow every two years. • .3 WHEAT: § 9.27.

**§ 9.29. PY Eb 846** (clay tablet; dimensions: 19.5 × 3.6 × 1.7 cm; scribe 41; find-spot: Archives Room Complex 2334 -59 -80 3347 7549X; date: around 1200/1190; location: NAMA).

**Content:** registration of a parcel of land with its holder. This text is an individual document which was later inserted into a larger one, the semi-recapitulative tablet PY Ep 301.2.

**Selected bibliography:** *Censimenti*, 84-103; *Documents*<sup>2</sup>, 252; *Handbuch*, 511; *Interpretation*, 200.

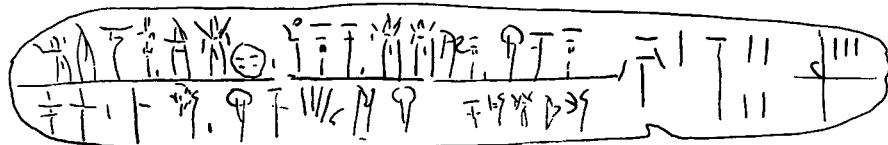


Fig. 9.33. PY Eb 846 (PT II, 100)

- .A a<sub>3</sub>-ti-jo-qo , e-ke-qe , o-na-to , ke-ke-me-na , ko-to-na
- .B pa-ro , da-mo , ko-to-no-o-ko                                      to-so-de pe-mo GRA 1 T 4 v 3

.A [[*ka*]] or perhaps [[\*35]] just before *a<sub>3</sub>*; the first word (and perhaps also the second) is written over erasure (trace of a vertical hasta perhaps not erased between *-to* and *ke-*). • .B T probably over erasure; the number ‘4’ could be a correction of ‘5’ or more, unless T 4 was written over [[v 3]]. • GRA 1 T 4 v 3 is written half way between .A and .B.

[.A] *Aithijok's hekhei -qe onāton ke-ke-menās ktoinās* [.B] *paro dāmoi* (?)  
*ktoinohokhos: tos(s)onde spermo* GRA 1 T 4 v 3.

‘[.A] Aithiops holds -qe the “lease (?)” of a *ke-ke-menā* land plot [.B] from the *dāmos* in his capacity of “landholder”; so much seed [i.e. surface/area]: (surface of) 139.2 litres WHEAT.’

***a<sub>3</sub>-ti-jo-qo, Aithijok's***: MN known elsewhere; the ‘doublet’ syllabogram (§ 9.1) *a<sub>3</sub>* explicitly spells [ai]; cf. the MN Αἰθίοψ. • ***hekhei -qe, onāton, ke-ke-menās, ktoinohokhos***: § 9.28. • ***ktoinās***: § 9.27. • ***paro***, ‘from’: cf. παρά. ‘From’ is the main sense of LB *paro*, but there are examples with a meaning ‘at one’s place’ like

$\pi\alpha\rho\alpha$  with dative: § 9.33. Most other Greek dialects have  $\pi\alpha\rho\alpha$ , ‘from’ and similar prepositions with a *genitive*, while LB uses the *locative or dative* (just as Arcadian, Cypriot and Pamphylian). • **dāmoi** (?): locative or dative in -*ōi*. The Mycenaean *dāmos* (cf. δῆμος) was a local administrative entity. It does not mean ‘people’ as in classical Greek. Its role was obviously linked with the management of the *ke-ke-menā* land (§ 9.28), but we ignore its other prerogatives (see Chapter 5.3.4 above). • **to-so-de pe-mo** when followed by the WHEAT ideogram introduces the measure (*tos[s]onde*, ‘so much’: cf. τοσ[σ]όσδε and § 9.2) of surface/area (*spermo*, ‘seed’, i.e. the Mycenaean measure of the pieces of land): see § 9.27. On the form *spermo* and not *sperma* for ‘seed’, see § 9.7. In this formula, *tos(s)onde* qualifies *spermo*: ‘so much seed [i.e. surface/area]’ — for other LB formulas, see § 9.31.

**§ 9.30. PY Ed 317** (clay tablet; dimensions: 18.8 × 3.6 × 1.7 cm; scribe 1; find-spot: Archives Room Complex 2312 -41; date: around 1200/1190; location: NAMA).

**Content:** total of land parcels held by four major personalities from Pylos (§ 9.28).

**Selected bibliography:** *Censimenti*, 103-106; *Documents*<sup>2</sup>, 257-258, 451-452; *Interpretation*, 213, 488; *Mémoires* II, 91-92; *Mémoires* III, 107-111; *Scripta Ruijgh* II, 136-139.

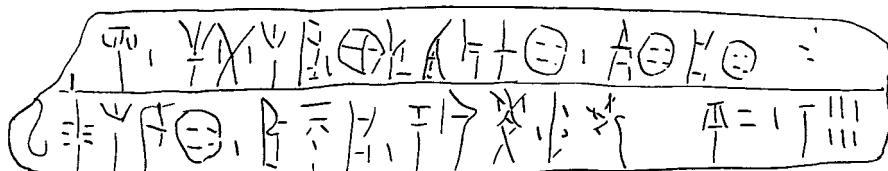


Fig. 9.34. PY Ed 317 (PT II, 35)

- .1     $\text{jo-d}\bar{\alpha}\text{-a}_2$  , i-je-re-ja , ka-ra-wi-po-ro-qe , e-qe-ta-qe vac.  
 .2    we-te-re-u-qe , o-na-ta , to-so-de , pe-mo ,      GRA 21 T 6

.1 -*po-* probably over erasure. • After *e-qe-ta-qe*, three signs certainly erased: possibly  $[\text{o}-\text{n}\bar{\alpha}-\text{t}\bar{\alpha}]$ . If so, the scribe forgot to add *we-te-re-u-qe* to the three first names of the tablet and corrected his error afterwards. • .2 The whole line has been erased and rewritten, except for the ideogram GRA and the numbers.

[.1] ]*Hō(s) d'ar hāi* (?), *hijereja*, *klāwiphoros* *k<sup>w</sup>e hek<sup>w</sup>etās k<sup>w</sup>e* [.2] *we-te-r-eus k<sup>w</sup>e*: *onāta*; *tos(s)onde* *spermo* GRA 21 T 6.

[.1] ]Item, the priestess and the “key-bearer” and the “companion” [.2] and *we-te-r-eus*: “leases (?)”; so much seed [i.e. surface/area]: (surface of) 2 073.6 litres WHEAT.’

**]o-da-a<sub>2</sub>**, **]hō(s) d'ar hāi** (?), ‘item’: coordinating expression used in a record to introduce a paragraph which is not the first but has the same basic subject as the preceding one (for crystal-clear examples of this function, see § 9.34, 9.41). A record may be either an isolated tablet or a ‘set’ (group of tablets meant to constitute a single document). In this case, *o-da-a<sub>2</sub>* introduces one of the PY Ed tablets — the first text of this series is Ed 236. *o-da-a<sub>2</sub>* has been interpreted here as lit. ‘and (*d*= δέ) thus (*hō[s]* = ὥσι) then (*ar* = ἄρ/ἄρα) in the following way (-*a<sub>2</sub>* = *hāi*: relative pronoun; compare Heraclean Doric ḡ μὲν..., ḡ δὲ..., ‘on the one hand..., on the other hand’ [?]; the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* implies anyway a sequence in [ha...])’ — see Y. DUHOUX, in Y. DUHOUX (ed.) *Langue et langues. Hommage à Albert MANIET*, Louvain-la-Neuve, Peeters, 1998, 28-31. Each of these four items is monosyllabic and monosyllabic words cannot normally stand alone in LB: thus the scribes wrote them quite naturally in *scr. cont.* Instead of the literal (but awkward) translation ‘and thus then in the following way’, I have conventionally adopted here the itemising adverb ‘item’ meaning ‘moreover, also, likewise, in addition’. Note that several other interpretations of *o-da-a<sub>2</sub>* have been offered and that *o-da-a<sub>2</sub>* is used only in PY: it is unknown in the other LB sites and in alph. Gr. The accumulation of no less than four LB particles and adverbs may seem extraordinary, but there are alph. Gr. parallels (for instance, ἀλλ' οὐδὲ μὲν δή in Demosthenes). The redundancy of some LB particles here is also paralleled in alph. Gr. by e.g. τε καί, which combines two particles each of which can be used alone with an identical meaning (‘and’). • ***hijereja***, ‘the priestess’: § 9.25. • ***klāwiphoros***: feminine title, likely cultic; cf. the cultic title κλειδοφόρος, ‘key-bearer’. • ***kʷe***: § 9.23. • ***hekʷetās***: cf. ἐπέτας; the ‘companion’ is a high level official, having inter alia military attributions (S. DEGER-JALKOTZY, *E-QE-TA. Zur Rolle des Gefolgschaftwesens in der Sozialstruktur mykenischer Reiche*, Vienna, Verlag der Österreichischen Akademie der Wissenschaften, 1978); Chapter 5.3.3 above — see also § 9.35. • ***we-te-r-eus***: MN, known elsewhere. • ***onāta***: § 9.28. • ***tos(s)onde spermo***: § 9.29. • ***WHEAT***: § 9.27.

**§ 9.31. PY Er 312** (clay tablet; dimensions: 9.3 × 13.4 × 1.2 cm; scribe 24; find-spot: Archives Room Complex 1392 2302 -23; date: around 1200/1190; location: NAMA).

**Content:** land parcels held by several of the highest Pylian dignitaries, including the king himself.

**Selected bibliography:** *Avviamento*, 132-133; *Censimenti*, 152-166; *Decipherment*, 159; *Documents*<sup>2</sup>, 264-266, 453-454; *Dosmoi*, 114-129, 167-169; *Études*, 345-346; *Handbuch*, 512-513; A. HEUBECK, ŽA 15 (1966), 267-270; *Interpretation*, 213-215, 488; *Introduction*, 134-136; J.T. KILLEN, in *Floreat*, 352-353; *Mémoires IV*, 67-85; T.G. PALAIMA, *Minos* 33-34 (1998-99), 217-221; P. PONTANI, *Aevum* 72 (1998), 37-51; M.S. RUIPÉREZ, in *Mykenaika*, 563-567; *Textos*, 42; *Welt*, 63-66.

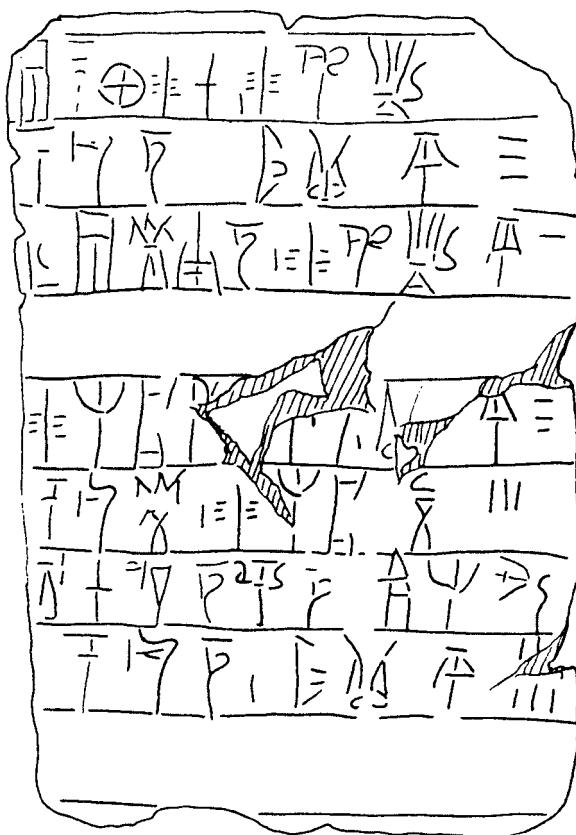


Fig. 9.35. PY Er 312 (PT II, 34)

- .0                  *vacat*
- .1 wa-na-ka-te-ro , te-me-no                  [
- .2 to-so-jo                  pe-ma    GRA 30

- .3 ra-wa-ke-si-jo , te-me-no      GRA 10  
 .4                *vacat*  
 .5 te-re-ta-o<sub>1</sub> , tō-ṣō pe-ma      GRA 30  
 .6 to-so-de , te-re-ta      VIR 3 *vac.*  
 .7 wo-ro-ki-jo-ne-jo , e-re-mo  
 .8      to-so-jo , pe-ma GRA 6[  
 .9                *vacat*  
 .10          *vacat*

This text has many erasures. • .1 *wa-na-ka-te-* over [ ]. • .2 *-so-* over [ ]; between *to-so-jo* and *pe-ma*, [ *pe-ma* , ]: the scribe wanted to avoid the impression that l. 2 would be only half full; he erased the ‘*pe-ma* ,’ that he had first written near *to-so-jo* and wrote it more to the right. • .3 *-si-* over [ ]. • .5 The original text may have had *to-so*, *ma*; when the clay was drier, *pe-* may have been lightly written over the divider. • .7 *e-re-mo* over [ ]. • .8 6[: number probably complete; five preserved units — the number cannot be larger than ‘7’. • [ *rq*[ ] before *to-*. • .9 [ *pe-ma* GRA ].

- .1-2 *Wanakteron temenos*: [.2] *tos(s)ojo sperma* GRA 30;  
 .3 *lāwāgesijon temenos*: GRA 10;  
 .5-6 *telestāhōn tōṣ(s)on sperma* GRA 30; [.6] *tos(s)oi de telestai* VIR 3;  
 .7-8 *wo-ro-k-ijōnejon* (?) *e-re-mo*: [.8] *tos(s)ojo sperma* GRA 6[.  
 .1-2 Official domain of the king: [.2] seed [i.e. surface/area] of such <an official domain>: (surface of) 2 880 litres WHEAT;  
 .3 official domain of the “leader of the people”: (surface/area of) 960 litres WHEAT;  
 .5-6 *ṣo mūṣ̄* seed [i.e. surface/area] of the *telestai*: (surface of) 2 880 litres WHEAT; [.6] and so many *telestai*: 3 MEN;  
 .7-8 *e-re-mo* land parcel of *wo-ro-k-iōn* (?): [.8] seed [i.e. surface/area] of such <an *e-re-mo* land parcel>: (surface of) 576[ ] litres WHEAT.’

.1 *Wanakteron*, ‘of the king’: cf. ἄναξ. The suffix *-τερος* is not used here with its later comparative meaning (‘more... [than]’), but to indicate a binary and contrastive opposition between things belonging to the king and the rest. • *Temenos*: cf. τέμενος. • .2, 8 *to-so-jo sperma* followed by the WHEAT ideogram twice introduces the measure of the land plots. Scribe 24 is the only Pylos scribe who uses the form *sperma* (also found in Crete) instead of *spermo*, which is regular on the Greek continent (§ 9.7). This *to-so-jo sperma* phrase constitutes a significant divergence from the standard LB formula *to-so(-de) sperma/o* used almost everywhere else (§ 9.29). The phrase *to-so-jo sperma*

has attracted a multitude of interpretations. In fact, *to-so-jo sperma* and *to-so sperma* alternate in our tablet and it is possible to show that their use is *syntactically conditioned*. *to-so-jo sperma* occurs (l. 2, 8) only when the parcel of land is described by a *two-word* phrase; this two-word phrase is syntactically *independent* of the *to-so-jo sperma* formula and is in the *nominative of rubric* (§ 9.1). Here are the two examples: (1) ‘Wanakteron temenos: *to-so-jo sperma*’, ‘Official domain of the king: *to-so-jo* seed [i.e. surface/area]’; (2) ‘*wo-ro-k-ijōnejon (?) e-re-mo: to-so-jo sperma*’, ‘*e-re-mo* land parcel of *wo-ro-k-iōn* (??): *to-so-jo* seed [i.e. surface/area]’. The use of *to-so pe-ma* (l. 5) is different because the piece of land does not have a separate description (*temenos*, etc.) but its holders are mentioned with a word in the genitive; this genitive is syntactically *dependent* on the *to-so sperma* formula: ‘*telestāhōn tō-ṣo sperma*’, ‘*tō-ṣo* seed [i.e. surface/area] of the *telestai*’. In the process of writing our text, the scribe 24 adapted the inflectional form of *tos(s)os* to the syntax of its contexts — he used the *genitive tos(s)ojō* when the preceding expression was not in the *genitive* but the *nominative tos(s)on* when the preceding expression was in the *genitive*. Note also that *wanakteron temenos* and *wo-ro-k-ijōnejon (?) e-re-mo* are not only syntactically *independent*, but also written on a different line from *to-so-jo sperma*; by contrast, *telestāhōn* is not only syntactically *dependent* but also written on the same line as *tō-ṣo sperma*. All this looks as if the best interpretations of *to-so-jo sperma* are the syntax oriented ones, with *to-so-jo* analysed as a thematic genitive sing. in ...o-jo (see § 9.6). *to-so-jo sperma* may then be understood as either (a) *tos(s)ojō sperma*, ‘seed [i.e. surface/area] of such (a *temenos/e-re-mo* land parcel)’ or (b) *tos(s)ojō, sperma*, ‘at so much, seed [i.e. surface/area]’, with a genitive of value (cf. πόσου διδάσκει;, ‘at what price does he teach?’: Plato, *Apology* 20b). Is it possible to choose between these two interpretations? The Tiryns tablet TI Ef 2 could perhaps help us. This text registers a parcel of land: *lqo-u-ko-ro DA 1 to-sa-pe-mo* GRA 6 (*to-sa-pe-mo* is written in *scr. cont.*; *Tithemy*<sup>2</sup> thinks that ‘*to-sa* was added later as an afterthought’). My own favorite interpretation of *to-sa-pe-mo* used to be *tos(s)a, spermo*, ‘so many, seed [i.e. surface/area]’ with *tos(s)a* used adverbially. But A. Morpurgo Davies (pers. com.) suggests another possible and very attractive solution: ‘*DA* in PY A- and perhaps in TH may refer to a supervisor, but this interpretation seems impossible in *pa-ki-ja-ni-ja to-sa da-ma-te DA 40* (PY En 609.1) largely because this text refers to land parcels. In fact there *to-sa* probably agrees with *da-ma-te* and, if so, is feminine and not neuter. *da-ma-te* is likely to refer to the pieces of land and it could be read as *damartes*, with an etymological meaning such as “households”. We could then read *pa-ki-ja-n-ijsas (?) tos(s)ai damartes*, “so many households of the place *pa-ki-ja-ne*”, with *tos(s)ai* qualifying *damartes*. In our Tiryns text, then, where

*to-sa-pe-mo* follows *DA*, *to-sa* could also be a feminine and refer back to *DA(mar)*. We could thus read *Jg<sup>w</sup>oukolos: DA(mar) 1; tos(s)ās spermo* GRA 6, “The cowherd: one hou(sehold); seed [i.e. surface/area] of such <a household>: (surface of) 576 litres WHEAT”. If this interpretation is right, our Pylos *tos(s)ojo sperma* should be understood in exactly the same way, viz. ‘seed [i.e. surface/area] of such <an official domain/e-re-mo land parcel>; etc.: in Pylos and in Tiryns, *to-so-jo/to-sa* would thus be adjectives agreeing with the genitive of the implicit words for the ‘land plot’. It is also conceivable that *tos(s)os* has here a more specialised meaning of ‘total’ as it does in the standard formula *to-so pe-mo*. In that case we could translate e.g. ‘Temenos of the king: surface/area of the total (temenos)...’. The first solution has been conventionally adopted here. • **WHEAT:** § 9.27. • **.3 lāwāgesijon:** cf. Pindar λᾶγέτᾶς, ‘leader of the people’ (from λᾶός *vel sim.*, ‘people’ [< λᾶFo-] and ἄγω, ‘lead’). In Mycenaean the term had a technical meaning and the *lāwāgetās* apparently held the second rank of the State; his precise functions are unknown — perhaps he may have been in charge of military affairs (see above, Chapter 5.3.2 and C. MILANI, *Varia Mycenaea*, Milan, 2005, I.S.U. Università Cattolica, 255-269). His land parcel is one third of the royal one and of the collective plots of the three *telestai*. • **.5 telestāhōn:** the *telestai* (cf. τελεστής) were important figures, having an ‘office’ (τέλος) which presumably gave them several perquisites about which we know very little (they apparently included the use of some land parcels). Here the *telestai* have a *collective* allocation of land (2 880 litres WHEAT for all three) while the king and the ‘leader of the people’ had *individual* parcels of land. • ***tos(s)on sperma:*** see above. • **.6** It is better not to understand *to-so-de telestai* here as *tos(s)oide telestai*, ‘so many *telestai*’ (cf. τοσ[σ]όσδε — see § 9.29) but as *tos(s)oi de telestai*, ‘and (= δέ) so many (cf. τόσ[σ]ος) *telestai*’, with the coordinating conjunction δέ. • **.7 wo-ro-ki-jone-jo:** perhaps possessive adjective derived from a MN in -ίον (?); several other readings are possible. • **e-re-mo:** this name of a kind of land parcel is usually understood as *erēmon* (?), ‘void (?)’, i.e. ‘waste’ (cf. ξρημος), but it could perhaps be read *helemon* (?), ‘marshy ground (?)’ (cf. ξλος).

**§ 9.32. PY Es 647** (clay tablet; dimensions: 12.9 × 3.6 × 1.2 cm; scribe 1; find-spot: Archives Room Complex 5236 -56; date: around 1200/1190; location: NAMA).

**Content:** tax due to the god Poseidon and three human recipients for parcels of land.

**Selected bibliography:** *Aspects*, 54-57; *Avviamento*, 134-135; *Documents*<sup>2</sup>, 275-280, 456-458; *Dosmai*, 13-75; A. HEUBECK, *Die Sprache* 4 (1958),

80-95; P.H. ILIEVSKI, in *Cambridge Colloquium*, 238-244; *Interpretation*, 221-224; M. LANG, in *Wingspread*, 37-51; *Opfergraben*, 110-113; *Scripta Ruijgh I*, 179-180; *Texte*, 151-154; W.F. WYATT, in *Wingspread*, 53-55.

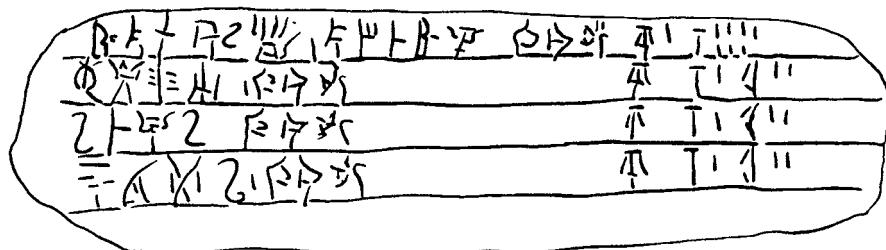


Fig. 9.36. PY Es 647 (PT II, 68)

- |    |   |                  |
|----|---|------------------|
| .1 | o-po-ro-me-no , po-se-da-o-ne    do-so-mo | GRA 1 T 7 vac.   |
| .2 | *34-ke-te-si , do-so-mo                   | GRA T 1 v 2 vac. |
| .3 | we-da-ne-we do-so-mo                      | GRA T 1 v 2 vac. |
| .4 | di-wi-je-we ,    do-so-mo                 | GRA T 1 v 2 vac. |
| .5 | vacat                                     |                  |

.2 \*34-*ke-* over erasure: [ky] is possible.

- |    |  |              |
|----|--|--------------|
| .1 | <i>o-po-ro-menos:</i><br><i>Poseidāhōnei dosmos:</i> | GRA 1 T 7;   |
| .2 | *34- <i>ke-tērsi dosmos:</i>                         | GRA T 1 v 2; |
| .3 | <i>we-da-n-ēwei dosmos:</i>                          | GRA T 1 v 2; |
| .4 | <i>di-wi-j-ēwei dosmos:</i>                          | GRA T 1 v 2. |

- |    |   |                     |
|----|---|---------------------|
| '1 | <i>o-po-ro-menos:</i><br>tax due to Poseidon: | 163.2 litres WHEAT; |
| .2 | tax due to the *34- <i>ke-tēres:</i>          | 12.8 litres WHEAT;  |
| .3 | tax due to <i>we-da-n-eus:</i>                | 12.8 litres WHEAT;  |
| .4 | tax due to <i>Di-wi-eus:</i>                  | 12.8 litres WHEAT.' |

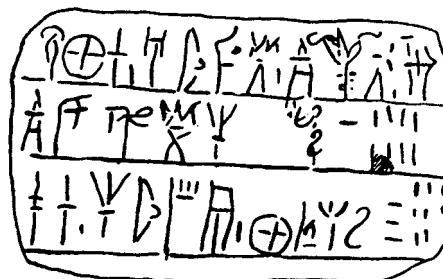
This tablet, together with a number of similar ones, is linked with PY Es 650, where a dozen of people, including *o-po-ro-menos*, ‘have so much seed [i.e. surface/area]: (surface of)... litres WHEAT’. The ‘tax’ (*dosmos*) registered here is thus related to a land parcel. However, in our tablet the WHEAT is not a surface measure (§ 9.27), but the cereal actually paid as tax on the land occupied.

• .1 *o-po-ro-menos*: MN known elsewhere in PY Es. • .2 *Poseidāhōnei* (see § 9.17): Poseidon occupied a major place in the Pylos pantheon (see also § 9.38) — *Od.* 3.5-6 shows the inhabitants of Pylos offering him bulls. In this tablet, Poseidon receives *ca* four times more than the total of the three other recipients: 163.2 ~ 38.4 litres. On the dative in ...*ei*, see § 9.6. • *dosmos*, ‘tax’: § 9.20. • \*34-*ke-tērsi*: title or occupation name in -τήρ occurring only in PY Es. • .3 *we-da-n-ēwei*: MN known elsewhere in PY; *we-da-n-eus* played an important role in the Pylos kingdom. • .4 *di-wi-j-ēwei*: this word is certainly a MN elsewhere (in PY An 656.8-9, *di-wi-je-u* bears the important title of ‘companion’), so it should be a MN here too. It may etymologically come from several forms: (1) an ethnic (cf. the MN Διεύς, from PNs like Δῖον or Δία); (2) a cultic title (\*priest of Zeus/Diwia’) — the possibilities (1) and (2) rely etymologically on the name of Zeus or his spouse (or daughter [??]), *Diw(i)ja* (§ 9.38); (3) J.L. Melena (pers. com.) suggests also a possible nickname in -eus of a compound MN beginning with \**Dwi-* — cf. δίς, ‘twice’ < \**dwi-* — like in MNs like (Δ)ισολύμπιος or Δίτυλος. • \*34-*ke-tērsi*, *we-da-n-ēwei*, *di-wi-j-ēwei*: we are not certain about the role of these three recipients; they may receive the taxes for themselves or for the central administration.

**§ 9.33. PY Fr 1184** (clay tablet; dimensions: 7.0 × 4.3 × 1.1 cm; scribe 2; find-spot: Chasm Rooms 7-8; date: around 1200/1190; location: NAMA).

**Content:** delivery of more than 500 litres of oil to a perfumer.

**Selected bibliography:** *Aspects*, 119-121; *Avviamento*, 136-137; E.L. BENNETT, JR., *The Olive Oil Tablets of Pylos*, Salamanca, Universidad de Salamanca, 1958, 40-41; *Decipherment*, 160; *Documents*<sup>2</sup>, 217, 394, 481, 494; *Études*, 350; *Handbuch*, 516; *Idéogrammes*, 266-267; *Interpretation*, 269; J.T. KILLEN, in *Economy*, 179-180; *Perfume*; A. SACCONI, *Kadmos* 35 (1996), 29-37; *Texte*, 167-168; *Textos*, 45; P.G. VAN ALFEN, *Minos* 31-32 (1996-97), 263-264; M. WYLOCK, *SMEA* 11 (1970), 118-119; Chapter 7.10 above.



**Fig. 9.37.** PY Fr 1184 (E.L. BENNETT, JR., *op. cit.*, plate III)

- .1 ko-ka-ro , a-pe-do-ke , e-ra<sub>3</sub>-wo , to-so
- .2 e-u-me-de-i OLE+WE 18
- .3 pa-ro , i-pe-se-wa , ka-ra-re-we 38
- .4 *vacat*

The whole tablet could be a palimpsest. • Several holes have been made in *lat. dex.*: five at the level of l. 2; one at l. 3. • .1 ‘, *e-ra<sub>3</sub>-wo , to-so*’ certainly over erasure.

- .1 *ko-k-alos apedōke elaiwon tos(s)on:*
  - .2 *Eumēdehi:* OLE+WE(*j/haleiphes*) 18;
  - .3 *paro i-pe-se-wa: khlārēwes* 38.
- 
- .1 Kok(k)alos delivered so much oil:
  - .2 for Eumedes: 518.4 litres OIL WITH WE-UNGUENT;
  - .3 at *i-pe-se-wa*'s: 38 vases oil.'

Ancient perfumes consisted of scented oil (about the Mycenaean use of oil, see § 9.5). One of the ways in which they were prepared was to make the oil boil together with herbs, etc. (§ 9.40). • .1 ***ko-k-alos***: MN known in PY Fg 374 as *a-re-po-zo-o*, *aleiphod<sup>z</sup>ohos*, ‘perfumer’, lit. ‘unguent boiler’ (§ 9.40); cf. the MNs Κόκαλος, Κόκ(κ)αλος. • ***apedōke***, ‘delivered’: this form provides a reasonably certain example of the verbal augment in Mycenaean (cf. ἀποδίδωμι). This verb means ‘deliver’ — see the sense of *apudosis* (§ 9.5) and of δίδωμι (§ 9.16) in LB. • ***e-ra<sub>3</sub>-wo***, ***elaiwon***: cf. ἔλαιον; the ‘doublet’ syllabogram (§ 9.1) *ra<sub>3</sub>* explicitly spells [lai/rai]. • ***tos(s)on***: see § 9.2. • .2 ***Eumēdehi***: MN of another ‘perfumer’ known elsewhere; cf. the MN Εὐμήδης. • ***OLE+WE(*j/haleiphes*)***, ‘OIL WITH WE-UNGUENT’: the OIL ideogram (Ὢ) is ligatured with the abbreviation *we* (ὦ) of *we-(j)a-re-pe*; cf. the compounds in -ηλιφής, ‘anointed with...’ (ἀλείφω, ‘anoint’). The interpretation of *we-(j)...* is not certain. • .3 ***paro***: here, the meaning ‘at *i-pe-se-wa*'s place’ is better than ‘from *i-pe-se-wa*’ (§ 9.29), since it offers a semantic symmetry with the dative of l. 2. • ***i-pe-se-wa***: *hap. leg.*; MN (?). • ***ka-ra-re-we***: in KN K 778.1, ]*ka-ra-re-we* is followed by the ideogram of the ‘stirrup jar’, \*210<sup>VAS</sup> (Ὥ). Since other LB stirrup-jar ideograms may bear the abbreviation *ka*, *ka-ra-re-we* is certainly a Mycenaean vessel name. It is obviously related to χλαρόν· ἔλαιηρὸς κώθων, ‘vessel for oil’ (Hesychius); hence, its interpretation as *khlārēwes*, ‘vases (for oil)’. The beginning of the tablet explicitly mentions a ‘delivery of oil’ and it is tempting to suppose that the 38 vases were full of oil — but we could not totally exclude that they were empty.

**§ 9.34. PY Ma 378** (clay tablet; dimensions: 21.8 × 4.2 × 1.9 cm; scribe 2; find-spot: Archives Room Complex 2345 -61 -75; date: around 1200/1190; location: NAMA).

**Content:** taxation of one of the Pylos districts (on the taxation in the Mycenaean States, see § 9.20).

**Selected bibliography:** *Aspects*, 153-161; P. DE FIDIO, *SMEA* 23 (1982), 83-136; *Documents*<sup>2</sup>, 289-295, 464-466; *Handbuch*, 521-522; J.T. KILLEN, in *Rome Colloquium* (forthcoming); J.T. KILLEN, *SMEA* 25 (1984), 173-188; *Mémoires* I, 59-91; *Mémoires* IV, 183-188; J.-P. OLIVIER, *BCH* 98 (1974), 23-35; M. PERNA, *Recherches sur la fiscalité mycénienne*, Nancy, Association pour la diffusion de la recherche sur l'antiquité, 2004; C.W. SHELTERDINE, in *Studia Mycenaea* (1988), 125-148; *Texte*, 193-199, 208-212; *Welt*, 69; W.F. WYATT, *AJA* 66 (1962), 21-41.

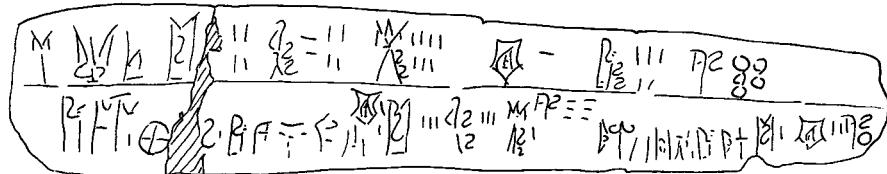


Fig. 9.38. PY Ma 378 (PT II, 42)

- .1 sa-ma-ra \*146 24 RI M 24 KE M 7 \*152 10 O M 5 ME 500 vac.
- .2a \*152 2 ME 60
- .2b o-da-a<sub>2</sub>, ka-ke-we, o-u-di-do-si \*146 3 RI M 3 KE M 1 pe-su-nu-wo, o-pe-ro \*146 1 \*152 2 ME 100

.1 One hole below number '7'. • .2 3 KE M 1 'ME 60' *pe-* over erasure; the '1' of KE M 1 over [KE] — instead of '1', the scribe wrote initially '2' but erased afterwards the second unit. • .2a \*152 2: the normal taxation proportions in PY Ma suggest a number '1' here. • .2b '100' is written below the upper right part of *ME*.

- .1 *sa-ma-ra*:
- \*146 24 — *LI(non) (?) M 24 — KE M 7 —* 10 — O M 5 — ME 500;
- .2 *hō(s) d'ar hāi (?) , khalkēwes ou didonsi: \*146 3 — LI(non) (?) M 3 — KE M 1 —* 2 — ME 60;
- perusinwon ophelos: \*146 1 —* 2 — ME 100.

‘.1 *sa-ma-ra*:

24 GARMENTS \*146 — 24 kg LI(nen) (?) — 7 kg *KE* — 10 OXHIDES \*152

— 5 kg *O* — 500 *ME*;

## .2 item, the smiths do not have to pay: 3 GARMENTS \*146 — 3 kg LI(nen) (?)

— 1 kg *KE* — 2 OXHIDES \*152 — 60 *ME*;

last year’s debt: 1 GARMENT \*146 — 2 OXHIDES \*152 — 100 *ME*.’

**.1 *sa-ma-ra***: the ‘Further Province’ (see Chapter 5.3.4 above) of the Pylos kingdom had seven districts; this town was the capital of one of them. • ***RI***: perhaps abbreviation of *ri-no*, *linon*, ‘linen’ (§ 9.11). • ***KE, O, ME***: the identification of these items is disputed. • ***ME*** could stand for *ME(li)*, ‘honey’ only if it was counted by jars *vel sim.*, like in § 9.8; if measured in capacity units (like in § 9.40), 500 or 100 units would yield the enormous amounts of 14 400 or 2 880 litres. • ***KE*** could perhaps stand for *kē(ros)*, ‘bees-wax’ (cf. κηρός). • **\*152 (Ὥ)**: the ideogram of the ‘oxhide’ is ligaturated with the abbreviation *wi* (Ϝ) of *wi(-ri-no)*, *w(rīnos)*, ‘h(ide)’ (cf. βῖνός < \*wrīn-) — compare with the ideogram of the ‘fleece’, \*153 (Ὦ: § 9.41). • ***hō(s) d’ar hāi* (?)**, ‘item’: § 9.30. This coordinating expression introduces a new paragraph concerning the same topic as the preceding one (taxes of the *sa-ma-ra* district). • ***khalkēwes ou didonsi***, ‘the smiths (cf. χαλκεύς) do not have to pay’ (lit. ‘do not pay’): this is an exemption from paying the tax. On the meaning of δίδωμι, see § 9.16. The negation οὐ is never separated from the following word in LB: this shows that it is not accented (in fact it is one of the Greek proclitics, a grammatical category discovered only in the XIX<sup>th</sup> century, but clearly differentiated by the LB scribes). • **.2 *perusinwon***: cf. περυστινός, ‘of last year’ (§ 9.5). Since we never find any group of tablets of the preceding years systematically preserved, we can be reasonably sure that the past records which ‘of last year’ alludes to were kept on another medium than clay (papyrus, parchment...) which burnt out when the palaces were destroyed — while, ironically, the tablets, which were much less precious, were baked by the fire and thus preserved. • ***ophelos***, ‘debt’: cf. ὀφείλω, ‘owe’. The town had thus failed to pay its full taxation for the preceding year.

**§ 9.35. PY Sa 790** (clay tablet; dimensions: 19.8 × 2.6 × 1.3-0.6 cm; scribe 26; find-spot: Archives Room Complex 6440 -45; date: around 1200/1190; location: NAMA).

**Content:** inventory of chariot wheels.

**Selected bibliography:** *Avviamento*, 152-153; *Documents*<sup>2</sup>, 374, 519; *Idéogrammes*, 139-149; *Interpretation*, 326; *Mémoires I*, 111-123, 333-336; *Streitwagen*, 95-113; Chapter 7.3 above.



**Fig. 9.39.** PY Sa 790 (PT II, 93)

a-mo-ta , e-qe-si-ja , no-pe-re-a<sub>2</sub> , ROTA+TE ZE 6 vac.

*a-mo-* over [[ka-ko]] or perhaps [[ka-ki]] (see below).

*Armota hek<sup>w</sup>esija nōpheleha:* ☺ [= ROTA+TE(rmidwenta)] D<sup>Z</sup>E(ugos) 6.

‘Wheels of “companion’s” type, useless: 6 PAI(rs) “FRIN(ged) (?)” WHEELS.’

**Armota, TE(rmidwenta), D<sup>Z</sup>E(ugos):** § 9.16. • *hek<sup>w</sup>esija*, ‘of “companion’s” type’: cf. *hek<sup>w</sup>etās* (§ 9.30); what were exactly these special wheels is not clear, but they were obviously intended to enhance the high social position of the ‘companions’. • **no-pe-re-a<sub>2</sub>, nōpheleha**: cf. ἀνωφελής, ‘useless’ — but see Chapter 7.3.2 above; the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) explicitly spells the aspiration. • [[ka-ko]] or [[ka-ki]]: form of χαλκός (cf. *ka-ko de-de-me-no, khalkōi dedemenō*, ‘both bound with bronze’), χαλκόδετος (cf. *ka-ko-de-ta, khalkodeta*, ‘bronze-bound’) or *khalkios* (cf. the dual *ka-ki-jo*, ‘in bronze’): the scribe obviously thought that the wheels which he was registering were at least partially made of ‘bronze’, but he discovered almost immediately that it was not true.

**§ 9.36. PY Ta 711** (clay tablet; dimensions: 21.0 × 3.9 × 1.5 cm; scribe 2; find-spot: Archives Room Complex 6412 7395 8308; date: around 1200/1190; location: NAMA).

**Content:** beginning of the inventory (‘set’ of thirteen tablets) of a collection of luxury items (some of them were damaged: § 9.37). The name of the man in charge of the description is given (*pu<sub>2</sub>-ke-qi-ri*) as well as the precise date when his inspection was done (‘when the king...’: see § 9.6). This equipment, presumably intended for banqueting, was likely kept in store. The vessels recorded in this tablet were probably metal ones.

**Selected bibliography:** *Avviamento*, 162-163; *Documents*<sup>2</sup>, 332-336, 496-498; *Études*, 312; A. HURST – F. BRUSCHWEILER, in *Colloquium Mycenaicum*, 65-80; *Idéogrammes*, 246-252; *Interpretation*, 339-363, 493-494; *Introduction*, 127-129; J.T. KILLEN, *BCH* 122.2 (1998), 421-422; *Mémoires III*, 150-152; *Opfergraben*, 139-140; *Textos*, 67-68.

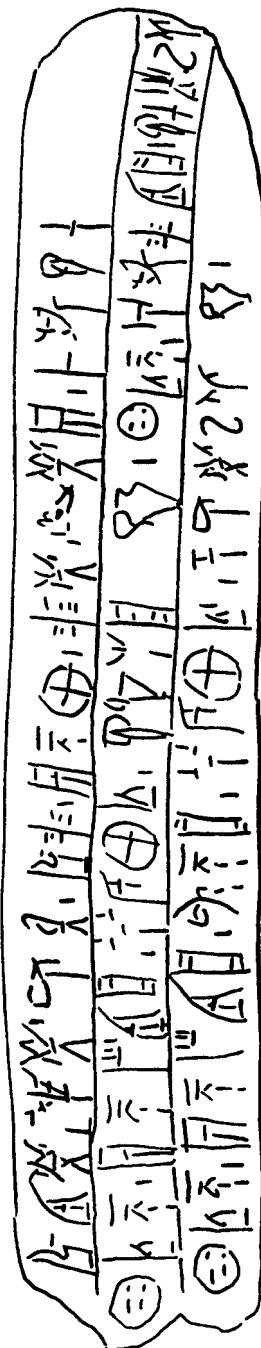


Fig. 9.40. PY Ta 711 (PT II, 79)

- .1 o-wi-de , pu₂-ke-qi-ri , o-te , wa-na-ka , te-ke , au-ke-wa , da-mo-ko-ro vac.  
 .2 qe-ra-na , wa-na-se-wi-ja , qo-u-ka-ra , ko-ki-re-ja \*204<sup>VAS</sup> 1 qe-ra-na , a-mo-te-wi-ja , ko-ro-no-we-sa <1 (?)>  
 .3 qe-ra-na , wa-na-se-wi-ja , ku-na-ja , qo-u-ka-ra , to-qi-de-we-sa \*204<sup>VAS</sup> 1 vac.

- .1 *au-* over [al]: when the scribe began to write the name *au-ke-wa*, he wrote first its [au] syllable with the ‘basic’ a syllabogram; but afterwards he changed his mind and used the ‘doublet’ (§ 9.1) *au*. • .2 There is an erasure in the space between -*ra* and *ko*. • At the end of this line, the scribe ran out of space: there is no room for other signs. This could be the reason why he omitted one number and perhaps also the ideogram \*204<sup>VAS</sup>. Hence the restitution <1 (?)>. • .3 ‘*to-qi-de-we-sa*’ over erasure. *PNPWM* reads ‘*qo-u-ka-ra* 1 , (sic) *to-qi-de-we-sa* \*204<sup>VAS</sup> 1’: if so, l. 3 would register *two qe-ra-na* vessels.

- 1** *Hō(s) (??) wide pu<sub>2</sub>-ke-qi-ri hote wanaks thēke au-ke-wa dāmo-ko-r-on:*  
**2** *qe-r-anā wanassēwījā, gʷoukrās, konkhilejā:* 1   
*qe-r-anā armotēwījā, korōnowessa (?)*: <1 (?)>;  
**3** *qe-r-anā wanassēwījā, gunajā, gʷoukrās, (s)torkʷ(h)idwessa:* 1 

- .1 *pu<sub>2</sub>-ke-qi-ri* saw as follows (??), when the king appointed/buried *au-ke-wa* as/the *dāmo-ko-ro*:  
 .2 ewer “of wanasseus type (?)”, with bull’s head, with sea-shells: 1   
 ewer “of cartwright type (?)”, decorated with curves (?): <1 (?)>;  
 .3 ewer “of wanasseus type (?)”, “of women type (?)”, with bull’s head, decorated with torsades (?): 1 

**1 o-**: the interpretation of this element is disputed. It could be: adverb (*hō[s]*, cf. ὥ[ζ], ‘so, thus, as follows’), sentence-beginning particle, intensive particle (*hō*, ‘really’ — with the same meaning as ξ̄),... • **wide**, ‘he saw’ i.e. ‘inspected’: cf. ἔδε/εἴδε. On the omission of the augment, see § 9.3. • **pu<sub>2</sub>-ke-qi-ri**: MN; the dative *pu<sub>2</sub>-ke-qi-ri-ne* appears in TH Gp 119.1 and there is an adjective *pu<sub>2</sub>-ke-qi-ri-ne-ja* in TH Of 27.3. The ‘doublet’ syllabogram (§ 9.1) *pu<sub>2</sub>* explicitly renders [phu]; this name is obviously a compound which can be interpreted in various ways, e.g. for the first element: *Phuge-*, *Phurk-*, *Phusk-* (cf. the MNs Φυγοστρατίδης, Φύρκιππος, Φύσκων). Perhaps *pu<sub>2</sub>-ke-qi-ri* was the very name of scribe 2 (??). • The sentence begins with **hote**, ‘when’ (cf. ὅτε), giving thus a precise date of the event recorded (see § 9.6). For similar formulas in the Near-Eastern world, cf. e.g. ‘when the king “received the tithe”’ or ‘when you took over the charge of “bath attendant” [*ramkūtum*: this could be a religious title]’ (*Mari*, 315 n° 418; 534-536 n° 562). • **wanaks**: cf. ῥvaξ, ‘lord, master’. • **thēke**: cf. θῆκε/ἔθηκε, ‘he put’. On the omission of the augment, see above. This form is currently understood as ‘he appointed’, but *Interpretation* insisted on a meaning ‘he buried’. Several objections have been raised to this funerary translation. (1) While *Interpretation* supposes that the PY Ta series was an inventory of items put in a tomb, archaeologists have not discovered such a huge quantity of precious furniture in Mycenaean graves. Moreover, *Interpretation* believed that the tomb supposedly referred to in our text was possibly a royal one, but this has proved hard to accept (see [2] below). The current interpretation of the PY Ta series as an inventory of items kept in store is much better, but we must observe that this does *not* preclude that the inventory was made ‘when the king *buried...*’. (2) *Interpretation*, 339-363 analyses *da-mo-ko-ro* as the MN of a possible member of the royal family — an obvious mistake, since *da-mo-ko-ro* is plainly the title of a high Mycenaean official: see the correction in the *Addenda* of *Interpretation*, 493. Here again, however, this

provides no motive to exclude an interpretation like ‘when the king *buried au-ke-wa*, the *dāmo-ko-r-on*’. (3) *Documents*<sup>2</sup>, 584 observed that ‘the sense “buried”... normally requires a mention of the earth, bones, etc.’ This is right — with the proviso that we recognise that such mentions *may* occasionally be missing: we do have examples of τίθημι, ‘bury’ with a reference to the deceased only, as in ὁ θεῖς τίνα ἀσεβῆς ἔστω, ‘whoever will bury somebody will be sacrilegious’ (*Tituli Asiae Minoris* 2.1.51, 15-16). On the whole, there is thus no compelling reason to exclude either a funerary interpretation of *thēke* in this text — see § 9.44-45 for a possible use of the verb τίθημι to refer to burying (*thetho*, ‘was buried [?]’) — or a civil one. • ***au-ke-wa***: MN known elsewhere; on the use of the ‘doublet’ (§ 9.1) syllabogram *au*, see above.

- ***dāmo-ko-r-on***: title of a high Mycenaean official; it has been suggested that he could be the head of a province, but this is by no means certain (see Chapter 5.3.4 above). On the Mycenaean *dāmos*, see § 9.29.
- **.2 *qe-r-anā***: name of a ewer with one handle; its root could be related either to θέρομαι, ‘become hot’ (< \**gʷher-*) or to βαλανεύς, ‘bath-man’.
- ***wanassēwijā***, ‘of wanasseus type (?)’ (precise meaning unknown; cf. ἄναξ): this adjective is linked with the LB name of the king, *wanax* (or the queen, \**wanassa* [?]). It is derived either from \**wanasseus*, ‘servant (?) of the king/queen (?)’, with an -ιος suffix, or from \**wanassa/os* (cf. *wa-na-so-i*) with an -ēwijo- suffix.
- ***gʷoukrās***, ‘with bull’s head’: cf. βούκρανος, ‘bull-headed’.
- ***konkhilejā***, ‘with sea-shells’: cf. κόγχη/κόγχος, ‘mussel’ and κογχύλιον, ‘small mussel’.
- ***armotēwijā***, ‘of wheelwright type (?)’ (precise meaning unknown): adjective in -ιος derived from *armoteus*, ‘wheelwright’ (cf. LB *a-mo-te-wo* [genitive sing.], *armotēwos*). On the LB word for ‘wheel’, *armo*, see § 9.16.
- ***korōnowessa* (?)**, ‘decorated with curves (?)’: cf. κορώνη, ‘anything hooked or curved’ (?).
- On the suffix -went-, see § 9.3.
- **.3 *gunajā***, ‘of women type (?)’ (precise meaning unknown; ‘with [decoration of] women [??]’ has been proposed): cf. γύναιος, ‘feminine’.
- **(s)torkʷ(h)idwessa**, ‘decorated with torsades (?)’: cf. στρόφις, ‘twister’ (στρέφω, ‘turn’) or τρόπις, ‘ship’s keel’ (τρέπω, ‘turn’).

**§ 9.37. PY Ta 641** (clay tablet; dimensions: 25.9 × 3.5 × 1.5 cm; scribe 2; find-spot: Archives Room Complex 8337 -55; date: around 1200/1190; location: NAMA).

**Content:** inventory of luxury vessels — this document belongs to the ‘set’ which starts with the preceding text (§ 9.36). All the vessels recorded in this tablet were probably made of some type of metal, although their material is not explicitly given. This document was found in 1952, in the very weeks when M. Ventris discovered that LB concealed Greek texts,

and was cleaned and studied by its excavator, Carl Blegen, only months later, in May 1953: the obvious correspondences between its ideograms and the associated words provided an easy check of the decipherment and was an important factor for the quick recognition of its correctness (see *Decipherment*, 81-84, 140).

**Selected bibliography:** *Avviamento*, 162-163; A.M. BIRASCHI, *SMEA* 32 (1993), 77-84; *Documents*<sup>2</sup>, pl. III, 336-337, 496-499; Y. DUHOUX, in *Floreat*, 227-236; *Handbuch*, 59, 525; A. HURST – F. BRUSCHWEILER, in *Colloquium Mycenaeum*, 65-80; *Idéogrammes*, 225-240; *Interpretation*, 338-345, 494; *Introduction*, 129-132; J.T. KILLEN, *BCH* 122.2 (1998), 421-422; A. LEUKART, in *Res Mycenaee*, 237-240; *Manuale*, 259-260; H. MÜHLESTEIN, in *Tractata*, 233-235; *Opfergaben*, 139-140; T.G. PALAIMA, *Cretan Studies* 9 (2003), 187-201; *Welt*, 90-93.

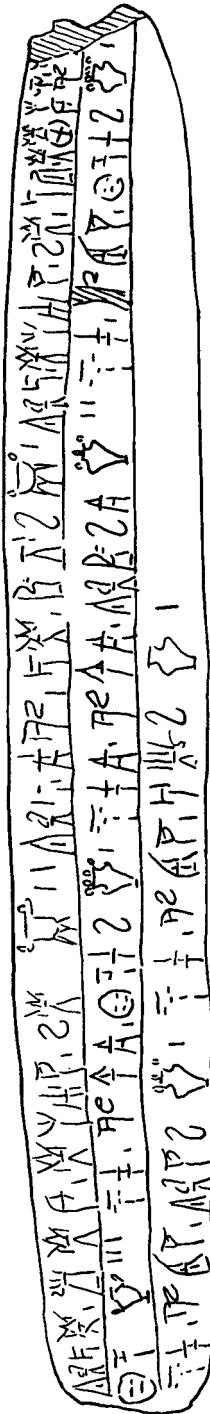


Fig. 9.41. PY Ta 641 (PT II, 66)

.1a ti-ri-po-de , a<sub>3</sub>-ke-u , ke-re-si-jo , we-ke \*20<sup>1VAS</sup> 2 ti-ri-po , e-me , po-de , o-wo-we \*20<sup>1VAS</sup> 1 ti-ri-po , ke-re-si-jo , we-ke , a-pu , ke-ka-u-me-ŋo[  
 .1b qe-to \*20<sup>3VAS</sup> 3 di-pa , me-zo(-e) , qe-to-to-we \*20<sup>2VAS</sup> 1 di-pa-e , me-zo-e , ti-ri-o-we-e \*20<sup>2VAS</sup> 2 di-pa , me-wi-jo , qe-to-ro-we \*20<sup>2VAS</sup> 1 [  
 .2 di-pa , me-wi-jo , ti-ri-jo-we \*20<sup>2VAS</sup> 1 di-pa , me-wi-jo , a-no-we \*20<sup>2VAS</sup> 1 vac.

.3 .1b The scribe wrote the second unit of '2' and the two examples of *ti-ri-po* over an erased zone. • 2 *me-zo{-e}*; error for *me-zo* (see below). • *qe-to-ro-we*  
 \*20<sup>2VAS</sup> over erasure.

<b>1</b>	<i>Tripode a<sub>3</sub>-k-eus, Krēsijowergēs:</i>	 2;
	<i>tripōs hemei podei, oiwōwēs (?)</i> :	 1;
	<i>tripōs Krēsijowergēs, apukekaumenoṣ[ ] skeleha:</i>	 [1];
<b>2</b>	<i>k<sup>w</sup>ethoi:</i>	 3;
	<i>dipas med<sup>z</sup>o&lt;s&gt; k<sup>w</sup>etrōwes:</i>	 1;
	<i>dipahe med<sup>z</sup>ohe triōwehe:</i>	 2;
	<i>dipas meiwijos k<sup>w</sup>etrōwes:</i>	 1;
<b>3</b>	<i>dipas meiwijos trijōwes:</i>	 1;
	<i>dipas meiwijos anōwes:</i>	 1.
<b>.1</b>	Two tripods, <i>a<sub>3</sub>-k-eus</i> , of Cretan workmanship:	 2
	tripod, with one single foot, with one single (?) handle:	 1
	tripod, of Cretan workmanship, legs completely burned:	[1] 
<b>2</b>	jars:	 3
	larger <i>depas</i> vase with four handles:	 1
	two larger <i>depas</i> vases with three handles:	 2
	smaller <i>depas</i> vase with four handles:	 1
<b>3</b>	smaller <i>depas</i> vase with three handles:	 1
	smaller <i>depas</i> vase without handles:	 1.

.1a Since .1b is to be read before .1a (§ 9.3), *ke-re-a<sub>2</sub>* \*<sup>201</sup><sub>VAS</sub> [1] (.1a) comes just after *ke-ka-u-me-no[ ]* (.1b) — *ke-re-a<sub>2</sub>* is written above *-ka-u-me-*. • **1 Tripode:** dual (or plur.: § 9.1); cf. τρίποντς and Dorian (Hesychius) πῶς, ‘foot’ (< \**pōds*). • **Tripode a<sub>3</sub>-k-eus, Krēsijowergēs:** the scribe correctly began his description with the non singular form *ti-ri-po-de*, but he then shifted — wrongly — to the singulars *a<sub>3</sub>-k-eus* and *Krēsijowergēs* — there is another similar error on 1. 2.

• **a<sub>3</sub>-k-eus:** the ‘doublet’ syllabogram (§ 9.1) *a<sub>3</sub>* explicitly spells [ai]. This word is usually taken as an adjective (cf. Πλαταιεύς, ‘Plataean’ < PN Πλάταια, ‘Plataeae’) and connected with αἴξ, ‘goat’: *aigeus*. Hence the possible meaning of ‘of goat type (?)’ referring to the vessel’s decoration — the handles of this tripod’s ideogram are in fact more complicated than those of the following one. But *a<sub>3</sub>-k-eus* could be the ethnic of a PN like Αἴγαι and mean ‘of Aigai type (???)’ — or even perhaps the MN of the artist who made the vase (??): there would then be no grammatical mistake in *a<sub>3</sub>-k-eus*. • **‘ke-re-si-jo, we-ke’ and ‘a-pu , ke-ka-u-me-no[ ]’:** the separation of compound words into their components is exceptional not only in LB, but also in the tablets written by scribe 2. He writes this way only in the Ta series. In the alphabetic transcription, these compounds have been conventionally written without separation (§ 9.1). • **Krēsijowergēs**, ‘of Cretan workmanship’: cf. compounds of the type of Λυκιοεργής, ‘of Lycian workmanship’. It is impossible to say whether the

scribe meant ‘made in Crete’ or ‘made in the Cretan style’. Anyway, this statement demonstrates the prestige that the inhabitants of Pylos attached to Crete even in last days of the Mycenaean civilisation. • ***hemei***: cf. εἰς, ‘one’ < \*sem-. Compare *hemei* with the alph. Gr. corresponding form, ἐνί: in LB, the evolution *hem-* > *hen-* had not yet taken place. On the dative in ...*ei*, see § 9.6. A tripod ‘with one single foot’ may seem odd unless we compare it with another tripod of this text, which has ‘legs completely burned’. It becomes then obvious that the items kept in store were sometimes damaged — bronze items were precious and archaeology shows that they could be kept even when out of use. • ***podei***: cf. πούς and see above. • ***oiwōwēs* (?)**, ***kʷetrōwes*, *tri(j)ōwes*, *anōwes***: all these compounds end in -ōwēs, ‘with ... ear(s)’ i.e. ‘handle(s)’ and are built on the word for ‘ear’, οὖς — cf. ἀμφώης, ‘two-eared’. • ***oiwōwēs* (?)**, ‘with one single (?) handle’: cf. οῖος, ‘alone’ (?). This adjective seems to imply a structural characteristic, not the result of an accident, but the ideogram shows nevertheless two handles (see below). • The ideogram of this vase ‘with one single foot’ and ‘with one single (?) handle’ has three feet and two handles (𐄇): could it be just an error? Or perhaps the scribe did not want (or was not able) to make a realistic sketch of the vessel — the ideogram is only one cm high. • ***tripōs Krēsijowergēs apukekaumenōṣ[ ] skeleha*** 𐄇: there are obvious differences between the ideogram of this tripod (𐄇) and the two preceding ones (𐄇 𐄇). This tripod has no handles and its feet look shorter and thicker. These characteristics seem independent of the ‘Cretan’ type of this vessel, however, since the ‘two tripods’ of l. 1 are also described as ‘Cretan’. • ***apukekaumenōṣ[ ]***, ‘completely burned’: cf. ἀποκαίω, ‘burn off’. The vase is definitely damaged (see above). • ***ke-re-a<sub>2</sub>*, *skeleha***: cf. σκέλος, ‘leg’; the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) explicitly spells the aspiration. *Skeleha* is an ‘internal accusative’ depending on *apukekaumenōṣ[ ]*: lit. ‘burned in the feet’. *Skeleha* is much better than *kheileha* (cf. χεῖλος, ‘lip’), since the ‘legs’ of a tripod were put directly in the fire. • **.2 *kʷethoi***: § 9.22. • ***dipas*, *dipahē***: sing. and dual; cf. δέπτας, ‘beaker’. The vowel alternation (*dipas* ~ δέπτας) suggests that this word may be a loan. • ***med<sup>z</sup>o<s>/med<sup>z</sup>ohe***: cf. Attic μείζων, ‘bigger’; the first *med<sup>z</sup>o{he}* is wrongly written in the dual or the plur.: it should be a sing. • ***kʷetrōwes***: cf. τέτταρες, ‘four’ and οὖς. • ***triōwehe***: dual; cf. τρεῖς and οὖς. • ***meiwijos***: cf. μείων, ‘lesser’. • ***anōwes***: cf. the ‘alpha privative’ (ἀν-: § 9.14) and οὖς.

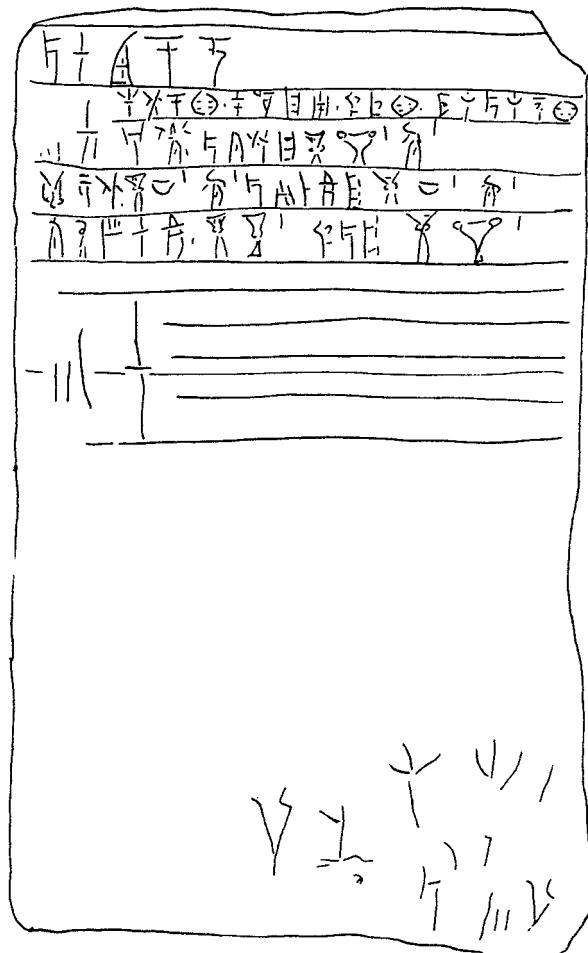
**§ 9.38. PY Tn 316** (clay tablet; dimensions: 12.0 × 19.5 × 2.3 cm; scribe 44; find-spot: Archives Room Complex 2311; date: around 1200/1190; location: NAMA 12 566).

**Content:** offerings to Pylos gods: 6 shrines/place and 14 or 15 deities are mentioned. This text provides the most impressive list known until now of the Pylos pantheon and alludes to several religious ceremonies. Almost all the deities are given golden vases (of three different kinds); most of them receive also human beings (women for the goddesses; men for the gods). A transliteration makes it difficult to render adequately the structure of the document and one should have a look at its facsimile. The line numbering used here *differs from the usual one*: this aims to be closer to the actual text structure. A concordance of the numbering used in this chapter and the current numbering is printed below:

Recto numbering		Verso numbering	
Current	This Chapter	Current	This Chapter
	r.0		v.0
.1	r.1	v.1	v.1A
.2	r.2A	v.2	v.1B
.3	r.2B	v.3	v.1C
.4	r.3	v.4	v.2A
.5	r.4	v.5	v.2B
.6	r.5	v.6	v.2C
.7-10	r.6A-D	v.7	v.2D
		v.8	v.3A
		v.9	v.3B
		v.10	v.3C
		v.11	v.3D
		v.12	v.4
		v.13-16	v.5A-D

**Selected bibliography:** *Avviamento*, 166-169; L. BAUMBACH, in *Res Mycenaee*, 33-34; E.L. BENNETT, JR., in *Colloquium Mycenaicum*, 221-234; E.L. BENNETT, JR., in *Mykenaika*, 110; M. DEL FREO, *Minos* 31-32 (1996-97), 145-158; *Documents*<sup>2</sup>, 284-289, 458-464; *Études*, 305, 322-323; J.-L. GARCÍA RAMÓN, in *Atti II*, 261-268; M. GÉRARD-ROUSSEAU, *SMEA* 13 (1971), 142-146; I. HAJNAL, in *Atti II*, 269-288; *Handbuch*,

525-527; S. HILLER, in *Palaeograeca et Mycenaea Antonino Bartoněk quinque et sexagenario oblata*, Brno, Universitas Masarykiana Brunensis, 1991, 79-89; *Idéogrammes*, 183-185, 210-216; *Interpretation*, 261-268, 362-363, 490; *Introduction*, 157-162; N. MAURICE, *Minos* 23 (1988), 124-132; *Mémoires II*, 306-308; *Mentions*; W. MERLINGEN, *Athenaeum* 46 (1958), 383-388; *Opfergaben*, 140-144; *Po-ti-ni-ja*, 29-36; T.G. PALAIMA, in *Floreant*, 437-461 (with photographs of both sides of the tablet); T.G. PALAIMA, *Minos* 31-32 (1996-97), 303-312; A. SACCONI, in *Studies Chadwick*, 551-555; B. SERGENT *Dialogues d'Histoire ancienne* 16.1 (1990), 175-217; *Textos*, 68-70; *Welt*, 100-103; A. WILLI, *Minos* 29-30 (1994-95), 177-185; *World*, 89-96 (with one photograph).



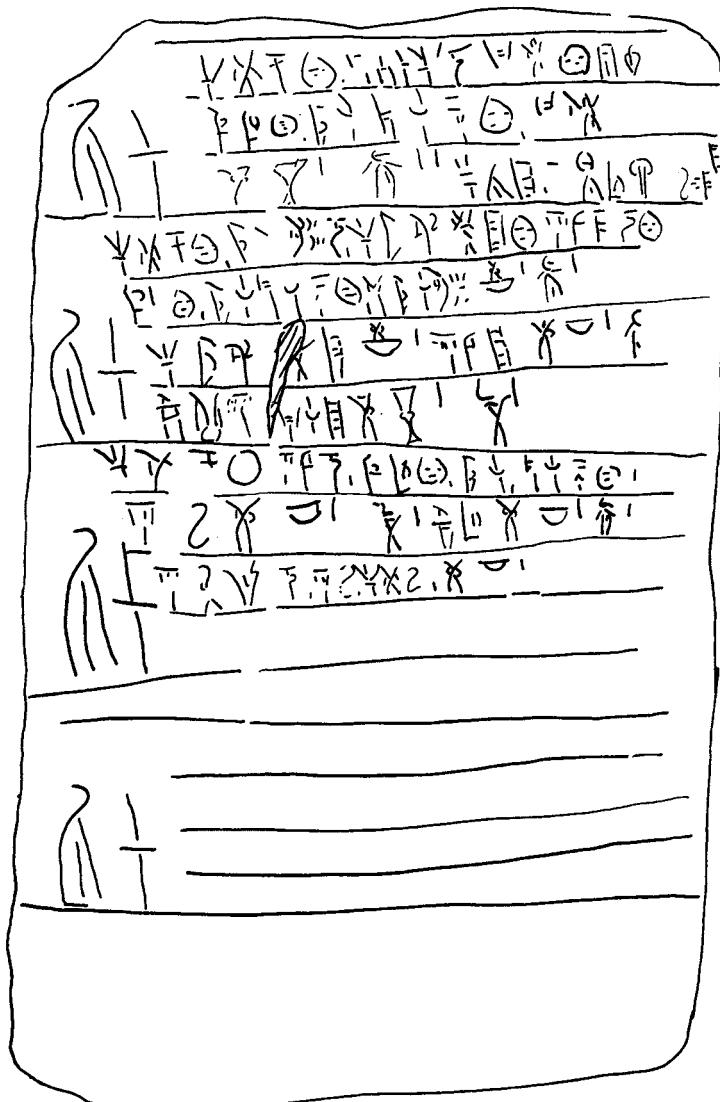


Fig. 9.42-43. PY Tn 316 (PT II, 36)

r.0	<i>vacat</i>	
r.1	<b>po-ro-wi-to-JO</b> , <i>vac.</i>	
r.2A	i-je-to-qe , pa-ki-ja-si , do-ra-qe , pe-re , po-re-na-qe	
r.2B	<b>pu-RO a-ke</b> , po-ti-ni-ja AUR *215 <sup>VAS</sup> 1 MUL 1 <i>vac.</i>	
r.3	ma-na-sa , AUR *213 <sup>VAS</sup> 1 MUL 1 po-si-da-e-ja AUR *213 <sup>VAS</sup> 1 MUL 1 <i>vac.</i>	
r.4	ti-ri-se-ro-e , AUR *216 <sup>VAS</sup> 1	
r.5	<i>vacat</i>	
r.6A	<i>vacat</i>	
r.6B	<i>vacat</i>	
r.6C	<i>vacat</i>	
r.6D	<b>pu-ro</b> <i>vac.</i>	

*reliqua pars sine regulis*

v.0		<i>vacat</i>		
v.1A	i-je-to-qe , po-si-dai-jo , a-ke-qe , wa-tu	<i>vac.</i>		
v.1B	do-ra-qe , pe-re , po-re-na-qe , a-ke	<i>vac.</i>		
v.1C	pu-ro AUR *2/3 <sup>VAS</sup> 1	MUL 2 qo-wi-ja , na-[ ] , ko-ma-we-te-'ja'		
v.2A	i-je-to-qe , pe-re-*82-jo , i-pe-me-de-ja-<jo->qe	di-u-ja-jō-qe	<i>vac.</i>	
v.2B	do-ra-qe , pe-re-po-re-na-qe , a<-ke>	, pe-re-*82 AUR*2/3 <sup>VAS</sup> 1	MUL 1	<i>vac.</i>
v.2C	i-pe-me-de-ja AUR*2/3 <sup>VAS</sup> 1	di-u-ja AUR *2/3 <sup>VAS</sup> 1	MUL 1	<i>vac.</i>
v.2D	pu-ro e-ma-a2 , a-re-ja AUR *2/6 <sup>VAS</sup> 1	VIR 1	VAC.	
v.3A	i-je-to-qe , di-u-jo , do-ra-qe , pe-re , po-re-na-qe a-kę	<i>vac.</i>		
v.3B	di-we AUR *2/3 <sup>VAS</sup> 1	VIR 1 e-ra AUR *2/3 <sup>VAS</sup> 1	MUL 1	<i>vac.</i>
v.3C	di-ri-mi-jo 1 , di-wo , i-je-we , AUR *2/3 <sup>VAS</sup> 1 [ ]			<i>vac.</i>
v.3D	pu-ro	<i>vac.</i>		
v.4		<i>vacat</i>		
v.5A		<i>vacat</i>		
v.5B		<i>vacat</i>		
v.5C		<i>vacat</i>		
v.5D	pu-ro	<i>vac.</i>		

*reliqua pars sine regulis*

Palimpsest, with traces of previous ruling. On the complicated history of the writing of this text, see E.L. BENNETT, JR., in *Colloquium Mycenaicum*, 221-234. • r.3 The reading of *ma-na-sa* is not in doubt. • The first \*2/3<sup>VAS</sup> is written over erasure, probably [AUR \*2/3<sup>VAS</sup> 1], apparently to allow the addition of MUL 1 after *po-si-da-e-ja* had been written. • r.6 This section was left incomplete by the scribe. • A whole half of the recto is left blank, but at the bottom on

the right, we read *di-we-si-po-*rq*-ti-mi-*jo**. Since this sequence (*scr. cont.*) seems meaningless but is also written in two other Pylos tablets (PY Aq 218.v; Xa 412.v), J.L. MELENA – M.S. RUPÉREZ, *Los Griegos micénicos*, Madrid, Historia 16, 1990, 110–111 have cleverly supposed that it could be the standard order of the first signs of the LB syllabary. • v.1A *i-je-* over erasure. • v.1B *po-re-na-qe , a-* over erasure. • v.1C The small size of *qo-wi-ja*, etc. reflects the lack of space in the second half of the line. • na-[ ]: the reading is exceedingly difficult (for a good macrophotograph of this part made by J.L. MELENA, cf. *Minos* 31–32 [1996–97], pl. IIIA). Here are some epigraphic comments. (a) *PTT*, 236: ‘na-[ ]: perhaps *na-ka* or *na-qe*; this word is over three erased signs, the first [na], the two other perhaps [ti ti], but this is far from certain’. (b) *PNPWM*: ‘na-[ ]: *na-* possibly over [na], the next <sign> would be a *qe* above a *-ti-*, except that there seems to be a bit of a horizontal between them, but the *na* might also be the head of a *di-*, with the lower parts pushed off to the right, possibly over three erased signs’. (c) We should add E.L. BENNETT’s comment in *Colloquium Mycenaicum*, 227–228. The correction of the *na-[ ]* part of text was made *after* the completion of this line. • v.2A *i-pe-me-de-ja->jo->qe:* cf. the symmetric terms *pe-re-\*82-jø* and *di-u-ja-jø-* and see below. • v.2B There are two peculiarities in this very line: (a) *pe-re-po-re-na-qe*, in *scr. cont.* without any word divider nor space between *pe-re* and *po-re-na-qe*; (b) the error *a-<ke>*: cf. *a-ke passim*. • v.2B *AUR\*2/3<sup>VAS</sup>* is a monogram (§ 9.18); here, combination of the ideograms for ‘gold’ (☒) and ‘vase \*2/3<sup>VAS</sup>’ (☒); elsewhere in this text (except v.2C, first *AUR\*2/3<sup>VAS</sup>*), these two ideograms are separated. • v.2C the first *AUR\*2/3<sup>VAS</sup>* is a monogram. • v.5 Section left incomplete by the scribe. • The last part of the recto is left blank.

### r.1 *Phlowi(s)tojo* (?)

- r.2.4** [r.2B] ***Pulos*** [r.2A] *hijetoi k<sup>w</sup>e pa-k-iansi, dōra k<sup>w</sup>e pherei, phorenas (?) k<sup>w</sup>e [r.2B] agei:*
- |                               |                         |
|-------------------------------|-------------------------|
| <i>Potnijāi:</i>              | AUR $\sum$ 1 MUL 1;     |
| [r.3] <i>ma-na-s-āii:</i>     | AUR $\bigcirc$ 1 MUL 1; |
| <i>Posidāhejāi:</i>           | AUR $\bigodot$ 1 MUL 1; |
| [r.4] <i>Trishērōhei</i> (?): | AUR $\sum$ 1;           |
| <i>Do(n)spotāi:</i>           | AUR $\sum$ 1.           |

## r.6A-D *Pulos*

v.1 [v.1C] ***Pulos*** [v.1A] *hijetoi k<sup>w</sup>e Posidāhjoi (?) hagei (?) k<sup>w</sup>e wastu*, [v.1B] *dōra k<sup>w</sup>e pherei, phorenas (?) k<sup>w</sup>e agei*:

[v.1C] AUR  $\sum_1$  MUL 2: *G<sup>w</sup>owijāi — (?) na-* [ ] — (?) *Konāwentejāi*.

v.2 [v.2D] ***Pulos*** [v.2A] *hijetoi k<sup>w</sup>e pe-re-\*82-joi (?) i-pe-me-deja->joi> (?) k<sup>w</sup>e Divjajoi (?) k<sup>w</sup>e, [v.2B] dōra k<sup>w</sup>e pherei, phorenas (?) k<sup>w</sup>e a<gei>:*

*pe-re-\*82:*

[v.2C] *i-pe-me-dejāi:*

*Divjāi:*

[v.2D] *Hermāhāi Arejāi:*

AUR  $\supseteq 1$  MUL 1;

AUR  $\supseteq 1$ ;

AUR  $\supseteq 1$  MUL 1;

AUR  $\sum_1$  VIR 1.

v.3 [v.3D] ***Pulos*** [v.3A] *hijetoi k<sup>w</sup>e Divjoi (?) dōra k<sup>w</sup>e pherei, phorenas (?) k<sup>w</sup>e agei:*

[v.3B] *Dwēi:*

*Hērāi:*

[v.3C] *Drīmijōi (?) Diwos (h)ijewei:*

AUR 1  $\supseteq$  VIR 1;

AUR  $\supseteq 1$  MUL 1;

AUR  $\supseteq 1$  [ ].

## v.5A-D *Pulos*

In the translation below, the recipients of the offerings are indicated in two ways: (1) just with their name without any additional qualification when they are known in alph. Gr. (e.g. ‘Zeus’) or when they are designated by a common noun (e.g. ‘the triple hero’); (2) with their name conventionally preceded by the words ‘the god’ or ‘the goddess’ in brackets when their name is unknown later or is not a common noun — e.g. ‘(the goddess) Posidaea’.

'r.1 In the month of the blossoming (?):

- r.2-4** [r.2B] **Pylos** [r.2A] performs a cultual ceremony (?) at *pa-k-ianes* and brings offerings and leads [r.2B] victims (?):  
 to the Mistress: 1 GOLDEN , 1 WOMAN;  
 [r.3] to (the goddess) *ma-na-sa*: 1 GOLDEN , 1 WOMAN;  
 to (the goddess) Posidaeia: 1 GOLDEN , 1 WOMAN;  
 [r.4] to the triple hero: 1 GOLDEN ,  
 to the Master: 1 GOLDEN .

#### r.6A-D Pylos

- v.1** [v.1C] **Pylos** [v.1A] performs a cultual ceremony (?) in the shrine of Poseidon and the town makes a consecration/  
 purification (?) [v.1B] and (Pylos) brings offerings and leads victims (?):  
 [v.1C] 1 GOLDEN , 2 WOMEN: to (the goddess) Boia — (?) to (the goddess) (?) *na-[ ]* — (?) to (the goddess)  
 Komawenteia.

- v.2** [v.2D] **Pylos** [v.2A] performs a cultual ceremony (?) in the shrine of (the goddess) *pe-re-\*82* and <in the shrine of>  
 (the goddess) *i-pe-me-deia* and in the shrine of (the goddess) Diwia [v.2B] and brings offerings and lea<ds> victims (?):  
 to (the goddess) *pe-re-\*82*: 1 GOLDEN , 1 WOMAN;  
 [v.2C] to (the goddess) *i-pe-me-deia*: 1 GOLDEN ,  
 to (the goddess) Diwia: 1 GOLDEN , 1 WOMAN;  
 [v.2D] to Hermes Areias: 1 GOLDEN , 1 MAN.

- v.3** [v.3D] **Pylos** [v.3A] performs a cultual ceremony (?) in the shrine of Zeus and brings offerings and leads victims (?):  
 [v.3B] to Zeus: 1 GOLDEN , 1 MAN;  
 to Hera: 1 GOLDEN ,  
 [v.3C] to (the god) Drimios (?), the son of Zeus: 1 GOLDEN  [ ].

#### v.5A-D Pylos'

After the heading (which likely gives the name of the month concerned), each side of the tablet is divided in several sections (2 in the recto; 4 in the verso). Every section has three or four lines. Both sides of the tablet end with an almost blank part. • In five of the six sections of the tablet, the scribe first wrote ‘Pylos’ in extra large signs at the bottom of the section — in r.2B, where the first section (after the heading) of the document begins, in its middle; he then went to the lines above. So, in section v.1, we have to read first v.1C (with ‘Pylos’), then go on to v.1A, v.1B and finally come back to v.1C to read what follows ‘Pylos’. • After ‘Pylos’, each section begins with a **formulaic sentence**: ‘performs a cultual ceremony (??) in... (here: shrine[s]/place name[s]) and brings offerings and leads victims (?)’. There is then a list of gods and goddesses, with each name normally followed by the offering: golden vase, mostly accompanied by one human being. • There is no regularity in the **numbers of shrine(s)/place name(s) and deities**: r.2-4: 1 place name ~ 5 deities; v.1: 1 shrine ~ 2/3 deities; v.2: 3 shrines ~ 4 deities; v.3: 1 shrine ~ 3 deities. Only four deities are apparently honoured in their own shrine (*pe-re-\*82, i-pe-me-deia*, Diwia, Zeus); the others were honoured elsewhere. • The **golden vessels** given to almost every deity are of different types. The most frequent are simple bowls (C: 8 ex.). There are five examples of two more elaborated vessels. The two C are given to the ‘triple hero’ and to Hermes Areias, while the three C are presented to the ‘Mistress’, to the ‘Master’ and to a goddess — either Boia, or (?) *na-[ ]*, or Komawenteia (see below). Each member of the Zeus family (Zeus, Hera and Zeus’ son: see below) is given simple bowls, not refined vessels... (see § 9.6). • The **MAN and WOMAN ideograms** associated with most deities must probably represent human beings as everywhere else: there is no reason to suppose they would represent human *figurines* here. • The interpretation of this text is particularly difficult, owing to its religious content and its numerous *hap. leg.* Clearly the initial formulae refer to the ceremony and the modalities of the offering but their Greek transcription is disputed; even the interpretation of some words as referring to shrines or sanctuaries is not universally accepted, while for most verbs a number of different interpretations have been offered. • **r.1 po-ro-wi-tojo:** likely month name used here to date the offerings recorded — on the use of this case and on its form in ...o-jo, see § 9.6. Mycenaean month names are generally associated with the word for ‘month’, *me-no*, *mēnhos* (?), but this is not compulsory (e.g. KN Fp 6). In PY Fr, *po-ro-wi-to* could be a month name as here, although other interpretations have been suggested. Two main readings of *po-ro-wi-tojo* have been proposed so far: (a) *Plōwistojo* (?), ‘in the month of sailing (?)’; cf. πλωτός, ‘sail on the sea’ (?) < \*plew-; (b) *Phlowi(s)tojo* (?), ‘in the month of the blossoming (?)’; cf. φλέω, ‘abound’ < \*bhlew-. The latter interpretation has been conventionally chosen

here since there is a Spartan month name [Φλ]οιάσιος (cf. also Φλυήσιος/Φλιάσιος). • The sequence *pu-ro i-je-to-qe* (r.2A-B, etc.) is syntactically ambiguous. Here, it has been understood as a subject ('Pylos') and its verb ('performs a cultual ceremony [??]': see below). In fact both terms could be independent: '(At) Pylos: a cultual ceremony is performed and one brings... and one leads... (??)'). • ***pu-ro, Pulos, 'Pylos'***: since v.1 of this tablet mentions 'Pylos' and 'the town', 'Pylos' must likely mean here the kingdom or the palace of Pylos, rather than only its capital. • **r.2A *i-je-to***: is to be read as *hijetoi*, but its interpretation is disputed. It could come from a verb formed on the root of *ἱερός*, 'holy' (??), unknown later. Its precise meaning is unknown: it has been conventionally rendered here by 'perform a cultual ceremony (??)', but 'sacrifice (??)' would also be possible (see below). A form of *ἴημι*, 'send' has also been proposed (??), but it should have some specialised meaning, since there is no explicit complement. On the ending *-toi*, see § 9.28. There are several interpretations of the mood and the voice of this verb. • ***kʷe***: § 9.23. The three *kʷe* (= τε, 'and') co-ordinate the three sentences *hijetoi kʷe pa-k-ijansi, dōra kʷe pherei* and *phorenas* (?) *kʷe agei* — compare Κναξάρῃ τε... ἐπολέμησε..., Κιμμερίους τε... ἐξήλασε, Σμύρνην τε... εῖλε (Herodotus 1.16). • ***pa-k-ijansi***, 'at *pa-k-ianes*' : PN in -ιᾶνες. *pa-ki-ja-ne* was the capital of one of the nine districts of the 'Hither Pylian Province' (see Chapter 5.3.4 above). It was also an important religious place apparently located not far from the palace. • ***dōra***: cf. δῶρον. • ***pherei***: cf. φέρω. • ***po-re-na, phorenas* (?)**: accusative plur. of a word in -ēn (cf. the dative plur. *po-re-si*). Alph. Gr. normally uses ἄγω for living creatures and φέρω for objects. This suggests that *po-re-na*, associated to ἄγω, should refer to human offerings (MAN and WOMAN), while the *dōra*, 'gifts', associated to φέρω, would refer to the vessels. What is the precise meaning of *po-re-na*? It clearly designated persons linked with the deities, but what was exactly their function? An answer is suggested by *po-re-no-zo-te-ri-ja, po-re-no-d<sup>2</sup>ostērija*, 'girdles of *po-re-no-*' (PY Un 443.2) and *po-re-no-tu-ṭe[* (PY Ua 1413), usually restored as *po-re-no-tu-ṭe[-ri-ja vel sim.* The latter word may be read *po-re-no-thu(s)ṭe[rija vel sim.* and could then be understood as 'sacrifices of *po-re-na*' — cf. θύω, 'offer by burning, sacrifice, slay a victim'. If so, we could translate *po-re-na* as 'victims'. We must nevertheless be cautious, because *po-re-no-tu-ṭe[* is restored, has a dotted sign and its meaning is not proved. Anyway, *po-re-na* has been conventionally understood as 'victims (?)' here and read *phorenas* (?) from the same root as Latin *feriō*, 'slaughter' (?). Other readings have been suggested, however: from the root of πωλέω, 'sell' (?) or of φέρω, 'bear' (? : the *po-re-na* would then be the 'bearers [of the vases]' — but there are less 'bearers [?] than vases...'). In the past *po-re-na* used to be read as an infinitive *phorēnai* from φορέω, but this

interpretation has been abandoned. • *agei*: cf. ἄγω. • *Potnijāi*: § 9.8. • **r.3 ma-na-s-āi**: this name of a goddess is a *hap. leg.* like several other GNs in this text. • *Posidāhejāi*, ‘to (the goddess) Posidaeia’: *hap. leg.*; clearly the spouse of Poseidon (see § 9.17); this name is unknown in alph. Gr. • **r.4 Trishērōhei** (?), ‘to the triple hero’ is known elsewhere at PY (this excludes a scribal error here); cf. τρις, ‘thrice’ and ἥρως, ‘hero’ — the numeral has a superlative meaning and may occur in composition both as τρι- or τρισ- before consonant (since Homer) or vowel. The alph. Gr. name of the ‘hero’ begins always with an aspiration, but its etymology is not certain. The LB form makes initial \*sē..., \*yē... or even \*ē... possible (the word could be a loan). The most natural transcription of *ti-ri-se-ro-e* is *Trisērōhei* (?), *without* initial aspiration, but since there are some reasons to suppose that the cluster [nh] followed by a vowel was spelled in LB just as [n] followed by a vowel (see § 9.6), we could suppose the same rule worked for [sh] followed by vowel and transcribe *Trishērōhei* (?): this has been conventionally done here. Other explanations have been proposed, however. On the dative in ...ei, see § 9.6. • **Do(n)spotāi**, ‘to the Master’: *hap. leg.*; cf. δεσπότης, ‘master’ which is normally supposed to derive from \*dems-pot-, where \*dems- is a very archaic form of the word for ‘house’. • **v.1A-C** This section is especially difficult, because its structure is not quite the same as that of the other ones. First, there is a supplementary clause in its first part (*a-ke kʷe wastu*). Second, the names of the deities involved were not written *before* the offering ideograms, as in every other section, but after. Moreover, one of these names was corrected later and one of its signs is badly legible. It seems likely then that when the scribe began to write this section, he knew only the offerings but not their recipients. So, he was not able to write their names at the normal place and added them later in a cramped way. It is tempting to suppose that the latter peculiarity could be linked with the addition of *a-ke kʷe wastu* at the very beginning of the section. If so, the action involving the ‘town’ (*wastu*) may have caused some delay or complication in the cult ceremonies. • **v.1A Posidāhijoi** (?), ‘in the shrine of Poseidon’ (see § 9.17): locative or dative in -ōi (§ 9.1) — the same two possibilities (locative or dative) apply to all the other forms transcribed here as ending in -oi. For these cases, cf. the symmetric *pa-k-ijansi* above. On the suffixes used in shrine names, see § 9.6. • **a-ke kʷe, hagei kʷe** (?), ‘and makes a consecration/purification (?)’ (cf. the purification of Athens in the VI<sup>th</sup> century: Aristotle, *Ath. Pol.* 1): for another possible use of this verb, see § 9.22. Since the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) is not used, we cannot be certain that *a-ke* had an initial aspiration — the sign *a<sub>2</sub>* is used elsewhere in this very text by scribe 44 (*e-ma-a<sub>2</sub>*). Other interpretations have been proposed for *a-ke kʷe*: one of them is *arkhei*, ‘comes ahead’ (??; cf. ἄρχω) — the subject would be ‘the town’,

see below. Another possibility is *agei*, from ḍyw, ‘lead’, certainly used four times in this tablet. *Wastu* would then be the object (‘leads the town’ [??]) — but see below. • *wastu*, ‘town’; cf. ḍστυ — the ‘town’ is not mentioned in the other sections of this tablet. The syntactic function of *wastu* is ambiguous: in theory it could be subject or object of *a-ke k<sup>w</sup>e*. However, the word order of *dōra k<sup>w</sup>e pherei, phorenas (?) k<sup>w</sup>e agei*, with the direct object preceding the verb, suggests that *wastu*, placed after *a-ke k<sup>w</sup>e*, should be its subject. We may wonder why a verb with *wastu* as subject would be inserted between two other verbs (*hijetoi* and *pherei*) which presumably shared another subject, either explicit (‘Pylos...’) or implicit (‘one...’). If *a-ke k<sup>w</sup>e* really meant ‘and makes a consecration/purification (??)’, this ordering could be quite natural, since *hagei* (??) would express an action similar to *hijetoi*, ‘performs a cultual ceremony (??)’ — unlike *pherei*, ‘brings’ and *agei*, ‘leads’ coming afterwards. On the whole, ‘and the town makes a consecration/purification (??)’ offers perhaps the best global explanation of the peculiarities of section v.1A-C — but even so this remains highly speculative. • Because the ‘shrine of Poseidon’ is mentioned, we might have expected that the offerings were meant for Poseidon and consequently were *males*, but since the WOMAN ideogram is used, the recipients must have been not male, but female deities — for a goddess worshipped in the precinct of a male god, see the example of Hera in Zeus’ shrine (v.3B).

• Who are the deities involved in this offering and how many are they? This is one of the most difficult problems of this section — and the references given above propose alternatives to the solution suggested below. In all the other sections, each deity is always given one vessel and often one human being, never more (seven times one vessel and one human being; four times only one vessel). What is the situation in v.1? Let us begin with the offerings themselves. These consist of *one GOLDEN VESSEL* and *two WOMEN*. It is obvious that we have here an exceptional offerings’ scheme: unlike everywhere else in the tablet, there are not as many vessels as human beings. This is perhaps linked with another exceptional peculiarity of this section: the scribe probably ignored the recipients of the offerings when he began to write this section (see above). One vessel and two women suggest that at least *two* (and of course no more than *three*) female deities should be involved. *With two goddesses*, the two sets of offerings would be: a) one vessel plus one woman; b) one woman. *With three*: a) one vessel; b) one woman; c) one woman. Now, there are just *three* words written after ‘1 GOLDEN , 2 WOMEN’: *G<sup>w</sup>owijāi, nq-[ ]* and *Komāwen-tejāi*. It seems excluded that two of them would be the MN of the ‘2 WOMEN’ offered while the third would be a GN: we have seen that the three offerings of this section imply *at least two female divinities*; moreover, there is no single example of a certain MN or human occupational name elsewhere in our tablet.

Each of these three words could be the name of a god, but *ɳa-[ ]* and *Komāwentejāi* could also be epithets like *Arejāi* which qualifies *Hermāhāi* in v.2D. For more details, see below. • *Gʷowijāi*, ‘to (the goddess) Boia’: for the reading of this *hap. leg.*, cf. the MN *Boia* and the PN *Boiai* < βοῦς (< \*gʷow-). It is tempting to consider *Gʷowijāi* not as a qualifier, but as a GN, since elsewhere in this same tablet, qualifiers are put after the GN (cf. *Hermāhāi Arejāi*, ‘to Hermes Areias’ and *Drimijōi* [?], *Diwos* [h]ijewei, ‘to [the god] Drimios [?], the son of Zeus’). Anyway, Hera is described as βοῶπις, ‘cow-eyed’ (i.e. ‘having large eyes’) in Homer. • *ɳa-[ ]*: this *hap. leg.* could be either an epithet of *Gʷowijāi* or a GN. The text is too difficult to allow a reasonable reading, but if the first sign was not to be read *ɳa-*, but *dī-* (???) and if the second could be read as *kā* (??) — see above —, the sequence could be understood as *dī-kā* (??), which obviously suggests a possible *Dikāi* (???) reading (cf. the GN Δίκη, since Hesiod) — this sounds too attractive to be right and the reading is extremely difficult. • *ko-ma-we-te-ja*, *Komāwentejāi* is known only once elsewhere: in TH Of 35.1, this feminine form is written just before the textile trade name *te-pe-ja* (‘women making *te-pa* cloths’: see § 9.12) and in theory it can be either an adjective (‘belonging to Komawens [?]’) or the genitive of a substantive (‘of Komawenteia [?]’). In fact the *ko-ma-we-te-ja* of TH Of is structurally parallel to a certain GN, Hera (*e-ra*: Of 28.2), and could be parallel to another certain GN, Hermes (*e-ma-a<sub>2</sub>*: Of 31.3) — all these tablets were written by the same scribe. This makes the TH *ko-ma-we-te-ja* a convincing GN. If so, it is also likely to be a GN in a religious text like PY Tn 316. It is true that *Komāwentejāi* is obviously derived from a form *Komāwens*, which is only known as a MN (§ 9.3), but *Komāwentejā* could perhaps be a divine epithet, ‘the long-haired one’ (§ 9.3), transformed into a GN just as e.g. the epithet in -οιος Ἀθηναῖα became the well known GN ‘Athena’ — hence its usual contracted form Ἀθηνᾶ. • On the basis of what precedes we could understand *Gʷowijāi*, *ɳa-[ ]* and *Komāwentejāi* in various ways: (a) ‘to (the goddess) Boia; (?) to (the god[dess]) *ɳa-[ ]* (?) to (the goddess) Komawenteia’; (b) ‘to (the goddess) Boia, (?) the *ɳa-[ ]* (?) to (the goddess) Komawenteia’; (c) ‘to (the goddess) Boia; (?) to (the god[dess]) *ɳa-[ ]* (?), the long-haired one’ — the first interpretation has conventionally been adopted here. • v.2 This section is the only one where several shrines are listed (v.2A): each of their main deities (plus Hermes Areias) receive individually their presents (v.2B-C). • v.2A *pe-re-\*82-joi* (?), ‘in the shrine of (the goddess) *pe-re-\*82*’: this shrine name is a *hap. leg.*, but the name of the goddess is known elsewhere; about -oi, see above. • *i-pe-me-deja<joi>* (?) and (v.2C) *i-pe-me-dejāi*: this GN (not known elsewhere) has probably no relation with the heroin Ιφιμέδεια. • *Diwjajoi* (?), ‘in the shrine of (the goddess) Diwia’:

cf. *Diwjāi* below. • v.2B ***pe-re-\*82***: GN known elsewhere. • v.2C ***Diwjāi***, ‘to (the goddess) Diwia’: this deity is known elsewhere — her name may be spelled *di-u-ja*; cf. the Pamphylian GN ΔιϜία and the adjective δῖος, ‘heavenly’. This goddess is obviously closely linked with Zeus, since *Diw-ja* is in fact the feminine form of ‘Zeus’, cf. the dative and genitive of ‘Zeus’ *Diw-ei*, *Diw-os* (see below). Diwia is generally considered as the spouse of Zeus (?). If so, since Hera is already associated with Zeus in v.3B, we may wonder if Diwia and Hera refer to the same goddess or not. Perhaps Diwia could even be understood differently, as the ‘daughter of Zeus (??)’, but cf. *po-si-da-e-ja* above. • v.2D ***e-ma-a<sub>2</sub>***, ***Hermāhāi***, ‘to Hermes’: cf. the GN Ἐρμῆς, ‘Hermes’. The ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) explicitly spells the aspiration. This GN occurs elsewhere in LB. We ignore in what shrine or place Hermes’ offerings were brought. • ***Arejāi***: *hap. leg.*; cf. Ἀρης, ‘Ares’ and Ἀρειος, ‘of Ares’ — *Arejāi* relies apparently on a -ē- (and not -ēs) form of ‘Ares’ name — an -ēs stem would yield \**a-re-i-ja*, \**arehijāi*, cf. *a-re-i-ze-we-i*. This word is written in smaller signs than Hermes, although there was sufficient room in this line: therefore, it seems to qualify Hermes. For epithets formed from the name of Ares and used as divine qualifiers, cf. Δία τὸν Ἀρην, ‘Zeus the avenger’ (lit. ‘of Ares’). • v.3A ***Diwjoi*** (?), ‘in the shrine of Zeus’: this sanctuary occurs elsewhere (spelled *di-wi-jo-*) in the Pylos LB texts. • v.3B ***Diwei, Hērāi, Diwos (h)ijewei***: Zeus is grouped with his wife Hera and his son (see below) in the same section, which starts with the mention of Zeus’ shrine: this gives a clear example of a ‘holy family’ and likely reflects a genuine divine triad (about [h]ijewei, see below). • v.3C ***Drimijōi*** (?), ‘to (the god) Drimios (?): *hap. leg.*; GN (cf. MNs like Δριμαῖος, Δρίμακος, Δριμύλος, Δρίμων, etc.) — less likely, adjective qualifying (h)ijewei (cf. δριμύς, ‘bitter, fierce’). • ***i-je-we, (h)ijewei***: a correction of *i-je-we* in *i-je-<re->we*, *hije<rē>wei*, ‘to the priest’ has sometimes been proposed, but is extremely difficult to accept: the text is good as it is and every other recipient in the tablet is divine and not human. The stem of the word for ‘son’, \**suyu-*, has produced several Greek forms: see § 9.43.6. • This text has been considered in the past as a calendar of religious offerings — this is obviously unlikely. Another interpretation was offered long since: the tablet would have been written in the very last moments of the Pylos palace under the pressure of enemy attack. Its quite unusual offerings would have been made to stave off an impending catastrophe. In fact, E.L. BENNETT’s epigraphic study (see above) has convincingly shown that there is no need to suppose a hasty redaction by a scribe who was trying to record almost desperate decisions: things could have been much more banal and the scribe 44 could just have experienced some difficulties in writing a complicated record.

**§ 9.39. PY Ub 1315** (clay tablet; dimensions:  $16.3 \times 5.5 \times 1.4$  cm; scribe 31; find-spot: Room 99; date: about 1200/1190; location: NAMA).

**Content:** record of leather items for chariot equipments.

**Selected bibliography:** *Avvamento*, 154-155; A. BERNABÉ, in *Austin Colloquium* (forthcoming); *Documents<sup>2</sup>*, 519-521; *Interpretation*, 328-329, 493; M. LANG, *AJA* 62 (1958), 184, 191, pl. 48; *Mémoires III*, 281-282; *Streitwagen*, 66-70.

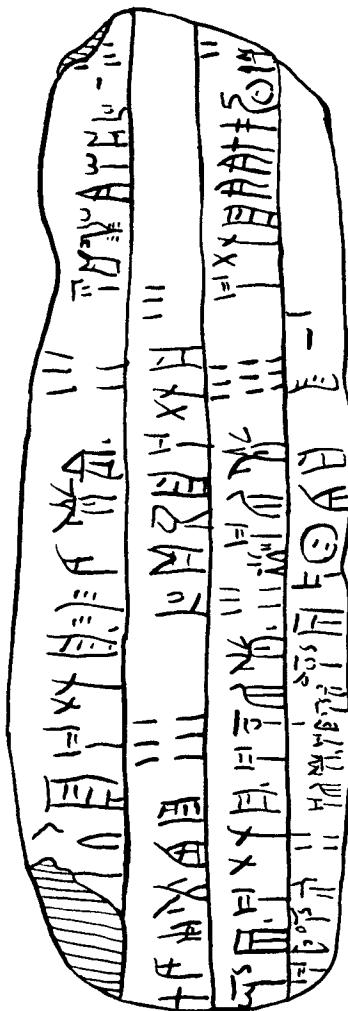


Fig. 9.44. PY Ub 1315 (M. LANG, *AJA* 62 [1958], plate 48)

- .1 ]-wo-ja a-ni-ja , te-u-ke-pi , 5 di-pie-ra<sub>3</sub> e-ru-ta-ra 16[
- .2 ro-u-si-je-wi-ja 6 ra-pté-ri-ja a-ni-ja 3 vac.
- .3a ne-wa; a-ni-ja , a-na-pu-ke , 5 dwo 2 a-pu-ke 9 a-ni-ja-e-ro-pa-jō-qe-riō-ṣā<sup>'2</sup>
- .4a a-pe-ne-wo 4 a-pu-ke , a-pe-ne-wo ne-wa po-qe-wi-ja ZE 11 vac.
- .4b a-pe-ne-wo 4 a-pu-ke , a-pe-ne-wo ne-wa po-qe-wi-ja ZE 11 vac.

Palimpsest. • .1 Perhaps *lro-wo-ja*. • 16[ : 4 units preserved. • .3b ‘*dwo* 2’ apparently added afterwards, in the empty space between ‘5’ and *a-pu-ke*. • .4b *a-pu-ke*, *a-pe-ne-wo* ‘1’ apparently added afterwards, in the empty space between the number ‘4’ and *ne-wa*.

- .1 [ - ]-*wo-ja*: (?)  
*anhijai* (?) *teukhesphi* 5 — *diphtherai eruthrai* 16[ ] —  
 .2 *ro-u-s-ijēwijai* 6 — *raptērijai anhijai* (?) 3 —  
 .3 *newai anhijai* (?) *anampukes* 5 — *dwo* 2 — *ampukes* 9 — *anhijai* (?) -*e-e-ro-pa-jo-qe-ri-ṣa* 2 —  
 .4 *apēnēwōn* (?) 4 — *ampuks* (?) *apēnēwōn* (?) 1 — *newai phorgʷēwijai*: *DZE(ugos)* 11.
  
- .1 [ - ]-*wo-ja*: (?)  
 5 reins with their equipment (?) — 16[ ] red hides —  
 .2 6 “pieces of the *ro-u-si-eus* type” — 3 mended (?) reins —  
 .3 5 new reins without head-bands — 2 *dwo* — 9 head-bands — 2 reins -*e-e-ro-pa-jo-qe-ri-ṣa* —  
 .4 4 <reins (?)> of cart-animal(s) (?) — 1 head-band of cart-animal(s) (?) — 11 PAI(rs) new halters.’

.1 [ -wo-ja: the larger signs suggest that this word is the heading of the text (PN or MN [??]) — better than \*[*a-ra-*]r̥o-wo-ja, \*[*ara*]rwojai, \*['fit]ted'. • *a-ni-ja, anhijai* (?): cf. ἡνία, ‘reins’. The archaic epigraphic Laconian form ἀνιοχίōν, ‘holding the reins’, i.e. ‘driving (the chariot)’ (cf. ἡνιοχέω), suggests that the aspiration of ἡνία was secondary. The LB data go in the same direction, since there is no single example of \**a<sub>2</sub>-ni-ja* (with the ‘doublet’ syllabogram *a<sub>2</sub>* rendering specifically [ha]: § 9.1) while we have a dozen of *a-ni-ja* spellings. This provides a third example of a LB word connected with transportation which does probably not show the secondary aspiration found in Attic Greek (see the LB names of the ‘horse’, *ikkʷos* and the ‘wheel’, *armo*: § 9.4, 9.16). Ἡνία could (but need not necessarily) come from an \*ānsiā form, with an evolution similar to that of μύν and ὕμος (see § 9.6 and 9.15): *a-ni-ja* could then represent \*ānhijai, \*ānhijai or \*ānijai (\*ānhijai has been conventionally adopted here). • *teukhesphi*, ‘with their equipment (?)’: cf. τεῦχος, ‘war implements, armour, arms’ (the word is mostly in plur.). On the -phi ending, see § 9.9.

• *di-pte-ra<sub>3</sub>, diphtherai*: cf. διφθέρα; the word is written with the ‘complex’ syllabogram (§ 9.1) *pte* replacing *pe-te* and with the ‘doublet’ syllabogram *ra<sub>3</sub>* specifically spelling [lai/rai]. • *eruthrai*: cf. ἐρυθρός. • .2 *ro-u-s-ijēwijai*: substantive or adjective in -ia from a theme in -εύς, derived in its turn from a form in -ιο-. If adjective, it could qualify an implicit *di-pte-ra<sub>3</sub>, diphtherai*, ‘hides’. No satisfactory interpretation emerges: colour name from ροῦς, ‘sumach’ (‘yellow pieces [??]’), or derivative from the PN (known elsewhere at PY) *ro-u-so*, *Lousoi* (‘pieces [?] of the Lousoi’s people type [??]’). • *ra-pte-ri-ja, raptērijai*: adjective from *raptēr* (*ra-pte*), ‘sewing-man, saddler (?)’ qualifying the implicit ‘hides’ (see above) — cf. ραπτής, ‘stitcher’. The word is written with the ‘complex’ syllabogram (§ 9.1) *pte* replacing *pe-te*. *Raptērijos* could perhaps have the same meaning as ραπτός, ‘mended’ (?; cf. *Od.* 24.228–229).

• .3 *newai*: cf. νέος. • *anampukes*, ‘without head-bands’: cf. ἄμπυξ and the ‘alpha privative’ (ἀν-: § 9.14). • **dwo 2**: *dwo* is the ‘complex’ syllabogram (§ 9.1) replacing *do-wo vel sim.*; when used to spell a whole word, *dwo* is normally interpreted as ‘two’, but we would expect here the name of an object — otherwise, the name of the listed items would be lacking, with a very strange repetition of the number ‘two’, written both phonetically (*dwō*, cf. δύο/δύω, δώδεκα) and ideographically (‘2’) — but see below. However, there is no satisfactory Greek interpretation of *dwo* — perhaps dual of δύη, ‘misery’ with a technical meaning (???): compare λῆρος, which may mean ‘useless’ and λῆρος, ‘gold ornament’ (both forms could have the same etymology). There is another possible solution, admittedly strange and extremely unlikely: ‘*dwo 2*’ would be in fact *two numbers ‘2’ intended to be added to the preceding number ‘5’ (???)*. We should then have  $5 + 2 + 2 = 9$  (???) reins without head-bands’ and these

9 (???) pieces would nicely correspond to the ‘9 head-bands’ registered immediately afterwards (???). • **a-ni-ja-e-e-ro-pa-jo-qe-ρo-ṣa**: this sequence written in *scr. cont.* shows how useful the word separation regularly practised by the Mycenaean scribes is. There could be at least three words here. • **a-ni-ja(-e-)**: the first word of this sequence comes very probably from the word for ‘reins’, as on l. 2-3. We can understand either *anhijāe* (?), ‘two reins (?)’ (dual in -āe; cf. the number ‘2’; this form would be the only example of -āe at PY, however) or *anhijai* (?; plur.). • **(-e-)e-ro-pa-jo-qe-ρo-ṣa**: this sequence is exceedingly difficult. After the word *anhijai* (?), a possible transcription could be: *en* (??; cf. ἐν) *e-ro-p-ajoi* (??; see below) *kʷelonaṣai* (??; cf. πέλω, ‘be’ < \**kʷel-*), i.e. ‘reins (?) being (?) in (?) the *e-ro-p-ajo-* (?)’. The sequence *e-ro-p-ajoi* (??), at the locative, should be the name of some ‘place’ where the reins were supposed to have been put in, but there is no convincing interpretation at hand for this word. It could be e.g. a compound with *en*, ‘in’ (cf. ἐν-) and a name of the lexical family of λώπη, ‘covering, robe, mantle’: a form *ellōpaion* (???) would then perhaps mean ‘the place where the chariots are put “in the coverings” (???)’ — cf. *Il.* 5.194-195, 8.441, which make clear that the chariots were covered with cloths when not used. There could be a LB compound of λώπη in *le-pi-ro-pa-ja*, if read as *leplōpaja* in KN Od 696.1. This is an *extremely* difficult hypothesis, however. See the bibliography above for other interpretations. • **.4 apēnēwōn** (?): if connected with ἀπήνη, ‘four-wheeled wagon’, *a-pe-ne-wo* should be an -εός derivate in the genitive sing. or plur., qualifying an implicit item (like possibly *raptērijai* above): ‘of cart-animal(s) (?)’. • **a-pu-ke**, ‘head-band(s)’: the normal reading of this form should be the plural *ampukes*, but the number ‘1’ which follows would call for the singular *ampuks*, unless (pers. com. of A. Morpurgo Davies) it is a word used only in the plural (*plurale tantum*) in LB (??). The other possibilities are a plain mistake (?; plural, instead of the singular: see § 9.10, with *poliwa*) or an exceptional spelling of the [k] of *ampuks*, written with an -e ‘dummy’ vowel (§ 9.1) in -ke (?). Anyway, this head-band was intended to fit ‘cart-animal(s) (?)’ (see above). • **phorgʷēwijai**, ‘halters’: cf. φορβειά, ‘halter’. • **D<sup>Z</sup>E(ugos)**: § 9.16.

**§ 9.40. PY Un 267** (clay tablet; dimensions: 9.0 × 15.5 × 1.7 cm; scribe 1; find-spot: Archives Room Complex 1387; date: about 1200/1190; location: NAMA).

**Content:** delivery of more than two tons aromatic stuff to a perfumer.

**Selected bibliography:** *Aspects*, 117-119; *Avviamento*, 170-171; E.L. BENNETT, JR., in *Mykenaika*, 109; *Documents*<sup>2</sup>, 223-224, 441-442; I. ERARD-CERCEAU, *SMEA* 28 (1990), 274-275; *Handbuch*, 517-518; *Interpretation*,

269-270; J.T. KILLEN, in *Economy*, 169-172, 176; J.T. KILLEN, *Herma-thena* 96 (1962), 67-69, 72; *Mémoires II*, 159; *Perfume; Textos*, 72; M. WYLOCK, *SMEA* 11 (1970), 119; Chapter 7.10.2 above.

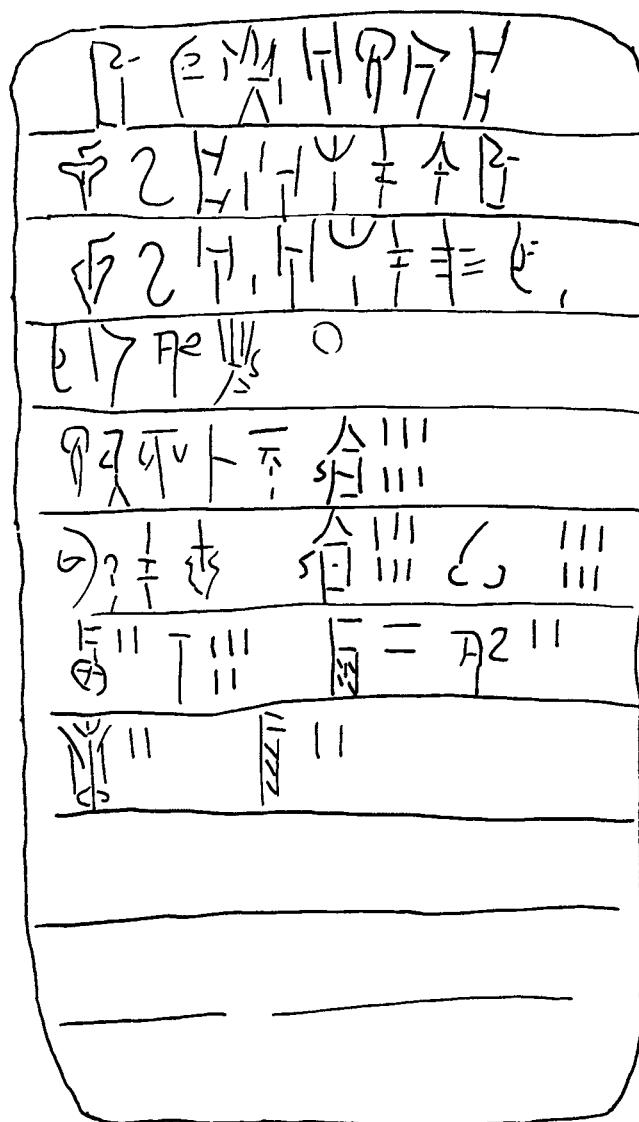


Fig. 9.45. PY Un 267 (PT II, 28)

- .1 o-do-ke , a-ko-so-ta vac.
- .2 tu-we-ta , a-re-pa-zo-o vac.
- .3 tu-we-a , a-re-pa-te vac.
- .4 ze-so-me-no vac.
- .5 ko-ri-a<sub>2</sub>-da-na AROM 6 vac.
- .6 ku-pa-ro<sub>2</sub> AROM 6 \*!57 16
- .7 KAPO 2 T 5 VIN<sup>a</sup> 20 ME 2 vac.
- .8 LANA 2 VIN<sup>b</sup> 2 vac.
- .9-11** vacant

Perhaps palimpsest. • .3 After *a-re-pa-te*, [ ] , *ze-so-me* ] was written and erased (the scribe began here the word that eventually he decided to write in the next line). • .4 *ze-so-me-no* is perhaps followed by a damaged divider and anyway by [ ] *ko-ri* ] (beginning of *ko-ri-a<sub>2</sub>-da-na*: once again, the scribe began here the word that he decided afterwards to write in the next line). • .7-8 The two ideograms for ‘wine’ are clearly different and obviously this is significant: VIN<sup>a</sup> (§) has three vertical strokes and apparently four diagonal ones, while VIN<sup>b</sup> (§) has only two vertical and three diagonal strokes (see below for a possible interpretation). • .9-11 The actual lines are written on traces of other lines and of a previous text. • .9 [ ] *ri* ] at left. • .v Large double mark not identifiable with a LB sign, perhaps made by a small finger.

[.1] *Hō(s)* (??) *dōke a-ko-so-tās* [.2] *Thuwestāi aleiphad<sup>z</sup>ohōi* [.3] *thuweha aleiphatei* [.4] *d<sup>z</sup>es(s)omenōi*:  
 [.5] *korihadna* AROM 6 — [.6] *kuparjon* AROM 6 — \*!57 16 — [.7]  
*KARPOS* 2 T 5 — VIN<sup>a</sup> 20 — *ME(li)* 2 — [.8] *LANA* 2 — VIN<sup>b</sup> 2.

‘[.1] *a-ko-so-tas* delivered as follows (??) [.2] to Thyestes, the perfumer, [.3] ingredients for aromatics intended for unguent [.4] to (be) boil(ed):

[.5] coriander, 576 litres AROMATIC STUFF — [.6] cyperus, 576 litres  
 AROMATIC STUFF — 16 \*!57 — [.7] 240 litres FRUITS — 576  
 litres WINE<sup>a</sup> — 57.6 litres HO(ney) — [.8] 6 kg wool — 57.6 litres  
 WINE<sup>b</sup>.

The total of the items delivered to the perfumer Thyestes exceeds two tons — and there is no mention of oil, which was the basic stuff for making perfumes (§ 9.33). Since the delivery was made by *a-ko-so-tas*, one of the most influent Pylian officers, it is obvious that the palace had an impressive perfume industry. • .1 *o-*: § 9.36. • *dōke*: cf. δῶκε/ἔδωκε, ‘he delivered’. On the meaning of δίδωμι and the omission of the augment, see § 9.16, 9.3. • *a-ko-so-tās*:

MN (see above; better than a title of civil servant). • .2 *Thuwestāi*: *hap. leg.* Although he bears the same name as Thyestes (Θυέστης), the famous son of Pelops, this man has nothing to do with the royal family of Mycenae — the LB tablets similarly speak about some Achilles or Hector who are obviously not the Homeric heroes. In this instance the name Thyestes fits perfectly the occupation of its bearer, since *Thuwestās* is etymologically ‘Mr. Pestle’ (cf. θυέστης). • *aleiphad<sup>z</sup>ohōi*, ‘perfumer’ (lit. ‘unguent boiler’): cf. ἄλειφαρ, ‘unguent’ and ζέω, ‘boil’. • .3 *thuweha*: the items listed here as *thuweha* include wool, whose natural oil was extracted and provided lanolin, which was used in the preparation of unguents. Since lanolin’s smell is unpleasant, *thuweha* should *not* be rendered with ‘aromatics’, but with ‘ingredients for aromatics’ — cf. θύος, ‘fragrant stuff’ (Hippocrates). See § 9.44 for the interpretation of *tu-wō-te-to* in TH Fq 126. All the items listed afterwards were clearly meant for use in perfume making. • *aleiphatei*: cf. ἄλειφαρ; on the dative in ...*ei*, see § 9.6. • .4 *d<sup>z</sup>es(s)omenōi*: cf. ζέω, ‘boil’ < \*yes-. Since this verb comes just after *aleiphatei*, it is more likely that it qualifies the ‘unguent’ than Thyestes, the perfumer. Its voice is either passive (‘to be boiled’) or middle (‘to boil’) — the form is of course medio-passive. • .5 *ko-ri-a<sub>2</sub>-da-na, korihadna*, ‘coriander’: § 9.7; the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) explicitly spells the aspiration. • .6 *ku-pa-ro<sub>2</sub>, kuparjon*: cf. κύπειρον, ‘galingale’ (a plant of the *Cyperus* group); its role in the making of perfumes is known in classical times; the word is written with the ‘pseudo-complex’ syllabogram (§ 9.1) *ro<sub>2</sub>*. • \*157: unidentified item. • .7 *KAPO, KARPOS, FRUITS*: the monogram (§ 9.18) ☷ associates the two syllabograms *ka* (⊕) and *po* (Ἔ): it renders the word for ‘fruits’. Fruits were regularly used for scenting oil — Theophrastus mentions apple or quince scented oil. • **WINE<sup>a</sup>/WINE<sup>b</sup>**: these ideograms must characterise wines of different qualities. Since their proportions are 10 (WINE<sup>a</sup>) ~ 1 (WINE<sup>b</sup>), WINE<sup>b</sup> (Ἅ) should refer to a more refined item than WINE<sup>a</sup> (Ἄ). Wine was used in the making of perfumes in classical Greece (R.J. FORBES, *Studies in Ancient Technology*, III, Leiden, E.J. Brill, 1965<sup>2</sup>, 33-35). • **ME(lī)**, ‘honey’: abbreviation of *me-ri*. ‘Honey and milk were favourites mediums in Antiquity for mixing solid materials to treat the skin’ (R.J. FORBES, *op. cit.*, 16). • .8 **WOOL**: likely used by perfumers because of its lanolin (see above).

**§ 9.41. PY Un 718** (clay tablet; dimensions: 12.7 × 19.7 × 1.9 cm; scribe 24; find-spot: Archives Room Complex 8327; date: about 1200/1190; location: NAMA 12 574).

**Content:** fiscal record for a banquet in honour of Poseidon.

**Selected bibliography:** E.L. BENNETT, JR., in *Mykenaika*, 116; *Documents*<sup>2</sup>, 280-284, 458; *Dosmoi*, 77-129; *Études*, 342; *Interpretation*, 215-216; *Introduction*, 156-157; *Mémoires IV*, 67-85; *Opferfaben*, 165-166; T.G. PALAIMA, *Hesperia* 73 (2004), 217-246; T.G. PALAIMA, in T. KRISCH et al. (eds), *Analecta homini universalis dicata*, Stuttgart, Akademischer Verlag Stuttgart, 2004, 269-275; *Scripta Ruijgh II*, 30-32; *Textos*, 73.

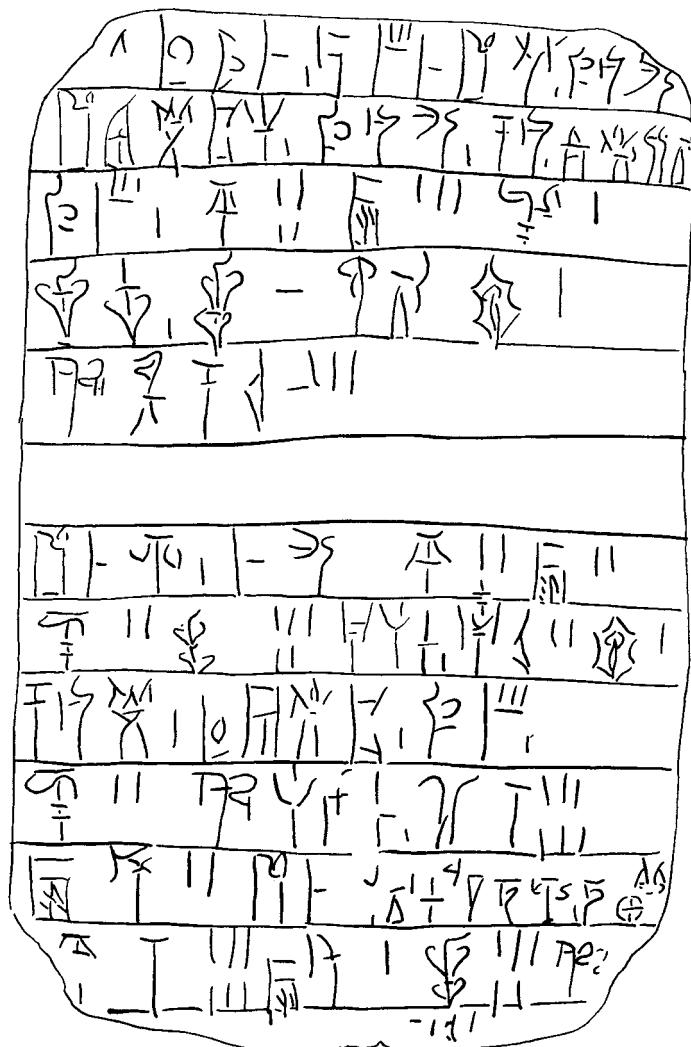


Fig. 9.46. PY Un 718 (PT II, 83)

- .1 sa-ra-pe-da , po-se-da-o-ni , do-so-mo  
 .2 o-wi-de-ta-i , do-so-mo , to-so , e-ke-ra<sub>2</sub>-wo  
 .3 do-se , GRA 4 VIN 3 BOS<sup>m</sup> 1 vac.  
 .4 tu-ro<sub>2</sub> , TURO<sub>2</sub> 10 ko-wo , \*153 1 vac.  
 .5 me-ri-to , v 3 vac.  
 .6 vacat  
 .7 o-da-a<sub>2</sub> , da-mo , GRA 2 VIN 2 vac.  
 .8 OVIS<sup>m</sup> 2 TURO<sub>2</sub> 5 a-re-{ro} , AREPA v 2 \*153 1  
 .9 to-so-de , ra-wa-ke-ta , do-se , vac.  
 .10 OVIS<sup>m</sup> 2 me-re-u-ro , FAR T 6 vac.  
 .11 VIN S 2 o-da-a<sub>2</sub> , wo-ro-ki-jo-ne-jo , ka-'ma'  
 .12 GRA T 6 VIN s 1 TURO<sub>2</sub> 5 me-ri[ ]  
 .13 vac. [ me]ri-ṭo v 1

Palimpsest. • .4 Number ‘10’ perhaps over erasure, unless written over a former text itself erased. • .8 *a-re-{ro}*: mistake for *a-re-<pa>*, cf. AREPA. The sign *pa* (†) has just one horizontal stroke more than *ro* (†). • .11 -*jo* , *ka-'ma'* over erasure. • .12 *me-ri[* over erasure.

- .1 *sa-ra-peda*, Poseidāhōni dosmos:  
 .2-5 *owide(r)tāhi dosmon tos(s)on e-ke-ra<sub>2</sub>-wōn* [.3] *dōsei*: GRA 4 — VIN 3 — BOS<sup>m</sup> 1 — [.4] *tūrjoi TŪRJOI* 10 — *kōwos* 1 — [.5] *melitos* v 3;  
 .7-8 *hō(s) d'ar hāi* (?), *dāmos*: GRA 2 — VIN 2 — [.8] OVIS<sup>m</sup> 2 — *TŪRJOI* 5 — *alei<phar> ALEIPHAR* v 2 — 1;  
 .9-11 *tos(s)on de lāwāgetās dōsei*: [.10] OVIS<sup>m</sup> 2 — *meleuron* FAR T 6 — [.11] VIN S 2;  
 .11-13 *hō(s) d'ar hāi* (?), *wo-ro-k-ijōnejon* (?) *ka-mas*: [.12] GRA T 6 — VIN S 1 — *TŪRJOI* 5 — *meli[ ]* [.13] — [ *me]litōs* v 1.

- .1 ‘*sa-ra-peda*, tax due to Poseidon:  
 .2-5 *e-ke-ra<sub>2</sub>-won* [.3] will pay so much tax to the sheep binders/ trussers/ inspectors: 384 litres WHEAT — 86.4 litres WINE — 1 BULL — [.4] 10 cheeses CHEESES — 1 FLEECE \*153 — [.5] 4.8 litres honey;  
 .7-8 item, the *dāmos*: 192 litres WHEAT — 57.6 litres WINE — [.8] 2 RAMS — 5 CHEESES — 3.2 litres unguent UNGUENT — 1 FLEECE \*153;  
 .9-11 on the other hand the “leader of the people” will pay so much: [.10] 2 RAMS — 57.6 litres flour of FAR — [.11] 19.2 litres WINE;  
 .11-13 item, the *ka-ma* of *wo-ro-k-ijōn* (?): [.12] 57.6 litres WHEAT — 9.6 litres WINE — 5 CHEESES — [ ]honey — [ ] [.13] — 1.6 litre[ho]ney.’

Four people or communities pay taxes to the god Poseidon: they are listed in decreasing order according to the quantity of the goods delivered — compare for instance the quantities of wine: 86.4 > 57.6 > 19.2 > 9.6 litres (the proportions are 9 ~ 6 ~ 2 ~ 1). • The impressive amount of expensive victuals listed in this text and their proportions match fairly well other documents which demonstrably compute items for the official banquets which were regularly organised by the Mycenaean palaces (about the quantities of food and beverage involved, see L. BENDALL, in *Rome Colloquium* [forthcoming]). This must also be the purpose of this text. • This tablet uses four times **monograms** (§ 9.18): *TURO*<sub>2</sub> (⌚: three times) and *AREPA* (⌚: once). • .1 *sa-ra-peda*: since there is a form *sa-ra-pe-do[* (PY Er 880.2: same scribe as here), this word looks like a compound of πέδον, ‘ground’; it could be the name of a kind of land (?) or a PN (?). • *Poseiddāhōni*: see § 9.17. • *dosmon*: elsewhere its meaning is obviously ‘tax’ (§ 9.20). However, in the context of a State banquet offered to Poseidon, we may wonder if *dosmos* was not still associated here with the idea of a ‘gift’ (its root is also found in δίδωμι, ‘give’). In this context, *dosmos* could perhaps then convey the idea of an ‘obligatory gift’. • *tos(s)on*: see § 9.2. • .2 *owide(r)tāhi*: *o-wi-de-ta-i* was long ago interpreted as an infinitive in *-sthai*, but this is highly improbable, given that *jo-wi-de-ta[* occurs on a label, where an infinitive would be strange (PY Wa 731, same scribe as here — this is the only other example of the word). This form is obviously the dative-locative plur. in *-āhi* of a compound. Its first element may be compared with οἶς, ‘sheep’ < \**owi-*; the second, with δέρω, ‘flay’, δέω, ‘bind’ or even perhaps ἰδεῖν, ‘see’ (in the latter case, \**owi-wid-etā-s* > \**owid-etā-s* [haplology]). The *owide(r)tāhi* were apparently supposed to collect the ‘taxes’ and perhaps to organise the banquet. • *e-ke-ra<sub>2</sub>-wōn*: MN of a very important Pylos officer. The word is written with the ‘pseudo-complex’ syllabogram (§ 9.1) *ra<sub>2</sub>*. It has been suggested that this is the name of the king (*wanaks*) himself, but this seems difficult. • *dōsei*, ‘he will pay’: on the meaning of δίδωμι in the LB texts, see § 9.16. • .4 *tu-ro<sub>2</sub>*, *tūrjoi*: cf. τῦρος, ‘cheese’; the word is written with the ‘pseudo-complex’ syllabogram (§ 9.1) *ro<sub>2</sub>*. On the repetition of *tūrjoi* and *TŪRJOI*, see § 9.15. • *kōwos*: cf. κῶας, ‘fleece’. • .5 *tūrjoi..., kōwos..., melitos*: observe the syntactic variation between nominatives (or accusatives...) and genitive (for parallels, see § 9.6, 9.44-46; the *nominative* of *meli* is used in KN Gg). • \*153 (⌚⌚): this ideogram of the ‘fleece’ is a hide ligatured with the abbreviation *ko* (Ϙ) of *ko(-wo)*, *kō(wos)*, ‘fle(ece)’. • .7 *hō(s) d'ar hāi* (?), ‘item’: § 9.30. This itemising expression introduces here a paragraph without any verb nor complement, differently from the preceding one: compare ‘*e-ke-ra<sub>2</sub>-won* will pay so much tax to the sheep binders/trussers/inspectors:’ (l. 2-3) and ‘item, the *dāmos*:’ (l. 7). The same structure appears on l. 9-11: compare ‘and

the “leader of the people” will pay so much:’ (l. 9) and ‘item, the *ka-ma* of *wo-ro-k-ijōn* (?)’ (l. 11). It is obvious that the content of the paragraph introduced by *hō(s) d'ar hāi* (?) is supposed to have the same basic subject as the preceding one: ‘item, the *dāmos*:’ clearly means ‘item, the *dāmos* <will pay so much tax to the sheep binders/trussers/inspectors>:’; etc. • ***dāmos***: § 9.29.

- .9 It is better not to understand ***to-so-de*** here as *tos(s)onde*, ‘so much’ (cf. *τοσ[σ]όσδε*), but as *tos(s)on de*, ‘and (= δέ) so much (= τόσ[σ]ος):’ see § 9.31.
- ***lāwāgetās***, ‘leader of the people’: § 9.31.
- .10 ***meleuron***: *hap. leg.* In theory *meleuron* could either share the meaning of μάλευρον/ἄλευρον, ‘wheat-flour’ or have the generic sense of ‘flour’ (cf. other words of its lexical family like μύλη, ‘mill’, etc.). The second meaning seems more likely because of the LB feminine occupational term *me-re-ti-ri-ja*, *meletriai*, lit. ‘grinders’ (*meletriai* is a member of the same etymological family as *meleuron*): it seems much more natural that these *meletriai* had to ‘grind’ any kind of grain or pulses than they handled exclusively wheat (cf. ἀλετρίς, ‘female slave who grinds grain’).
- **FAR**: this ideogram occurs elsewhere without any additional word (see e.g. KN Fs 2, where it is an autonomous item, parallel to wine, barley, figs and oil) and is measured in solid capacity units. FAR must then represent some solid food different from ‘barley grain’. It must also be different from ‘wheat grain’, since our tablet registers also GRA. Several LB studies transcribe nowadays FAR as the abbreviation of FAR(ina), i.e. FL(our). This is a mistake, because the official transcription of the ideogram 𒃩 is definitively *not* an abbreviated Latin word, but a complete one: FAR stands for Latin *far*, genitive *farris* which means either ‘spelt’ or ‘flour’ — see the Proceedings of the Fifth International Colloquium on Mycenaean Studies, Salamanca, 1970, in *Minos* 11 (1972), XXII. The ideogram FAR has thus no official unambiguous sense; for its precise meaning, see below.
- ***meleuron* and FAR**: we have seen above that *meleuron* does likely not mean ‘wheat-flour’ but more generically ‘flour’. If so, FAR can hardly mean ‘flour’ too, because the nexus *meleuron* FAR would then mean ‘\*\*flour FLOUR’, without any identification of the kind of flour registered. FAR must then represent a specific solid food able to be milled and different from the two main Mycenaean cereals, wheat (GRA) and barley (HORD). It may be either a third cereal or some pulse — for the wide archaeobotanical range of cereals and pulses found in the late Bronze Age Greece, see P. HALSTEAD, *ABSA* 90 (1995), 230; both cereals and pulses were demonstrably milled. It is now time to consider a peculiarity of FAR: its form (𒃩) is not only used as an ideogram, but also as the syllabogram \*65 — just like e.g. the LB sign 𒄑 is either the syllabogram *mu* or the ideogram BOS (ox). The probable reading of \*65 is *ju?* (§ 9.1). Let us then suppose that the use of *ju?* as symbol of some specific cereal or pulse was a Greek creation and that *ju?* was thus the abbreviation of a Greek word. Is there an alph. Gr. name of cereal or pulse which could match

an initial *ju*? The answer is obvious: ζειαί, with a root \*yew- which could yield a word beginning with \*yu.... The standard definition of ζειαί is ‘one-seeded wheat; einkorn’ (*Triticum monococcum* L.), but R. PALMER, in *Mykenaika*, 480 considers it is ‘probably emmer’, i.e. *Triticum dicoccum* Schübl. Actually, both crops are listed by HALSTEAD (see above) as Mycenaean Greek cereals. However, the name of the cereal or pulse symbolised by FAR cannot be considered just as a variant of ζειαί, because Homer mentions ζειαί as *horses’ fodder*: if the Mycenaean situation was similar to the Homeric one, this cannot be reconciled with either the banqueting ambiance of our tablet or the religious context of KN Fs. We must then suppose that FAR could symbolise some other product than ζειαί — PALMER, *op. cit.*, 488 suggests ‘bread wheat’, i.e. *Triticum aestivum* L., which is suitable to make fine flour. Before we accept this interpretation, there is another point to consider, however. The initial [y...] of the root \*yew- became [d<sup>z</sup>...] in Greek as shown by ζειαί. This phenomenon was already realised in the LB tablets, cf. e.g. \*yeug- > d<sup>z</sup>eug-, written ze-u-k... (§ 9.4). But if the LB words built on \*yew- began by [d<sup>z</sup>...], their abbreviations should be written by signs of the z- series. So, our *ju*? abbreviation becomes difficult. This problem may perhaps be solved if we remember that the ideogram FAR was presumably created a long time before our last LB texts. At that stage we can suppose that an initial [yu-] was still pronounced as such and the first sign of the cereal name was adopted to indicate the cereal itself. It was only later on that the evolution [y...] > [d<sup>z</sup>...] took place. If so, FAR could have remained untouched just *because it was no longer felt as a syllabogram but as an ideogram* and had lost the link with the actual pronunciation of the word that it symbolised. Moreover, A. Morpurgo Davies reminds me that some evidence for a relatively late date of the change \*yu- > d<sup>z</sup>u- may be provided by the word *e-pi-<sup>65</sup>-ko* of PY Vn 46.11 if *Interpretation* was right in taking it as a compound of (the later) ζυγόν, ‘yoke’. All this is possible but very speculative. On the whole, we may be reasonably sure that FAR is the symbol of some solid food (cereal or pulse) different from wheat (GRA) and barley (HORD), but its definite identification (and the eventual reading of its underlying word) must still remain uncertain. • .11 *wo-ro-k-ijōnejon* (?), ‘of wo-ro-k-ijōn (?)’: § 9.31. • *ka-mas*: neuter substantive in -ας designating a kind of land parcel and interpreted either as *khamas* (??; cf. χαμαί, ‘on the ground’) or *kamas* (??; cf. κάμνω, ‘work’ and καμάν· τὸν ἀγρόν. Κρῆτες, ‘the field. Cretans’ [Hesychius]).

**§ 9.42. PY Vn 10** (clay tablet; dimensions: 10.0 × 6.9 × 1.5 cm; scribe 3; find-spot: Archives Room Complex 3270; date: about 1200/1190; location: NAMA).

**Content:** delivery of wood by woodcutters to the palace’s wheel workshop.

**Selected bibliography:** V.L. ARAVANTINOS – L. GODART – A. SACCONI, in *Neuen Linear B-Texte*, 56; *Aspects*, 121-122; *Avviamento*, 172-173; M. CIVITILLO, in *Rome Colloquium* (forthcoming); *Documents*<sup>2</sup>, 349-350; *Études*, 348-349; *Interpretation*, 367-368; J.L. MELENA in *Austin Colloquium*, § 4 (forthcoming); *Mémoires* II, 255; T.G. PALAIMA, *SMEA* 21 (1980), 199-203; *Scribes Pylos*, 68-70, 217; *Streitwagen*, 64-65; *Textos*, 71; Chapter 7.3.1 above.

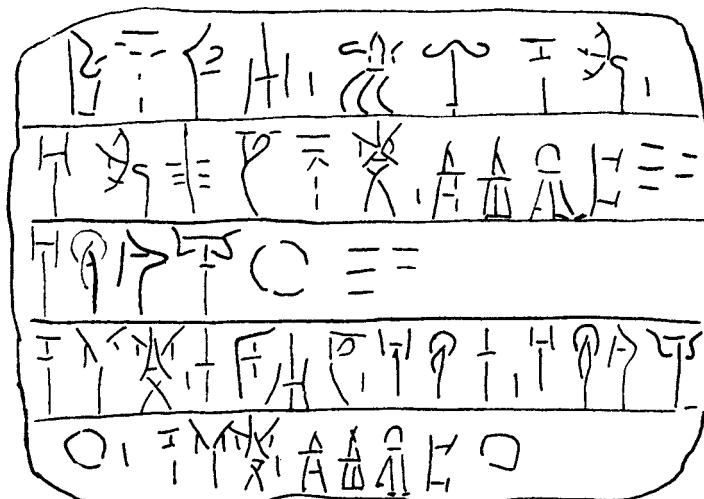


Fig. 9.47. PY Vn 10 (PT II, 2)

- .1 o-di-do-si , du-ru-to-mo ,
- .2 a-mo-te-jo-na-de , e-pi-\*19-ta 50
- .3 a-ko-so-ne-qe 50 vac.
- .4 to-sa-de , ro-u-si-jo , a-ko-ro , a-ko-so-ne
- .5 100 , to-sa-de , e-pi-\*19-ta 100 vac.

.1 Perhaps erasure between *-ru-* and *-to-*. • .2, .5 *e-pi-\*19-ta*: the sign *\*19-* is written in an idiosyncratic way, but the reading is now paralleled by *e-pi-\*19-ta* in TH Wu 430 (without any other word, however). • .5 ‘100’: perhaps ‘101’, but less probable. • .v Five contiguous lines made with the fingertips.

- [.1] *Hō(s) (?) didonsi (?) drutomoi (?)* [.2] *armotejōnade:*  
*epi-\*19-ta* 50 [.3] *aksones kʷe* 50;
- [.4] *tos(s)a de Lousijos Agros:*  
*aksones* [.5] 100;  
*tos(s)a de epi-\*19-ta* 100.

‘[.1] The woodcutters (?) deliver (?) as follows (??) [.2] to the wheel (?) workshop:  
 50 *epi-\*19-ta* [.3] and 50 (pieces of wood for) axles;  
 [.4] on the other hand, Lousios Agros <delivers> so many:  
 [.5] 100 (pieces of wood for) axles;  
 and so many *epi-\*19-ta*: 100.’

.1 *o-*: § 9.36. • ***didonsi*** (?) ***drutomoi*** (?), ‘the woodcutters (?) deliver (?)’: the words could be in the singular instead of the plural. On the meaning of δίδωμι, see § 9.16. • .2 ***armotejōnade***: a plur. is in theory possible. Since *armo* means ‘wheel’ (§ 9.16), *armotejōn* should etymologically mean ‘wheel (?) workshop’, but we cannot totally exclude that it could already have meant ‘chariot (?) workshop’. This *armotejōn* could have been located in the North-East Workshop of Pylos. • ***epi-\*19-ta***: the number of *epi-\*19-ta* matches exactly the number of ‘(pieces of wood for) axles’: the *epi-\*19-ta* could thus be pieces of wood used for wheels. There is a parallel compound in ἐπι- in the alph. Gr. wheel’s lexicon: ἐπίσ(σ)ωτρον, ‘tyre of a wheel’ (< \*k<sup>2</sup>ō-). Could *epi-\*19-ta* represent \*epit<sup>2</sup>ōta (?), ‘tyres (??)’? Each of these 50 pieces of wood should then be long and large enough for two tyres. If so, \*19 could be read as \*zo<sub>2</sub>, rendering specifically [t<sup>2</sup>o] (?). It would then be a ‘doublet’ (§ 9.1), while zo, as a ‘basic’ syllabogram, renders both [t<sup>2</sup>o] and [d<sup>2</sup>o]. To be sure, we still need a satisfying explanation of all the terms of the whole \*19 dossier, however — and see ARAVANTINOS – GODART – SACCONI quoted above. • ***aksones***: cf. ᾥξων. • ***kʷe***: see § 9.23. • .4 It is better not to understand ***to-sa-de*** here as *tos(s)ade*, ‘so many’ (cf. τοσ[σ]όσδε) but as *tos(s)a de*, ‘and (= δέ) so many (= τόσ[σ]ος)’: see § 9.31. • ***Lousijos Agros***: PN known elsewhere (cf. the PN Λουσοί and ἀγρός); this second delivery is presumably also made ‘to the wheel (?) workshop’. • .4-5 [.4] ***aksones*** [.5] **100**: the number is written on l. 5, while the item’s name is on l. 4. This is quite unusual: normally LB scribes avoid this type of arrangement.

#### 4. THEBES

##### § 9.43.1. *The Aravantinos tablets*

The magnificent discovery by V. Aravantinos of about 240 new LB documents during the emergency excavations that he succeeded in conducting between 1993 and 1995 in the centre of Thebes (odos Pelopidou) has uncovered many LB novelties. The interest of these texts is considerable because their

content differs from that of the earlier tablets. The book (*TOP*) which provides the first complete edition of these important tablets has been very welcome, but it appeared only recently (end of 2001). The result is that these documents have not yet been the object of the long and detailed scrutiny which was consecrated to the other LB tablets. Therefore, the texts themselves and the interpretations of the first editors have still to be carefully checked and discussed, as was done for all other tablets — this work is currently in progress. That is why this section about the new Thebes documents is so much longer and more detailed than the others — it may be seen as an example of the type of more or less detailed discussion that is needed for new LB tablets. This section is also somewhat more speculative than the others since at this stage of the inquiry it is necessary to try out a number of different hypotheses; of course it is by no means intended to provide the last word about these difficult texts.

### **§ 9.43.2. *The Aravantinos tablets presented below***

The three Aravantinos tablets presented below are members of a single series, TH Fq, and were written by the same scribe (305). All the Fq documents of scribe 305 share a number of common features. The most obvious are: ‘page’ (see Chapter 2.2.3 above) tablets, completely ruled, dealing with barley distribution. Whenever their lower part is sufficiently preserved, they end with the ‘total’ of the issued barley. There are two Fq tablets by scribe 305 whose width is totally or almost completely preserved: they measure 10.4 (Fq 254[+]255: complete) and 10.0 cm (Fq 276: broken at the right). Since all the Fq texts written by scribe 305 are highly standardised, it seems very probable that all of them shared an original width of *ca* 10.4 cm. Below, we shall exploit this conclusion to estimate the number of missing signs in the three Fq tablets studied. We shall assume that these missing signs have approximately the same dimensions as the signs actually preserved before or after the break; for the purposes of this calculation the word divider is conventionally never considered a sign.

### **§ 9.43.3. *The TH Fq food quantities***

The Fq tablets list quantities of barley grain (HORD) which were obviously given to some people as shown by several clear datives (see § 9.43.5). Cereals were regularly provided by the Mycenaean palaces as payment or as food rations meant to answer the nutrition needs of their personnel. There are several current calculations, but the *smallest* supposedly *daily* barley rations for a free male adult were z 3 or z 4 (= v 1), i.e. about 1.2 or 1.6 litre. This amount is in no way

exaggerated: the Spartans trapped by the Athenians on Sphacteria in 425 were sent ‘two Attic choenices of barley wheat’ per man per day, i.e. 2.16 litres (Thucydides 4.16). In fact many TH Fq barley quantities are surprisingly small: there are about 40 certain ex. of only z 1, i.e. 0.4 litre, and about 35 certain ex. of z 2, i.e. 0.8 litre. Does this exclude rations and how can it be explained? We should start by paying attention to the nutritional quality of Boeotian cereals. According to Theophrastus, *Hist. Plant.* VIII.4.5, Boeotian wheat had an outstanding nutritional value: 1.5 choenix of Boeotian wheat was equal to 2.5 Athenian ones (this is a proportion of 6 to 10). If this first millennium situation was already true in the Mycenaean Thebes and if it applied not only to wheat, but also to barley, then we could perhaps hypothesise that the z 3 or z 4 of barley found outside Boeotia corresponded to smaller Boeotian quantities. A 6 to 10 proportion gives the following result: the smallest Boeotian quantities z 1 or z 2 could correspond to \*z 1.8 or \*z 2.4 outside Boeotia. Even so, ca \*z 2 is distinctly less than the z 3 or z 4 actually found elsewhere. It is then perhaps wiser to look for a better explanation. A tempting hypothesis was suggested by J.T. KILLEN (§ 9.43.10): the very small z 1 or z 2 should not be daily rations but may be meant to cover just one meal. Another possibility is submitted by JAMES 2002-2003 (§ 9.43.10): these quantities could mostly be *supplementary* rations. Anyway, we may assume that the quantities of barley issued were related to the social importance and/or the number of their recipients and the barley quantities of the TH Fq series will conventionally be qualified here as follows:

- ‘*very small quantities*’: z 1 or z 2 (0.4-0.8 litre);
- ‘*normal quantities*’: from z 3 to v 1 (1.2-1.6 litre);
- ‘*high quantities*’: from v 1 z 1 to v 5 z 3 (2-9.2 litres);
- ‘*very high quantities*’: T 1 and more (9.6 litres and more).

#### **§ 9.43.4. *The recipients listed in TH Fq: how can we discover who, and of what nature, they were?***

The *first basic rule* (it should be constantly observed in any discussion of a LB text) is that religious status should *never* be assumed unless there are truly compelling arguments for it — as Michael Ventris (quoted by John Chadwick) said: ‘religious explanations should only be accepted when all else fails’. The correctness of this principle is easy to prove: in the ca 3 350 different LB words counted in *Handbuch*, 352, 378-379, 400, there are only ca 70 GNs or specifically religious items (altogether less than 3 % of the total). Secular status must thus always be the default solution, unless a religious interpretation is unmistakable. For instance, almost nobody will doubt that in TH Of 31.3 *e-ma-a<sub>2</sub>*

is a divine figure, since *e-ma-a<sub>2</sub>* is known elsewhere as a god (Hermes) and is parallel in this series to other divine names, *e-ra* (Hera) and *po-ti-ni-ja* (Potnia).

A second basic rule relies on the actual status of the undisputed recipients of TH Fq. *TOP* rightly considers that most of them are MNs. Consequently, the default interpretation must be that the TH Fq recipients are probably human beings, and, more specifically, MNs. Here again, the justification of this principle is at hand: in the *ca* 3 350 different LB words counted in *Handbuch*, there are no less than *ca* 1 945 MNs (more than 58 % of the total). Hence, every Fq recipient will be conventionally considered below as a ‘probable MN’ unless there is a cogent reason to think otherwise — for instance, a clear plural could not possibly be a MN.

Whenever possible, however, these identifications as ‘probable MN’ will be put to test. Here are some characteristic features which will be used to check the correctness of the analysis:

- ‘Characteristic 1’: the recipient’s name is more than two signs long and is identical to a well known MN elsewhere — every recipient having this characteristic will be qualified below as ‘certain MN’ unless it is impossible to think so.
- ‘Characteristic 2’: the recipient’s name is part of an onomastic formula — e.g. ‘(So-and-so), the son of Such-and-such’ (see § 9.43.7) — on the word for ‘son’, see § 9.43.6. Every recipient having this characteristic will be qualified below as ‘obvious MN’.
- ‘Characteristic 3’: the recipient’s name is identical to a well known MN elsewhere *but* is only two signs long. Unlike names having the ‘characteristic 1’, these words will not be considered as ‘certain’ but only as ‘probable MNs’ because they are extremely short and may thus conceal different forms — see e.g. the examples of *di-wo*, *e-ra* and *ko-wo* (§ 9.44: *ma-ka*) which represent respectively both the GN *Diwos* and the MN *Diwōn*; the GN ‘Hera’ and a PN; *korwos*, ‘boy’ and *kōwos*, ‘skin’.
- ‘Characteristic 4’: the recipient’s name is written *just* before or *just* after a ‘certain’ or an ‘obvious MN’.
- ‘Characteristic 5’: the barley quantity of the recipient is similar or identical to those of ‘certain’ or ‘obvious MNs’.

### § 9.43.5. *The inflectional case of the TH Fq recipients*

In the TH Fq tablets, most recipients names are graphically ambiguous between nominative and dative. There are nevertheless several clear-cut

instances of recipients in the nominative or in the dative. The *dative* is especially clear in names in the plural: e.g. *i-qo-po-qo-i*, *ikkʷophorgʷoihi*, ‘to the horse-keepers’; *te-ka-ta-si*, *tektasi*, ‘to the carpenters’; etc. Singular datives occur too: e.g. *ko-ru-we* (compare with *ko-ru*: see below); *ma-di-je* (if it comes from the MN *ma-di*); etc. Certain *nominatives* are less frequent: if we provisionally exclude from our count the nominative of the word for ‘son’, *jus*? (see § 9.43.6), there is only one example of nominative (so, *TOP*), *ko-ru*, corresponding to the dative *ko-ru-we* — both forms are written several times by the same scribe in the same series. On case alternations like this one, see § 9.6, 9.41. Since there are more clear examples of datives than of nominatives, I shall conventionally understand below as dative every recipient name which is graphically ambiguous (§ 9.1). If the declension and/or the suffixation of a word is not certain, like in e.g. *ma-ka*, *zo-wa*, etc., their ending will not be transcribed.

#### § 9.43.6. *The reading of the sign ḫ as the ideogram FAR or as the syllabogram \*65 = ju?*

In the TH Fq tablets, there is occasionally a sign ḫ which is written between the name of the recipient and the dry measures used elsewhere for barley. We have already seen that the sign ḫ has two uses in the LB documents: it may be either an ideogram (FAR, probably representing a special type of cereal or pulse, different from the two main Mycenaean cereals, wheat [GRA] and barley [HORD]: § 9.41) or a syllabogram (\*65, i.e. *ju*? : § 9.1). The editors of *TOP* have chosen in every case the ideographic reading FAR, introducing into the Fq tablets *another product than barley grain* (HORD). They suppose that FAR means ‘barley flour’. This interpretation is bound to a first objection, since it is not the most likely identification of FAR (see above). Another objection is provided by TH Fq 254[+]255 (§ 9.46): this tablet has no less than three examples of the sign ḫ and its totalling line is reasonably well preserved. If the sign ḫ is really the ideogram FAR, symbolising a specific cereal or pulse, its quantities — at least v 4 — should be computed separately in the totalling formula on l. 15. In fact there is no trace of the sign ḫ there: the scribe counted only barley (HORD) and no FAR at all. The same phenomenon happens in the only other TH Fq text where the sign ḫ is used and the totalling line is sufficiently preserved (Fq 214.14: there is less than one cm lost in a line where the scribe seems not to have thought that he would be short of place). Moreover, in most of its occurrences no significant space is left between the names of the recipients and the sign ḫ (nor is there a word divider). It is true that the same may happen with unquestionable

ideograms in the Aravantinos tablets, but the objections presented above weaken the case for an interpretation of the sign 𠁧 as an ideogram in these sequences, because the most natural way to understand a LB sign adjoining a syllabogram is to consider it as a syllabogram too unless it is impossible to do so. Another important piece of evidence is provided by TH Gp 124.1 where 𠁧 follows the syllabogram ]ko and is itself immediately followed by a word divider and the ideogram for wine and its quantities: ]ko𠁧, VIN v 2[. The editors' suggestion that this indicates a mixture of wine and flour requires the assumption of a unique form of writing — there is no single example of a sequence made of ideogram + divider + ideogram other than a unit. Thus, Palaima has suggested that the sign 𠁧 should not be read as the ideogram FAR, but as the syllabogram \*65, *ju*? in several TH Fq tablets.

But how can \*65, *ju*? be understood in TH Fq? In its clearest examples, it is written in *scr. cont.* just after the last syllabogram of a MN. Palaima has then brilliantly suggested that -\*65, -*ju*? stands for the word for ‘son’ (for the LB and alph. Gr. forms of this word, see below). One of the convincing arguments that he uses is the comparison of two examples of clear MNs, *Lakedaimonijos* and *Lakedaimnijos* (on their status, identity and the difference in their suffixes, see § 9.43.8). *Lakedaimonijos* is followed in *scr. cont.* by an indisputable form of the word for ‘son’, *hujos*, ([ra-]ke-da-mo-ni-jo-u-jo: TH Gp 227.2; scribe 306?; so, TOP), while *Lakedaimnijos* (scribe 305) is followed several times (see § 9.43.7) in *scr. cont.* by -\*65, -*ju*? (pace TOP, with its reading \*\*ra-ke-da-mi-ni-jo FAR). It becomes then clear that -\*65, -*ju*? (scribe 305) corresponds to -*u-jo*, *hujos* (scribe 306?).

This new interpretation has several important consequences not only for the understanding of the texts, but also for the language of the TH tablets. But we must first propose a Greek transcription of -\*65, -*ju*? ‘son’.

Palaima understands this -*ju*? form as a dative: he supposes that it is the result of a *haplography*, viz. an inadvertent omission of repeated *signs*. One should have had, he thinks, the dative in -*ōi* of *Lakedaimnijos* followed by the dative of (*h*)*ijus*? This sequence \**Lakedaimnijōi* (*h*)*ijui* (*sic*) should have been written \*...*jo-i-ju*? in *scr. cont.*, but would have been graphically simplified in -*jo-ju*? This supposed haplography is difficult to justify, however, because there are no less than four Theban examples of *ra-ke-da-mi-ni-jo-ju*? (plus *ra-ke-<da>-mi-ni-jo-ju*? : § 9.46): an accident like a haplography would hardly be so generalised. If so, could it not be a *haplology* (unconscious omission of repeated identical or similar *sounds*)? This is not easy to accept either, because the word for ‘son’ is probably *not* in the dative. It is true that we may expect a dative, but if so the form should be *i-je-we*, (*h*)*ijewei*, ‘to the son’ (PY Tn 316.v.3C: § 9.38) and end in -*we* — for datives sing. in -*we*, cf. *ko-ru-we*, *ko-r-uwei*, ‘to

*ko-r-us'* (form of a - $\nu\zeta$  stem written several times by our scribe 305: see § 9.44) or *e-ri-nu-we*, *Erinuwei*, ‘to the Erinyes’ (§ 9.17). However, as we have seen (cf. § 9.43.5), dative and nominatives do alternate in TH Fq. So it is much easier to assume that the forms in -*ju*? like *ra-ke-da-mi-ni-jo-ju*? are in the nominative like the plain nominative *ko-r-us* — and this excludes a haplology.

Hence there is every reason to read -\*65, -*ju*? as a nominative *jus*?, ‘son’ and to take it as a by-form of the *i*-\*65, i.e. (*h*)*ijus*? well known in Pylos. But how can we explain these variants?

We may safely exclude a contraction of the two [u] vowels of \**sujus*: first, this would give \**sūs* > \**hūs* and not *jus*?; second, this phenomenon is post-Mycenaean (§ 9.24). Our starting point will then be a major characteristic of the Greek lexical family which reflects the Indo-European word for ‘son’, \**sujus*: all its members had extremely *unstable* forms. This is obvious in the alph. Gr. words, which show a remarkable array of variants: *huiός*, *huός*, *huiύς*, *huύς*, *hύς*, *hūīς*, *Fhiός*... (I have deliberately chosen epigraphic forms in this selection). An important reason for this variety is that the two [u] vowels of \**sujus* seemed obviously too close to each other and too alike. Hence, there was a regular tendency to suppress the difficulty by changing these vowels. This modification was done either by thematising the form (thus, the athematic - $\nu\zeta$  form was transformed into a thematic - $\circ\zeta$  one) or by keeping the form athematic but changing one of its two vowels (thus, *hūīς* instead of *huύς*).

The interesting point is that the same instability appears in LB too. At Pylos we have an indisputable LB form of the word for ‘son’, the dative sing. *i-je-we*, (*h*)*ijewei* (§ 9.38) plus several examples of the nominative sing. of this very word: *i*-\*65, *i-jus*?, (*h*)*ijus*? (§ 9.1, 9.20). Thebes has a certain variant -*u-jo*, *huijos* (TH Gp 227.2: so, *TOP*), while Cnossos and (?) Mycenae could provide a further possible one: *i-jo*, (*h*)*ijos* (KN V 1523 [see below] and [?] MY Au 102.1). These forms seem to suggest that almost every Mycenaean State transformed \**sujus* in its own way.

This general framework provides an easy explanation of our TH -\*65, -*ju*? if read as a nominative *jus*?, ‘son’. However, before we go into the details, we must first establish what form we expect for \**sujus* at the time of our tablets. In fact, its initial \**s-* had become *h-* (hence \**hujus*) — for this change, cf. e.g. the adjective meaning ‘one or the other of two’ (cf. *ἄτερος*, *ἔτερος*), \**spiterom* > \**sateron* > *hateron*, written *a<sub>2</sub>-te-ro* with the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) which explicitly spells the aspiration. Just as in alph. Gr., the two [u] vowels of this \**hujus* caused phonetic problems in LB. And the solutions chosen were exactly those adopted in alph. Gr.: the vowels were changed either by thematisation and/or by dissimilation. Let us begin with all the LB forms but *jus*?. In Pylos, \**hujus* became (*h*)*ijus*?, dative (*h*)*ijewei*, with the first

[u] dissimilated to [i]. In Thebes, the word was thematised in the scribe 306? tablet Gp 227: hence *huijos*. Knossos and (?) Mycenae provide a double treatment, thematisation and dissimilation with (*h*)*ijos* — this form was perhaps a blend of (*h*)*ijos*? and *huijos*. It is now time to examine our Thebes *jus*? < \**hujus* (it was written by several scribes: 305, 306, 310 and —). The solution provided for the difficult \**hujus* sequence was again a dissimilation, but a wide-ranging one: the whole first syllable of the word, [hu], was completely dissimilated — hence, \**hujus* > *jus*? . There are good parallels for such a syllabic dissimilation. In LB compare the word for ‘amphora’, *a-pi-po-re-we*, *amphiphorēwes* (plur.) and the dissimilated form *a-po-re-we*, *amphorēwe* (dual): the whole [phi] syllable disappeared, and this is identical to the alph. Gr. situation, cf. ἀμφορεύς (§ 9.22). In alph. Gr., compare e.g. a dissyllabic kinship name like πάπ(π)ας, ‘daddy’, which became πᾶς, ‘id.’ in Syracusan (gloss), with the loss of one of its two syllables just as \**hujus* > *jus*? . The alph. Gr. monosyllabic form *húς* is generally considered as a contraction of *huvús*, and this is very likely. But since it is attested slightly earlier than *huvús* (527-514 BC ~ ca 500 BC), we should perhaps not totally exclude that *húς* could be the result of a syllabic dissimilation just as *ju*?’s (??).

It may perhaps seem curious to find so many ‘sons’ in the Aravantinos tablets but this is not an isolated feature since some other LB texts offer similar accumulations. The small diptych PY Aq registers two ‘sons’: *pe-ri-me-de-o i-ju?* (= *i-\*65*), ‘the son of Perimedes’ and *qo-te-wo i-ju?* (= *i-\*65*), ‘the son of \**qo-t-eus*’ (PY Aq 64.7, 218.16). There are likely no less than three sons in KN V 1523.4-5: *pi-ma-ɳa-ro zo-wi-jo i-jo*, ‘*pi-ma-ɳa-ro*, the son of *zo-wi-jo*’, *a-tu-qo-te-ra-to i-jo*, ‘the son of *a-tu-qo-te-ra-to*’ and *pi-ma-na-ro pi-ro-i-ta i-jo*, ‘*pi-ma-na-ro*, the son of *pi-ro-i-ta*’. In this text, *i-jo* is currently understood as *ijōn*, participle of the verb εἰ̄μι, ‘go’ with the meaning ‘who is to go’, but I think that (*h*)*ijos*, ‘son’ is a better choice. In fact there is no mention of the place where these three people of V 1523 are supposed to go — unlike PY An 1.1, which provides the only certain example of the participle *ijōn* and explicitly registers ‘rowers who are to go to Pleuron’. Moreover, V 1523 explicitly locates these three men ‘at So-and-so working-place’ (*o-pi*: § 9.12).

The *scr. cont.* with no word divider or significant gap between the MN and -\*65, -*ju*? is normal since monosyllabic words cannot stand alone in LB. It is moreover paralleled by the *dissyllabic* forms of the word for ‘son’ fully spelled out in *scr. cont.* in [ra-]ke-da-mo-ni-jo-**u-jo** (TH Gp 227) and in *pa-se-ri-jo-ko-wo* (MY Oe 121.2: § 9.21).

For the case and ending of the MNs preceding the words for ‘son’, see § 9.43.7.

**§ 9.43.7. *The case and ending of the MNs preceding the words for ‘son’ in TH Fq***

In the Aravantinos TH tablets, several words appear in *scr. cont.* just before *jus*? (-\*65, -*ju*?), ‘son’ (§ 9.43.6) as parts of an onomastic formula meaning ‘the son of So-and-so’. Therefore they have our ‘characteristic 2’ and will be considered below as ‘obvious MNs’ (see § 9.43.4). The other words eventually used in such formulas, like ‘Such-and-such, (the son of So-and-so)’ will of course also be labelled as ‘obvious MNs’. Here are the best preserved examples:

- *a-]ko-ro-da-mo-ju?* (TH Gp 215.2, scribe —; ‘certain and obvious MN’ with ‘characteristics 1’ [certain MN in KN Df 1223.B] and ‘2’; cf. the MN Ἀκρόδημος). On *TOP* interpretation, see § 9.44.
- *a-ra-o-ju?* (TH Fq 214.13, 254[+]255.7b, scribe 305; ‘obvious MN’ with ‘characteristics 2 and 5’; *TOP*: MN or ethnic).
- *i-je-re-wi-jo-ju?* (TH Gp 303.1, scribe —; ‘certain and obvious MN’ with ‘characteristics 1’ [certain MN in KN K 875.6] and ‘2’; *TOP*: MN; cf. the MN Ἰέρειος).
- *ka-wi-jo-ju?* (TH Fq 123.1, 130.3, 254[+]255.6, 258.5, 342.2, scribe 305; ‘obvious MN’ with ‘characteristics 2 and 5’; *TOP*: trade name or MN). For the Greek transcription of *ka-wi-jo-*, see § 9.45.
- *ku-no-ju?*[ (TH Fq 236.5, scribe 310; ‘obvious MN’ with ‘characteristics 2 and 5’; *TOP*: genitive plur. of the word for ‘dog’). On the Greek transcription of *ku-no* and on *TOP* interpretation, see § 9.45.
- *o-to-ro-no-ju?* (TH Fq 214.7, scribe 305; ‘obvious MN’ with ‘characteristics 2 and 5’; *TOP*: MN).
- *qe-da-do-ro-ju?* (TH Gp 215.2, scribe —; ‘certain and obvious MN’ with ‘characteristics 1’ [certain MN in KN Df 1223.B] and ‘2’; *TOP*: MN). *qe-da-do-ro-ju?* occurs as a full onomastic formula: see below.
- *ra-ke-da-mi-ni-jo-ju?*, *ra-ke-<da>-mi-ni-jo-ju?* (TH Fq 229.4, 254[+]255.13, 258.3, 275.3, 284.3, scribe 305; ‘obvious MN’ with ‘characteristics 2 and 5’; cf., with another form of the suffix, the MN Λακεδαιμόνιος). On *TOP* interpretation, see § 9.43.8.

A question arises about the syntax of the names in *-o-* like [*a-]ko-ro-da-mo-*, etc. followed by the word for ‘son’. In theory there are three syntactic possibilities. These names may be: (a) MNs in the genitive qualifying ‘son’; (b) patronymic adjectives agreeing with ‘son’ (see § 9.21 for these two interpretations); (c) MNs followed by the word for ‘son’ in apposition — for instance, *ra-]ke-da-*

*mo-ni-jo-u-jo* would mean ‘\*Lakedaimonios, the son’, i.e. ‘\*Lakedaimonios, Junior’ (?): this analysis supposes that both father and son bear the same MN.

Let us begin with the last interpretation. It may seem tempting, but it conflicts with a complete onomastic formula preserved in TH Gp 215.1 (scribe —): *]a-me-ro , qe-da-do-ro-ju?*. This formula gives: (a) the name of a son, *]a-me-ro*, *]Αmeros* (‘obvious MN’ with ‘characteristics 2 and 5’; *TOP*: MN; cf. the MN “*Ημερος*; the aspiration of the alphabetic forms is secondary and restricted to Ionic and Attic); (b) the name of his father, *qe-da-do-ro-* (‘certain and obvious MN’: see above); (c) the word for ‘son’ (*-ju?*, *jus?*). We must thus translate ‘]*Αmeros*, the son of *qe-da-do-ro*'. In this case at least the son did *not* bear the same name as his father and it becomes then impossible to understand ‘\*\*]*Αmeros qe-da-do-ro*, Junior’ — hence, it is more economical to understand the other groups with *jus?* in the same way.

The second interpretation takes these forms as patronymic adjectives. This is obviously not possible for *a-ra-o-* and *o-to-ro-no-*, however, since the necessary suffix is absent. In theory it could apply to the *-ijo-* forms, but it is difficult for some of them too. *ra-ke-da-mi-ni-jo-* *vel sim.* are unlikely patronymics because *Λακεδαιμον* is not known as a MN in alph. Gr., where it is used only as a PN. The same is true for *ka-wi-jo-*: a patronymic adjective formed e.g. from \*\**ka-wi* is unlikely because *ka-wi-jo* occurs by itself without *-\*65*, *-ju?* in Fq 229 and 247. Etc.

We are then left with the third solution: *a-]ko-ro-da-mo-*, etc. can be genitives qualifying the word for ‘son’. Here, we must consider two possible analyses: the genitives could be athematic or thematic. Athematic genitives in *-os* are possible for some of these MNs: for instance, *o-to-ro-no-* could be a genitive in *-nos* of a nasal stem, but since it is a *hap. leg.* it is impossible to know. For most MNs, however, athematic genitives are impossible: for instance, *a-ra-o* occurs alone where a dative or nominative is required; *ka-wi-jo* cannot be a genitive in *-ijos* of an *i*-stem, because it occurs alone in other contexts where a genitive would be out of place (e.g. TH Fq 229.6). The other possibility is that all or most of our forms are thematic. This is certain for *[a-]ko-ro-da-mo-* (from [A]*krodāmos*: § 9.44) and *i-je-re-wi-jo-* (from *Hijerēwījōṣ*), plus of course *ra-ke-<da>-mi-ni-jo-*, *ra-ke-da-mi-ni-jo-*. These thematic forms should be ...*o* sing. genitives. For a long time the possible existence of this genitive in LB has been debated. Its clearest examples are probably the names of the months at Cnossos where we find sequences like *ka-ra-e-ri-jo me-no* (KN Fp 7) with a clear ...*o* thematic sing. form next to the athematic genitive of the ‘month’ name, *mēnhos* (?) — the same formula also allows the expected *-ojo* genitives (*ka-]ra-e-ri-jo-jo me-no*, etc.). Opinions have diverged on this

subject largely because the origin of these genitives is difficult to explain since a contraction from *-ojo* or *-oo* is excluded in this period (cf. § 9.24). But another solution is at hand if these thematic ...*o* genitives sing. are not linked with *-ojo*, but explained as a reflex of the old Indo-European ablative in *\*-ōd*. This is the solution I have conventionally adopted here. There is then no need to suppose with *TOP* that the scribe 306? probably forgot a syllabogram in *ra-]ke-da-mo-ni-jo-u-jo*. *TOP* restores *\*\*ra-]ke-da-mo-ni-jo<-jo>-u-jo*, but as it stands, the form provides a perfect genitive, [La]kedaimonijō *hujōi*, ‘to the son of [La]kedaimonios’.

#### § 9.43.8. *The ra-ke-da-mi-ni-jo- and [ra-]ke-da-mo-ni-jo- names*

The two MNs formed from the PN Λακεδαίμονων deserve a special examination.

*TOP* thinks that *ra-ke-da-mi-ni-jo-* and *[ra-]ke-da-mo-ni-jo-* are not MNs but *ethnics*. It would however be very strange to give barley to some ‘Lacedaemonian’. *TOP* supposes that this ‘Lacedaemonian’ was a kind of ambassador representing the Lacedaemonians, but the idea of such an ambassador is hard to believe for a number of reasons. Moreover, *TOP*’s interpretation relies on the reading of *ra-ke-da-mi-ni-jo-ju'* as *\*\*ra-ke-da-mi-ni-jo* FAR which we have rejected: see § 9.43.6. In fact, it is true that *ra-ke-da-mi-ni-jo- vel sim.* were *etymologically ethnics* (‘the man of L.’). But these ethnics came to be used as MNs — the phenomenon is the same as for the ‘probable MN’ *Milātijōi[* (see § 9.46) and is widely attested in alph. Gr.

If we agree that *ra-ke-da-mi-ni-jo-* and *[ra-]ke-da-mo-ni-jo-* are MNs, we must check if they refer to the same person. *TOP* thinks so. So do I, but for another reason: each of them is followed by the word for ‘son’ — a coincidence is perhaps not totally excluded, but somewhat difficult to accept. However, we must recognise that the context of the *hap. leg.* *[ra-]ke-da-mo-ni-jo-* (TH Gp 227) is too limited to allow any comparison with the occurrences of *ra-ke-da-mi-ni-jo-*. Moreover, there is a difficulty because the terminations of these two forms are distinctly different: *-mnios ~ -monios*. These differences can be explained morphologically (see below), but they may at first sight seem strange in a MN, which is supposed to remain unchanged if used for the same person. In fact there are LB examples of variation in the MN of the same person — for instance, is absolutely certain that two Pylos scribes write in different ways the names of the same persons: the scribe 41 writes *i-pa-sa-na-ti* and *pe-re-qo-ta* the MNs that his colleague 1 writes *e-pa-sa-na-ti* and *pe-re-qo-ta* or *qe-re-qo-ta*. This is explained as a difference of pronunciation and/or spelling.

What we have in the *-mnios* ~ *-monios* alternance is an example of morphological variation (see below). This phenomenon is not frequent, but is nevertheless known in alph. Gr. — for instance, we do know three different forms of the MN of a IV<sup>th</sup> c. BC tyrant: Κλεομένης, Κλέομμις and (in an official text) Κλέομις. This parallel is not exactly the same because it involves an alternation between full name ~ abbreviated form. It nevertheless shows that we cannot exclude that *ra-ke-da-mi-ni-jo-* and [ra-]ke-da-mo-ni-jo- could refer to the same person when written by two different scribes of Thebes. In this very case, the change may have been possible if the two terminations of ethnics *-mnios* ~ *-monios* coexisted with the same meaning in the local language — and perhaps the etymological meaning of the word was still felt within the MN. For possible other spelling variations in a LB Theban MN, see also the alternance *de-u-ke-we* ~ *de-u-ke-[·]-we* (§ 9.46). Anyway I shall conventionally suppose here that *ra-ke-da-mi-ni-jo-* and [ra-]ke-da-mo-ni-jo- refer to the same person.

We may then come back to their terminations. While the final suffix is the same in both forms (*-ijos*), there is a variation in the presuffixal morpheme: *-mn-* ~ *-mon-*. When he writes *ra-ke-da-mi-ni-jo-* *vel sim.*, scribe 305 has the zero grade (-μν-) of the morpheme -μων-, which is morphologically expected, while scribe 306? uses a more advanced form, where -μν- has been transformed in the full grade -μων- on the analogy of the PN Λακεδαι-μων. This is not the only linguistic difference between these scribes. It is interesting to compare their spellings of the word for ‘son’. Scribe 305 writes *-ju?*, *jus?*, whereas scribe 306? has *-u-jo*, *huijos*. *Jus?* is the old athematic form, whereas *huijos* is the more recent thematic one. Once again, scribe 305 uses an old form, while scribe 306? has a recent one. We should not oversimplify the linguistic complexity, however, because both *jus?* and *huijos* have recent and archaic characteristics. The archaic ones are the athematic form in *jus?* and the initial syllable *hu-* still preserved in *huijos*; the recent ones are the thematic form in *huijos* and the loss of the initial syllable *hu-* in *jus?*. On the whole, there are two features in which scribe 306? was linguistically more advanced than scribe 305 and this means that, very clearly, Mycenaean scribes did not write their texts in a fixed, totally stereotyped way.

#### § 9.43.9. *The LB primary dry measure*

*TOP*, 162, 264 uses one scribe miscalculation in TH Ft 140 to suggest that the LB primary dry measure was not equal to 10 τ, as normally assumed,

but to 12 t. This tablet, *TOP* points out, lists  $38 + 14 + 20 + 3 \text{ t } 5 + 12 \text{ t } 7$  units of wheat, i.e. a total of 87 t 12, which should be written 88 t 2, while the sum written in line 8 is 88. Thus, the authors conclude, there were 12 t in one primary dry measure. However, there is no LB example of t associated with numbers exceeding ‘9’. This gives a very strong reason to suppose that there were 10 t (and not 11 or 12) in one primary unit of dry measure. The number 88 of TH Ft 140.8 is probably just a mistake for 88 t 2. Such isolated arithmetic mistakes do regularly happen in LB as elsewhere.

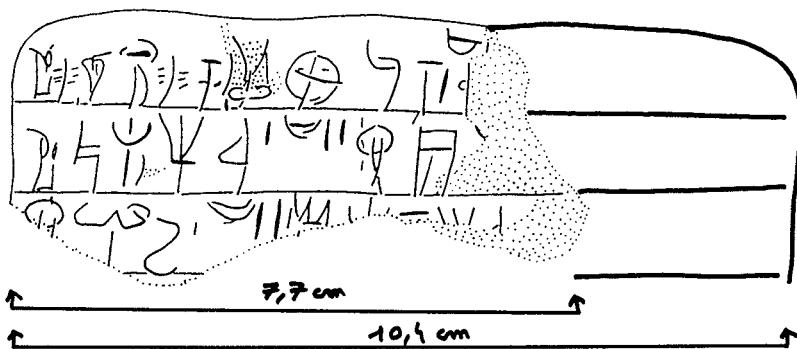
#### § 9.43.10. Selected bibliography for § 9.43-46

V.R. ARAVANTINOS – L. GODART – A. SACCONI, *Kadmos* 42 (2003), 15-30; J. CHADWICK, *Minos* 31-32 (1996-97), 293-301; Y. DUHOUX, in M.R. CATAUDELLA – A. GRECO – G. MARIOTTA (eds), *Gli storici e la Lineare B cinquant’anni dopo*, Florence, SARGON, 2006, 65-82; Y. DUHOUX, *Kadmos* 46 (2007), 1-19; Y. DUHOUX, in F. LANG – C. REINHOLDT – J. WEILHARTNER (eds), *ΣΤΕΦΑΝΟΣ ΑΡΙΣΤΕΙΟΣ. Archäologische Forschungen zwischen Nil und Istros. Festschrift für Stefan Hiller zum 65. Geburtstag*, Vienna, Phoibos Verlag, 2007, 95-103; Y. DUHOUX, *Minos* 37-38 (2002-2003), 173-253; Y. DUHOUX, in *Rome Colloquium* (forthcoming); S. A. JAMES, *Minos* 37-38 (2002-2003), 397-417; J.T. KILLEN, in *Neuen Linear B-Texte*, 79-110; M. MEIER-BRÜGGER, in *Neuen Linear B-Texte*, 111-118; *Mémoires* IV, 255-281; A. MORPURGO DAVIES, in *Neuen Linear B-Texte*, 119-124; *Neuen Linear B-Texte* — this book constitutes the proceedings of a Colloquium held in 2002 and devoted to the Aravantinos tablets; *Opfergaben*, 196-198; T.G. PALAIMA, *Kadmos* 42 (2003), 31-38; T.G. PALAIMA, *Minos* 35-36 (2000-2001), 475-486; T.G. PALAIMA, in *Neuen Linear B-Texte*, 139-148; C.J. RUIJGH, *Mnemosyne* 46 (2003), 219-228; C.J. RUIJGH, *Mnemosyne* 47 (2004), 1-44; C.J. RUIJGH, in *Neuen Linear B-Texte*, 159-169; *Textos*, 49-50; *TOP*, 43, 45-46, 104-106, 184-197, 224-227.

**§ 9.44. TH Fq 126** (clay tablet; dimensions:  $7.7 \times 3.7 \times 1.4$  cm; scribe 305; find-spot: odos Pelopidou; date: last decennia before 1200/1190; location: AMT 28 443).

**Content:** distribution of barley grain to several individuals or groups; the beginning of the text gives its precise date.

**Selected bibliography:** see § 9.43.10.



**Fig. 9.48.** TH Fq 126  
left: preserved part (*TOP*, 43); right: restitution of the lost part (see below)

- .1a z 1[- - - - ca 8 - - - -]
- .1b o-te , tu-wa-te-to , ma-ka HORD T 1 v[- - - - ca 8 - - - -]
- .2 o-po-re-i v 1 z 2 ko-wa z[- - - - ca 6 - - - -]
- .3 ko-ru z 2 ke-re-nā-ī y[- - - - ca 6 - - - -]
- .4 *infra mutila*

The whole tablet is a palimpsest. • The right and lower parts of the text are missing. The number of missing signs on the right has been estimated on the basis of a restored width of *ca* 10.4 cm (§ 9.43.2). • The number of lost entries on l. 1-3 can be estimated as follows. On l. 1 (ca 8 missing signs), two short or one long entry/ies — cf. short entries like *ko-ru* z 2 (l. 3: 5 signs) or long ones like *o-po-re-i* v 1 z 2 (l. 2: 9 signs). On l. 2-3 (ca 6 missing signs), one entry. • .1b *TOP* reads a word divider between *ma-ka* and HORD, but their photograph and facsimile show no trace at all. • .2 z 2: corrected from z 3. • .3 *ko-ru*: corrected from *ko-ru-we* (see below).

- 1** *Hote Thuwōn (?) theto:*  
*ma-ka* HORD T 1 v[ ] z 1[;  
ca 8 ];
- 2** *o-po-r-ehi* v 1 z 2;  
*ko-wa* z[;  
ca 6 ];
- 3** *ko-r-us* z 2;  
*ke-re-nā-ī* y[;  
ca 6 ];
- 4** *infra mutila*

- .1 ‘When Thyon (?) was buried (?)  
 to *ma-ka*: 11.6[ ] litres BARLEY;  
 [ ca 8 ];
- .2 to *o-po-r-es*: 2.4 litres;  
 to *ko-wa*: [0...]litre; [  
 ca 6];
- .3 *ko-r-us*: 0.8 litre;  
 to (the [??]) \**ke-re-ŋa-i*: [ ]litres; [  
 ca 6];
- .4 *infra mutila*

**.1** *Note...*: this sentence gives the date of the distribution ('<What follows was done> when...'): see § 9.6. • ***tu-wō-te-to***: there is no space nor word-divider in this sequence, so it should normally represent one single word. This makes the division *tu-wō te-to* adopted by everybody but Chadwick not immediately attractive (but see below). Chadwick's *thuwōthēto* ([??]: 'it was burnt as an offering', aorist passive of the verb θύω) is interesting, but we must object to the *medio-passive* ending in -to, instead of the active ending which is universally used in alph. Gr. with an aorist in -θη-. A form *thuwōthē* followed by the particle *toi* (??) or the demonstrative pronoun *to/toi/tōi* (??) would be difficult: *tōi* is unknown in LB and its use ('when *surely*, it was burnt as an offering') would seem odd; the demonstrative *tō* is known in LB, but it is not clear what it would mean here ('when *this/at this place/for this* was burnt...'). Since the scribe of our text wrote another word ending in ...te-to just after *hote* in TH Fq 130 (§ 9.45), it becomes extremely tempting to divide *tu-wō-te-to* here in the two words *tu-wō* and *te-to*. Moreover, we do have at least one certain example of the *scr. cont.* of two polysyllabic and tonic words at TH: scribe 306? writes [*ra-]ke-da-mo-ni-jo-u-jo*, [*La]kedaimonijō hujos*, 'the son of [La]cedaemonios' (TH Gp 227.2: § 9.43.6-8). On the interpretation of *tu-wō te-to*, see below. • ***theto***: cf. θέτο/ἔθετο, indicative aorist of τίθημι. The meaning of this form depends on the interpretation of *tu-wō* (see below). On the omission of the augment, see § 9.3. • ***tu-wō***: the only interpretation given so far is *thuwos*, 'burnt offering' (cf. θύος). If so, the date formula would mean 'When the burnt offering was done/created'. This may seem good at first sight, but in fact it is definitely odd. Archaeology shows that 'burnt offerings' were common for a long time before the end of the Mycenaean civilisation. This is confirmed by the LB data: the new join PY Ea 102 + Ea 107 made by J.L. MELENA (*Minos* 35-36 [2000-2001], 357-360) proves the existence of a 'shrine of Dionysus', *di-wonu-so-jo e-ka-ra*, *Diwonusojo eskharā*, with *eskharā* meaning 'sacrificial hearth/shrine where offerings are *burnt*' (cf. ἐσχάρα, 'brazier' and 'sacrificial

hearth; altar of burnt-offering'). How then could a burnt offering be sufficiently atypical to be used in a date formula? This reminds us that the only certain meaning of *thuwos* elsewhere in LB is 'ingredients for aromatics', *not* 'burnt offering'. It may not be due to chance that the LB MN derived from *thuwos*, *tu-we-ta*, *Thuwestās*, is the name of a 'perfumer' (on these two words, see § 9.40). So, we should reconsider the whole interpretation of *hote tu-wo theto* and look for the indication of a unique or at least exceptional event. This can be done only by giving a fresh look at the meaning of *theto*. It is well known that among its many uses, *τίθημι* can express the idea of 'lay in the grave, bury' a deceased from Homer onwards (*Il.* 23.83: μὴ ἐμὰ σῶν ἀπάνευθε τιθήμεναι δστέ', 'Αχιλλεῦ, 'please do not put my bones far from yours, Achilles'). And we have already seen that *τίθημι* can have the technical meaning of 'bury a person' and be constructed only with the accusative of the deceased (see § 9.36). Now, *tu-wo* could perfectly well be a MN *Thuwōn* (regularly attested in alph. Gr.: Θύων; better than the Satyr's name Στύων). If so, the sentence would be *hote Thuwōn (?) theto*, 'When Thyon (?) was buried (?)', which would provide a single event suitable for dating purposes. For other possible Mycenaean uses of the verb *τίθημι* to refer to burials, see *theto* (TH: § 9.45) and *thēke*, 'buried (?)' (PY: § 9.36). The passive use of *τίθημι* without the -θη- suffix contrasts with the alphabetic situation, where the -θη- suffix is *always used*, but it is well known that a medio-passive ending without -θη- can express the passive (cf. e.g. ἀπέκτατο, 'he was killed': *Il.* 15.437). • We may wonder whether the barley was delivered not only 'at the time when' the presumed burial was done, but perhaps also 'on its occasion'. This seems somewhat difficult, however, because the barley quantities issued in our tablet are generally similar or identical with those associated elsewhere in TH Fq with the same recipients: thus they are likely to be the standard ones (notice that this text was written earlier than Fq 254[+]255: see § 9.46). Presumably then the event recorded was just a date and does not give any clue to the context of the distribution itself. This is important for the interpretation of the whole TH Fq series. We do not know why only a few TH Fq distributions were dated while most of them were not — but this agrees with the general LB practice (§ 9.6). • About the 'characteristics' used below to check the identifications of recipients as 'probable', 'obvious' or 'certain' MNs, see § 9.43.4. • *ma-ka*: this is one of the major recipients of TH Fq (about 15 ex.; 'very high' barley quantities; almost always put in the first place of the lists). Who is *ma-ka*? *TOP* interprets it as the name of a female deity, *Mā Gā*, 'Mother Earth'. This raises an important method problem. How can we find out if a LB word is a GN? Several useful guidelines do exist. Here are a few of them. The first relies on the obviousness of the divine interpretation: a long (five syllabograms)

sequence like *po-se-da-o-ne* strongly suggests a correspondence with the GN Ποσειδάων. Another criterion uses indisputable LB GNs parallels. Let us take the example of the *hap. leg. do-po-ta* (§ 9.38.r.4). It directly follows *ti-ri-se-ro-e*, *Trishērōhei* (?), ‘to the triple hero’, a long (five syllabograms) word whose interpretation is obvious. Moreover, *ti-ri-se-ro-e* is in its turn directly preceded by the transparent *po-si-da-e-ja*, *Posidāhejāi*, ‘to (the goddess) Posidæia’ — another five signs word. And there are plenty of other certain divine names structurally parallel to *do-po-ta* in this very tablet. We can thus safely conclude that *do-po-ta* is a GN. Of course, we should never forget that the shorter a sequence is, the more risky its interpretation and Greek transcription will be. For instance, the LB word *di-wo* must certainly be read as *Diwos*, the genitive of Zeus’ name in one text (§ 9.38.v.3C), but with such a short sequence the risk of homography is very high. No wonder then if the same *di-wo* turns out to be a certain MN elsewhere, *Diwōn* (KN Dv 1503, etc.). The same holds true even for the three-syllabogram word *da-ma-te* (PY En 609.1: see § 9.31), which does *not* spell the name of the goddess Δημήτηρ, contrary to what we might expect. Now, our second basic rule of interpretation (§ 9.43.4) suggests that *ma-ka* is a ‘probable MN’. This identification must be put to test: the first thing to do is to carefully scrutinise its context — especially the other words directly associated with it (i.e. written *just before* or *just after*) — and its barley quantities. Let us begin with its close associations. There are only two TH tablets where *ma-ka* is *directly* associated with the name of another recipient (Fq 254.2, 258.1). In each case, this recipient is *a-ko-da-mo*. *a-ko-da-mo* is a ‘probable MN’ (with ‘characteristic 5’). This conclusion matches its Greek interpretation: it is obviously a compound in *-dāmos* (more likely than *-daimōn*) which could be read *Agodāmos*, *Argodāmos*, etc. (cf. the MNs Ἀγόλαος and Ἀργόλαος — forms in Ἀγε- and Ἀργε- are much more frequent than those in Ἀγο- and Ἀργο-, however, and we have MNs like Ἀγέδαμος and Ἀργέλαος). *TOP* equates *a-ko-da-mo* with another word, *a-ko-ro-da-mo*, and understands both forms as referring to a unique religious office/function name, *agorodāmos*, ‘congregation’s gatherer’. This is very hard to accept. In fact *a-ko-ro-da-mo* is a ‘certain and obvious MN’ (§ 9.43.7); cf. the MN Ἀκρόδημος. Moreover, *a-ko-da-mo* and *a-ko-ro-da-mo* cannot represent the same word if this starts with *agoro-*. A mistake is improbable since *a-ko-ro-da-mo* occurs twice in TH. The conclusion is that *a-ko-da-mo* and *a-ko-ro-da-mo* certainly cannot both represent *agorodāmos* and are in fact likely to correspond to two different MNs (see J.L. GARCÍA RAMÓN in *Neuen Linear B-Texte*, 45–50). Thus, since the only word directly associated with *ma-ka* at TH is the ‘probable MN’ *a-ko-da-mo*, we get a confirmation that *ma-ka* is itself a ‘probable MN’. Is this conclusion consistent with *ma-ka*’s barley quantities? Yes, since in Fq 254[+]255.2 *ma-ka*

gets *less* barley than *de-qo-no*, which is interpreted by *TOP* as a *human* designation (§ 9.46): this gives a supplementary confirmation of the human status of *ma-ka*. However, the question is more complicated because the word *ma-ḳa* may occur in a short KN tablet, F 51, where it is followed by the barley ideogram. The word's second sign has been alternatively read *qe* (hence *ma-qe*) or *ḳa* (hence *ma-ḳa*). If the correct reading is *ma-ḳa*, it is important to note that *di-we*, usually understood as the dative of Zeus' name, *Diwei*, appears in the same text and in the same line. Does this collocation not prove the divine status of *ma-ḳa* at KN? Not necessarily. First, since *ma-ka* is clearly a very short sequence, we should be extremely cautious about homography. Second, both the association and the meaning of *di-we* itself are less obvious than it may seem at first glance. (a) In fact just between *di-we* and *ma-ḳa*, the scribe wrote 'HORD T 1 HORD T 4 z 1', with a very odd repetition of the ideogram HORD plus quantities. It is extremely difficult to suppose that the scribe: (α) first wrote HORD T 1; (β) discovered then that the right quantity was \*T 5 z 1; (γ) finally added HORD T 4 z 1 to get the required total. If the required final quantity was \*T 5 z 1, the best way to transform HORD T 1 in \*HORD T 5 z 1 would have been simply to add four unit strokes to the original T 1 and then to write z 1. In fact I do not know of any LB repetition of this kind which does not involve an error. A more attractive way to explain HORD T 1 HORD T 4 z 1 is to suppose that the scribe forgot to write an item just before HORD T 4 z 1 — such an omission is provided by e.g. KN Dv 1226: ovis<sup>m</sup> 28 (l. B) is directly followed (l. A) by ovis<sup>m</sup> 62, but the parallelism with the other tablets shows that the scribe forgot to write an item before ovis<sup>m</sup> 62 (e.g. <*o*>, <*pa*> or <*pe*>). In KN F 51, we should then have the sequence '\**di-we* HORD T 1 <forgotten item> HORD T 4 z 1 *ma-ḳa* HORD V 6'. If so, *ma-ḳa* would *not* be directly preceded by *di-we*. Notice that the scribe made an undisputable error in this very line: he wrote '*ma-ḳa* HORD V 6' instead of '\**ma-ḳa* HORD T 1' (T 1 = V 6). (b) We have also to ascertain the real meaning and function of *di-we* in this text. It is true that *di-we* looks like the dative of Zeus' name (§ 9.6, 9.38), but we should remember that the ambiguity of the LB script *does* allow different interpretations of words which may look like GNs (see above), especially when they are short. How can we then establish the correct interpretation of *di-we* in KN F 51? A good way is to examine its contextual associations. In this tablet, *di-we* is directly preceded by the *human* (so, *TOP*) designation *po-ro-de-qo-no* — so *di-we* could be human too. It could perfectly well be a MN like *Diwēs*, nickname in -ης, -ητος (cf., with other suffixations, the LB MN *Diwōn* [see above] or alph. Gr. ones like Διῆς, Ζηνᾶς, Ζήνων, etc.). The interpretation of *di-we* as a nominative causes no difficulty, since every other word of this text could be in the nominative or in the dative. (c) How can we choose between a

human or a divine *di-we* in KN F 51? An interesting clue comes from the barley quantities listed in the tablet. If our interpretation of the second occurrence of HORD after *di-we* is correct, *di-we* is only associated to τ 1 (= v 6): this is *less* than the τ 1 v 3 of *wa*, which is understood by everybody (including *TOP*) as *wa(-na-ka)*, *wa(naks) vel sim.*, ‘the king’. This may point to a humane rather than divine interpretation of *di-we*. Since *ma-ḳa*, in this very text, has the same barley quantity as *di-we*, *ma-ḳa* ought to be human too. The conclusion is that KN F 51 provides no compelling argument for a divine *ma-ḳa*. (d) We must finally ask whether the Thebes *ma-ka* and the Cnossos *ma-ḳa* are the same word, because it is dangerous to equate very short LB sequences. To the examples already given above, we may add *e-ra*, which denotes both the GN ‘Hera’ and a PN in the Cnossos texts; or *ko-wo*, which is *korwos*, ‘boy’ almost everywhere, but *kōwos*, ‘skin’ in PY Un 718 (§ 9.41), etc. So, *ma-ka* and *ma-ḳa*, with only two syllabograms, should be treated with due caution: their Cnossos and Thebes occurrences could perfectly conceal different words. It is true that on the one hand we have *de-qo-no* and *ma-ka* in one Thebes tablet (TH Fq 254[+]255.1 and 2: § 9.46), while on the other hand we have *po-ro-de-qo-no* and *ma-ḳa* in one Cnossos tablet (KN F 51.v.1 and 2). Do these associations not prove that the Cnossos *ma-ḳa* and the Thebes *ma-ka* must represent the same word? Things are unfortunately not so simple: a seemingly significant association may prove illusive, as shown by the next example. KN B 1055.1 and 9 show both *e-qe-ta* and *pa-te*, while *e-qe-ta-i* and *pa-te* are found in PY An 607.3 and 2, 5. Since these two tablets are dealing with personnel, it could perhaps seem tempting to suppose that *e-qe-ta/pa-te* and *e-qe-ta-i/pa-te* represent the same pair of words. In fact this would be an error. The three/four syllabograms items *e-qe-ta/e-qe-ta-i* really represent forms of the same word, *hekʷetās*, the ‘companion’, while the two syllabograms items *pa-te* represent *pantes*, ‘all’ in KN B 1055 but *patēr*, ‘father’ in PY An 607... This example does not prove that the Thebes *ma-ka* and the Cnossos *ma-ḳa* are not the same word, but shows that we cannot take their identity for granted. The late John Chadwick did unfortunately not give details, but he was very probably right when he found the religious interpretation of *ma-ka* ‘unacceptable’ (*Minos* 31–32 [1996–97], 293). Until now, I have conventionally adopted the reading *ma-ḳa* in KN F 51, which is considered as possible by *CoMIK*, although the editors clearly prefer *ma-qe* — we can understand their hesitation if we look at their facsimile (made by L. Godart) of the sign written after *ma-*: it is shown as ☩, which could be a variant of either *qe* (⊖) or *ka* (⊕). In fact, *TOP* reads *ma-ka*, with no dotted syllabogram at all. This implies that the sign after *ma-* is a certain *-ka* and this rejoins the facsimile made a long time ago by A. Evans: ☷. But what is really written after *ma-* in KN F 51? The only way to know is to check

the original. In October 2006 I was allowed by the Director of the Archaeological Museum of Iraklio, Mrs. Nota Demopoulou-Rethemiotaki, who deserves my warmest thanks, to study the tablet at ease and in the best conditions. What I discovered is that the syllabogram written after *ma-* cannot be neither a *ka* nor a *qa* because there is absolutely no ‘vertical’ line traced by the scribe inside the circle of the sign. What scribe ‘124’ d wrote is undoubtedly a *qe*: the sign has the form  with two ‘horizontal’ and parallel strokes traced within the circle (see Fig. 9.49-51). This matches several similar examples of *qe* at Knossos. I am pleased to learn from J.L. Melena that he has made an independent close inspection and some macrophotographs of KN F 51. Just like me, he observed that the reading *ma-qe* is inescapable and that *ma-qa* or even *ma-qe* is excluded. The conclusion, then, is crystal clear: there is no \*\**ma-ka* at Cnossos, but only a *hap. leg. ma-qe*. And since the case for a divine *ma-ka* in Thebes is entirely built on the ghost Cnossian \*\**ma-ka*, the whole foundation of TOP’s theory collapses (see DUHOUX, *Kadmos* 2006: § 9.43.10).



**Fig. 9.49.** Detail of the right part of KN F 51 v. (photo Y. Duhoux)



**Fig. 9.50-51.** Macrophotograph and facsimile of the syllabogram written after *ma-* in KN F 51 v.2 (photo and facsimile Y. Duhoux)

How should the Theban *ma-ka* be read? There are several current interpretations. Most of them are divine: *Mā Gā*, ‘Mother Earth’ (*TOP*) — cf. Aeschylus’ *Mā Γᾶ*; *Makhā*, ‘(goddess) Battle’ (cf. μάχη); *Magā*, ‘(goddess) Kneading’ (akin to μᾶζα, ‘barley-cake’, μάσσω, ‘knead’, etc.). The *ma-ka* of Thebes has also been interpreted as a common noun *magāi*, ‘for kneading’. Since *ma-ka* is a ‘probable MN’, several MNs forms should be considered: in *Mag-* (cf. μάγειρος, ‘butcher, cook’), *Mak-* (cf. μακρός, ‘tall’), *Marg-* (cf. μάργος, ‘gluttonous’), *Makh-* (cf. μάχη, ‘battle’). There are anyway MNs like *ma-ka-ta*, *ma-ka-wo*, *Máγας*, *Máχα*, etc. A MN like e.g. Μάκαρ could even be possible if *ma-ka* was not a dative but a nominative (§ 9.43.5). The gender of *ma-ka* can be masculine or feminine, with a suffix like, e.g., -ᾱς, genitive -ᾱ (masculine) or -ᾱ, genitive -ᾱς (feminine). However, since indisputable feminine recipients are exceedingly rare in TH Fq, *ma-ka* is more likely to be a masculine than a feminine MN. • **2 o-po-re-i:** dative sing. in *-i*, which must come from an original *s*-stem. This word is a ‘probable MN’ (with ‘characteristics 4-5’). A compound of the LB preverb *opi-* and the word for ‘mountain’, ὄρος has been suggested. A GN, as proposed by *TOP*, seems much less likely because of the clear secular characteristics of *o-po-re-i*; moreover, its interpretation as the divine epithet *Opōrēs*, ‘protector of the fruits’ (*TOP*) is difficult to accept in Greek because it does not fit with the traditional etymology of ὥρα, ‘season’. • **ko-wa:** ‘probable MN’ (with ‘characteristics 4-5’). How should we read *ko-wa*? Its gender is more likely to be masculine than feminine (see above: *ma-ka*). This word cannot be exactly identical to the *ko-wa* of all the other LB texts, which is taken as the word for ‘girl’, *korwā*. There are then two main possibilities of Greek interpretation. (a) If the ‘probable MN’ *ko-wa* has nothing to do with *korwā* — cf. the case of *ko-wo* quoted above —, it could have the same root as for instance κοέω (< \**kow-*, ‘perceive’) or κῶος, ‘cave’ and κοῖλος, ‘hollow’ (< \**kow-*). There is anyway a MN Κόης. (b) The ‘probable MN’ *ko-wa* could also be etymologically linked with *korwā*, ‘girl’ — cf. MNs like [K]όρη or Κοῦρος. On *ko-wa*’s suffixation, see above: *ma-ka*. There is no reason to interpret *ko-wa* as a divine figure, the goddess Κόρη (other name of Persephone, the daughter of Demeter), as *TOP* proposes. See also below. • What about the interpretation of *ma-ka*, *o-po-re-i* and *ko-wa* as a **Theban divine ‘triad’** which would correspond to the later Eleusinian one, with Demeter, Zeus and Kore? This idea has been constantly put forth by the editors of *TOP*. We have just seen that these LB names are not deities, but ‘probable MNs’. But could they nevertheless form a triad? The basic point to begin with is the definition of a genuine triad. It is by no means obscure: a triad is a group of three items typically associated in manner such that every of them follows or precedes each other directly. Everybody

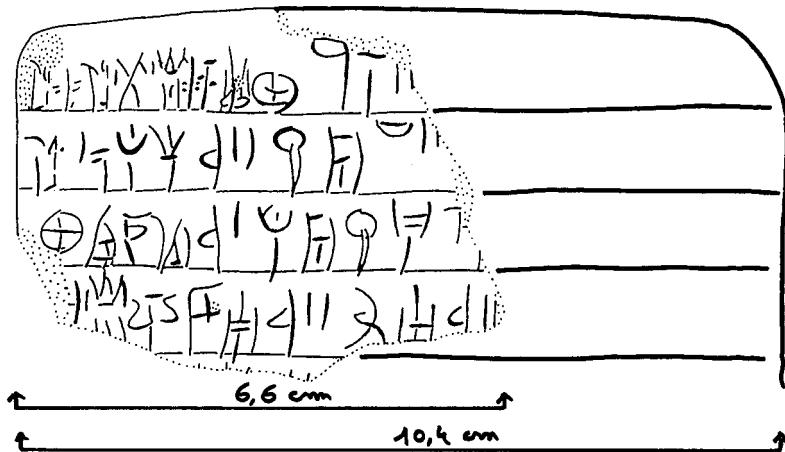
will recognise these characteristics in divine figures like Osiris, Isis and Horus (Egypt), Anu, Ea/Enki and Enlil (Babylonia), Apollo, Artemis and Leto (Greece), Jupiter, Mars and Quirinus (Rome) — not to speak of the Father, the Son and the Holy Ghost. Thus if we want to believe in a Theban LB triad with *ma-ka*, *o-po-re-i* and *ko-wa* we must show that these names regularly follow or precede each other directly. Does this happen? The answer is: *never*. There is no text where *ma-ka*, *o-po-re-i* and *ko-wa* follow or precede each other *directly*. There is not even a simple pair of *ma-ka* and either *o-po-re-i* or *ko-wa* written just before or just after each other. There are only three cases where *o-po-re-i* and *ko-wa* follow each other directly — but such an association is by no means exceptional in TH Fq: compare the pairs made by *ko-wa* and *a-pu-wa* (4 ex.) or *ko-ru-we* and *to-jo* (up to 4 ex.), etc. The conclusion must be that *ma-ka*, *o-po-re-i* and *ko-wa* do not form a triad. We may wonder, then, why the existence of such a triad has been so widely believed. The answer is at hand, I believe, if we look at the TH texts *disregarding* the gaps in the tablets. For instance, in the very tablet studied here, we can read in this way a sequence *ma-ka...*, *o-po-re-i*, *ko-wa*: the ‘triad’ is there — but only if we ignore the gap of *ca* 8 signs between *ma-ka* and *o-po-re-i*, where there is enough room for one or even two recipients. The same is true of the only other example which may give the impression of a direct sequence of *ma-ka*, *o-po-re-i* and *ko-wa* (§ 9.45). In fact the LB texts offer a nice example of what a genuine Mycenaean triad of deities should be: in PY Tn 316.v.3, offerings are sent to ‘the shrine of Zeus’. In this very shrine, three deities are given presents: first, Zeus himself; directly after Zeus, Hera, Zeus’ wife; directly after Hera, ‘Drimios (?)’, the son of Zeus’ (§ 9.38). It seems clear that these three gods, who are named one after the other, are honoured in the same shrine and constitute an obvious ‘holy family’, could be a real triad. • **3 *ko-r-us***: ‘probable MN’ (with ‘characteristics 4-5’). *TOP* understands *ko-r-us* as a MN or a GN (the latter hypothesis is highly improbable). Clear nominative, whose dative in *-uwei ko-ru-we* is written several times — for other examples of datives in *-we* of *-uč* themes, see § 9.6. In our text, *ko-ru* was corrected from *ko-ru-we*: for this kind of change, cf. the MN in the nominative *o-ko-mo-ne-u*, corrected from the genitive *o-ko-mo-ne-wo* in PY Ea 780. The nominative *ko-r-us* alternates in this tablet with two clear datives (*o-po-r-ehi* and *ke-re-n-āhi*). On this alternation, see § 9.6, 9.31, 9.41, 9.45-46 and add for instance TH Ft 140, where two certain dative-locatives of PNs (*te-qa-i*, *Thēgʷāhi*, ‘at Thebes’ and *e-re-o-ni*, *Eleōni*, ‘at Eleon’) are used in parallel with the indisputable nominative of a noun in *-εúč* (*e-u-te-re-u*; *TOP* supposes it would be a PN). The ‘probable MN’ *ko-r-us* has been read *Skollus* or *Khoirus*; in fact there is a MN *Kopúč*.

• *ke-re-ɳa-i* is the dative-locative plur. (in *-āhi*) of a feminine noun used three times at TH. Its barley quantities are identical to those of ‘certain or obvious MNs’ and it is directly associated with the ‘probable MNs’ *ko-rū(-we)* (see above) and \*56-*ru-we* (with ‘characteristics 4-5’; *TOP*: MN or GN). The only other dative-locatives plur. in *-āhi* at TH are the PN ‘Thebes’ (*te-qa-i*) and a group of female persons (*ma-ri-ne-we-ja-i*). So, *ke-re-ɳa-i* could be a name referring to females — e.g. *gerenāhi*, ‘for the women making barley-groats (???)’, from γέρανος· ὅργανον ξύλινον, ἐν φό κόπτουσι οἱ ἀλφιτοποιοὶ τὰ ἄλφιτα, ‘wooden tool with which the barley-groats makers pound the barley-groats’ (Hesychius) — the basic meaning of γέρανος is ‘crane’; *kērēnāhi*, ‘for the women working on bees-wax (???)’, from κηρός, ‘bees-wax’; *skelesnāhi*, ‘for the women making leggings (???)’, from σκέλος, ‘leg’. A PN would perhaps fit — it could match a PN like Γέρηνα/Γερηνία known in Messenia (TH Gp 176 associates *ke-re-na-i* with the certain PN \*63-*te-ra-dē*); we must however object that there is no other certain PN in TH Fq. Religious possibilities have been suggested: *gerēnāhi* (????), ‘to the cranes’, i.e. the sacred cranes (cf. γέρανος and γέρην; so, *TOP* — on the ‘sacred animals’ in the Aravantinos tablets, see § 9.45) and even *krēnāhi* (????), ‘to the sources’ (despite the fact that κρήνη obviously comes from \**krasnā*). In KN M 719, there is a *hap. leg. ke-re-na*. This tablet is obscure (four of its five words are *hap. leg.*) and *ke-re-na* could be almost everything, including a MN — cf. the certain MN *ke-re-no*. Moreover, it is by no means certain that the KN *ke-re-na* is really connected with the TH *ke-re-na-i*: there is a real possibility that the two forms spell different words, as e.g. the KN sequences *ki-ri-ta* and *ki-ri-ta-i*, which represent no less than three totally distinct words: (a) the noun *krithā*, ‘barley’ (cf. κριθή); (b) the adjective *khrista*, ‘anointed’ (cf. χριστός); (c) a PN. • If the interpretation proposed above were right, TH Fq 126 would then record a distribution of barley made ‘when Thyon (?) was buried (?)’. This man must have been rather important but unfortunately the text provides no further information about his supposed death.

**§ 9.45. TH Fq 130** (clay tablet; dimensions: 6.6 × 5.3 × 1.2 cm; scribe 305; find-spot: odos Pelopidou; date: last decennia before 1200/1190; location: AMT 28 447).

**Content:** distribution of barley grain to several individuals or groups; the beginning of the text gives its date.

**Selected bibliography:** see § 9.43.10.



**Fig. 9.52.** TH Fq 130  
left: preserved part (*TOP*, 45); right: restitution of the lost part  
(see below)

- |    |  |                          |            |
|----|--|--------------------------|------------|
| .1 | o-te , o-je-ke-te-to ma-ka                 | HORD T 2[- - - - - ca 10 | - - - - -] |
| .2 | o-po-re-i v 2 ko-wa z 2[- - - - - ca 9     | - - - - -]               |            |
| .3 | ka-wi-jo-*65 v 1 re-wa-ko-a-me[-ro- - ca 7 | - - - - -]               |            |
| .4 | ]a-ke-ne-u-si v 2 ku-si v 2[- - - ca 6     | - - - - -]               |            |
| .5 | ]vestigia[<br><i>infra mutila</i>          |                          |            |

The number of missing signs at the right of the actual tablet has been estimated on the basis of a restored width of *ca* 10.4 cm (§ 9.43.2). • The number of missing entries on l. 1-4 may be estimated as follows. On l. 1-2 (*ca* 10 and 9 missing signs), one or two entries — cf. short entries like *ku-si* v 2[ (l. 4: 5 signs) or long ones like *]a-ke-ne-u-si* v 2 (l. 4: 8 signs). On l. 3-4 (*ca* 7 and 6 missing signs), one entry. • .1 In *o-je-ke-te-to*, the *-te-* has been added afterwards. • .3 *ka-wi-jo-\*65* v 1: *TOP* reads \*\**ka-wi-jo* FAR v 1 (see § 9.43.6). • *re-wa-ko-a-me[-ro]*: there is no word-divider nor significant space between *re-wa-ko* and *a-me[-ro]*. *TOP* reads *re-wa-ko a-me[-ro]*, which is the correct *interpretation* (see below), but not what is actually written.

**.1** *Hote o-je-ke theto:**ma-ka* HORD T 2[;*ca* 10

];

**.2**      *o-po-r-ehi*                v 2;*ko-wa* z 2[;*ca* 9

];

**.3**      *Skaiwijo jus<sup>?</sup>*        v 1;*re-wa-ko<*                >;*Āme[rōi*                ;*ca* 7

];

**.4**      *[akhneusi* (??)        v 2;*ku-si*        v 2[;*ca* 6

;

**.5**      *]vestigia[**infra mutila***.1** ‘When *o-je-ke* was buried (?):to *ma-ka*:                19.2[ ] litres BARLEY;

[

*ca* 10];**.2**      to *o-po-r-es*:                3.2 litres;to *ko-wa*:                0.8[ ] litre;

[

;

*ca* 9 ];**.3**      the son of Skaiwios:        1.6 litre;to *re-wa-ko<*:                ... litres>;

to Ame[ros]:                [...] litres;

[

*ca* 7 ];**.4**      *]to the winnowers* (??):    3.2 litres;*ku-si*:                3.2[ ] litres;

[

*ca* 6 ];**.5**      *]vestigia[**infra mutila*

**.1** *Hote...:* this sentence gives the date of the distribution ('<What follows was done> when...'); see § 9.6. • ***o-je-ke-te-to*:** the discussion about the division of *tu-wa-te-to* in TH Fq 126 could be repeated here (§ 9.44). Chadwick's

*oje(i)khthēto* (?), from the root of οἴγνυμι, ‘open’ encounters the same objection as his *thuwōthēto* (?) in TH Fq 126 (§ 9.44). Moreover, there is also an etymological difficulty, because οἴγνυμι is supposed to come from \*owignumi — a form \*o-we-ke-te-to is thus awaited. This leads us to a tentative two-word interpretation of *o-je-ke-te-to*. It is tempting to use the model of *tu-wō-te-to* in the parallel text Fq 126, written by the same scribe, and to try a division in *o-je-ke te-to*. If so, we may wonder why did scribe 305 consistently write the two formulas with ...te-to in *scr. cont.* A mistake is difficult to accept. Would it be a way of highlighting the special link of the subject and a personal form of its verb in a *passive* construction (?). In any case there are other LB examples of *scr. cont.* involving a verb: at KN, scribe 123 wrote twice *e-ke-pu-te-ri-ja, hekhei phutelijān* (?), ‘occupies a *phutelijā* (?) land parcel’ (KN Uf 981, [1022]), etc. There are two full sentence interpretations offered so far for the split *o-je-ke te-to*: (a) *hote oweigēs* (?) *theto*, ‘when the opening/revelation (?) was done (?)’ (TOP); (b) *hote oy' ekstheto* (?), ‘when he (: the priest) had exposed the tree-fruits (on the offering table) (?)’ (RUIJGH: § 9.43.10). None of them is promising. (a) *oweigēs*, from the root of οἴγνυμι, suffers of the same etymological objection as *oje(i)khthē*. (B) the etymology of ὄα, plur. of ὄον, ‘fruit of the service-tree’ (*Sorbus domestica*) is unknown; the introduction of two implicit items (‘priest’ and ‘offering table’) in the sentence is difficult; RUIJGH himself admits that the actual meaning of ‘had exposed the tree-fruits’ is uncertain — he is tempted to ‘imagine that the priest put a bowl filled with tree-fruits as firstlings on an altar or an offering table outside the sanctuary building’. We have then to look in another direction. Following the parallel of Fq 126, *o-je-ke* could be a MN (?). How should it be read? A first possibility is a MN ending in -ks. A nice parallel structure would be the MN Οἴδηξ (from οἴδηξ, ‘handle of rudder; tiller’). *o-je-ke* should then have a suffixation in -ēk-s instead of -āk-s (cf. the -ēk-s suffixed Laconian κέλ-ηξ, ‘riding-horse’ instead of the \*-ēt-s suffixed Attic κέλ-ης). From a different angle, we could interpret *o-je-ke* as a compound in -ēs, like the MN Δημοσθένης, etc. Such a compound could end in -ēkēs (cf. the MN Εὐήκης; from ἔκος, ‘cure, remedy’), -enkhēs (from ἔγχος, ‘spear, lance’), etc. Anyway, if we tentatively understand *o-je-ke* as a MN (?), *o-je-ke-te-to* could be read as *hote o-je-ke* (?) *theto*, ‘when *o-je-ke* (?) was buried (?)’ — on the form and meaning of *theto*, see § 9.44. There is one further possible split of *o-je-ke-te-to*: *o-je* (?) *ke-te-to*, with *ktēto*, ‘he/one acquired’ or ‘he/it was acquired’ (?), from κτάομαι (< \*ktē-). Since the *o-te...* mention is expected to provide a reference characteristic enough to be used for a date, the acquisition (?) of the *o-je* (?) element should refer to

something of outstanding value — but no convincing interpretation emerges. For instance, we could imagine *o-je* (??) being a PN — but *o-je* (??) is otherwise unknown in LB. It is true that we do have an Attic deme called Οἰη/Οῖα, etc., but this name cannot be equated with our *o-je* (??) because it is an -ā stem (coming perhaps, although its etymology is not certain, from \**Owiā*, which should be written \**o-wi-ja vel sim.* in LB). On the whole, a funerary interpretation of *theto* seems better. Why would the two deaths (?) mentioned in Fq 126 and 130 have happened? Diseases do exist, of course. Wars too — and we cannot but recall the siege of Thebes reported in the epic *Thebais* and staged in Aeschylus' *the Seven against Thebes*. Anyway, diseases or war in the last days of the Mycenaean Thebes do not preclude a definitive destruction caused by a sudden earthquake (this is the hypothesis proposed by *TOP*).

- About the ‘characteristics’ used below to check the identifications of recipients as ‘probable’, ‘obvious’ or ‘certain’ MNs, see § 9.43.4. • ***ma-ka***: ‘probable MN’ (§ 9.44). • **.2 *o-po-re-i, ko-wa***: ‘probable MNs’ (§ 9.44). • **.3 *ka-wi-jo-\*65, ka-wi-jo-ju?*, *Skaiwijo jus?***, ‘the son of Skaiwios’ (cf. the MN Σκαιῖος < \**Skaiwios*): on *TOP*’s reading \*\**ka-wi-jo* FAR, see above and § 9.43.6. In PY, *ka-wi-jo* is a MN or a trade name. In TH Fq, it is an ‘obvious MN’ (§ 9.43.7; *TOP*: trade name or MN). • **The ‘sons’ of TH Fq** (§ 9.43.6-7) are always linked with ‘high’ (at least 5 ex.) or ‘normal’ (at least 1 ex.) barley quantities. This suggests that the social level of these recipients was not low — as in several other examples of ‘sons’ outside TH. • ***re-wa-ko-a-me[-ro]*: *a-me[-ro]***, *Āme[rōi]* is an ‘obvious MN’ (§ 9.43.7; *TOP*: MN), while *re-wa-ko* is a ‘probable MN’ (with ‘characteristics 4-5’; *TOP*: MN; on its Greek interpretation, see J.-L. GARCÍA RAMÓN, in *Rome Colloquium* [forthcoming]). In Fq 198.2 ]*re-wa-ko* v 1 is directly followed by *a-me-rō*[. This gives a good clue to the *scr. cont.* *re-wa-ko-a-me[-ro]* here. The only differences between these two texts are that both a word separation and the barley quantities are lacking. This suggests that the *scr. cont.* *re-wa-ko-a-me[-ro]* is simply a scribal error, just as, in this very tablet, the initial omission of the -te- of *o-je-ke-te-to* l. 1 (see above) and the omission of another sign made elsewhere by the same scribe (§ 9.46, l. 13). So, we may assume that scribe 305 mistakenly wrote as one single entry the six syllabograms of *re-wa-ko* and *a-me-ro* (there are several words of six signs in TH Fq) and then forgot to write the quantities of barley given to *re-wa-ko*. *TOP* thinks that these two MNs were exceptionally grouped in one single entry. The difficulty is that there is no other example of such a grouping in TH Fq and that the writing of two MNs in *scr. cont.* is unusual. • **.4 *]a-ke-ne-u-si***, ‘to the wijnowers (??)’ occurs about ten times in TH Fq (barley quantities identical to those of ‘certain or obvious MNs’).

*a-ke-ne-u-si* is directly associated with the following words: (a) *ku-si*, a ‘probable MN’ (see below); (b) *] $\varrho$ -ni-si*, a ‘probable MN’ (with ‘characteristic 5’) — better than the strange *ornisi*, ‘to the birds’ proposed by *TOP* (see below); (c) *o- $\mu$ -wa-ja-wo-ni*, a ‘probable MN’ in *-āwōn* (with ‘characteristics 4-5’; *TOP*: MN); (d) *ra-ke-<da>-mi-ni-jo-ju?*, ‘the son of Lace<dae>mniōs’ (‘obvious MN’: § 9.43.7). All the terms directly associated with *a-ke-ne-u-si* point thus to a human designation. Since the word is clearly the dative plur. of a name in *-εύς*, it must refer in theory either to a group of persons (obviously men) or to a town (cf. the Pylos PN *a<sub>3</sub>-ta-re-u-si*). Two interpretations have been proposed so far. The first, *hagneusi*, ‘to the purified’ (*TOP*), must be treated with caution because such a religious term is by no means required by the context; moreover, since the ‘doublet’ syllabogram (§ 9.1) *a<sub>2</sub>* (= [ha]) is not used in *a-ke-ne-u-si*, there is no certainty about its initial aspiration — the scribe 305 regularly uses the syllabogram *a<sub>2</sub>*. The other suggestion, *akhneusi*, ‘to the winnowers (??)’ (cf. *ἄχνη*, ‘chaff coming off in winnowing’) seems more plausible. It could also provide an interpretation of *a-ke-ne-u-si* as a possible PN (*Akhneusi*, ‘at Akhnēwes [??]’; etymologically ‘the place of the winnowers’) but a PN seems less probable, since there is no other certain PN in TH Fq. • ***ku-si***: *hap. leg.*; ‘probable MN’ (with ‘characteristic 5’). *TOP* considers that *ku-si* should be taken together with *ku-ne* and *ku-no* and interprets all of them as forms of the ‘dog’s name (so, in our tablet, *kusi*, ‘to the dogs’). There are several compelling reasons not to do so, however. First, *KILLEN* (§ 9.43.10) has shown that *ku-ne* and *ku-no* are associated in Fq 229 and 236 with four MNs which do not occur with *ku-si*. *ku-ne* and *ku-no* are thus a pair of words which refers probably to one single recipient and must very likely be separated from *ku-si*. Moreover, *ku-no* occurs in Fq 236.5 as *ku-no-\*65[*, i.e. *ku-no-ju?*[, *ku-no juš?*, ‘the ṣon of *ku-no*’ (pace *TOP*, with its reading \*\**ku-no FAR*[: see § 9.43.6]). *ku-no* is thus an ‘obvious MN’ (§ 9.43.7), while *ku-ne* is a ‘probable MN’ (with ‘characteristic 5’). All this makes it clear that *ku-ne/ku-no* cannot be but a MN. An attractive Greek reading could be the dative *Kunei* (*ku-ne*) and the genitive *Kunos* (*ku-no*) from a MN *Kuōn* — cf. the MNs *Kóvax*, *Kuvískos*, *Kuvvó*, etc. and the LB MN *ku-ne-u*, read as *Kuneus* (there are plenty of ‘Mr. Dog’ or ‘M. Lechien’ today in English or French speaking areas). On the other hand, the ‘probable MN’ *ku-si* could then be read e.g. as *Kursis* (?) (cf. MNs like *Kúρσαμος*, *Κυρσίλος*) *vel sim.* There are surely no dogs here. • *TOP* speaks of **sacred animals**: sacred birds, cranes, dogs, geese, mules, snakes and a sacred piglet would have been given barley, olives and wine. What about this question? A *first point* to settle is the difference between ‘sacred’ and ‘divinised’ animals.

A ‘divinised animal’ was an animal taken as a god or symbolising a god, while ‘sacred animals’ were animals belonging to a divinity. It seems clear that the recipients involved in the TH tablets are not likely to have been ‘divinised animals’ because several of their names are *in the plural*: while one canine god may be conceivable, a plurality is not (so, *TOP*). Moreover, although mules were extremely useful and appreciated animals, C.J. RUIJGH (§ 9.43.10) observes that *divinised* mules are impossible because these animals are bastard and sterile. Now, if the TH tablets are dealing with ‘sacred animals’, i.e. real ones (like the ‘sacred fields’ were real ones), *wine* given to several living cranes, mules or snakes would be strange: none of them is likely to drink wine. A *second point* to examine is the length of the names of the ‘sacred animals’. We have already seen that the shortest LB words, i.e. those which are only two signs long, are extremely ambiguous: they allow often several different Greek transcriptions (see e.g. the examples quoted § 9.44). In fact, the names of six out of the eleven different forms of ‘sacred animals’ names have only two signs. This increases greatly their ambiguity and we should thus be especially cautious about their animal interpretation. A *third point* to consider is the actual use of words etymologically based on or identical to animal names. Many words in many languages may be used as animal names but also as MNs, PNs or even non animal vocabulary words — for instance, (a) *buffalo* is or used to be the name of: a wild bovid; a sort of fish; a cloak or rug made of the skin of a bison; a buffalo-horn used for making handles of pocket-knives; *Buffalo* may be a MN, the name of a city located in New York State (USA) and of a plane. (b) *falcon* is or used to be the name of: a bird of prey; a light cannon. *Falcon* may be a MN, the name of a city located in North Carolina (USA) and of a plane. Etc. This shows that we should carefully check what a LB animal-like name really refers to: it may be an animal, but also a MN, a PN, an object... • When we study in its context the name of every ‘sacred animal’ name of the Aravantinos tablets, we discover that the available data does *not* support an animal interpretation: even the longest words most probably refer to ordinary human realities, as suggested first by the recipients which precede or follow them directly in the texts and secondly by their quantities of barley, olives and wine, which are the same as those of certain human recipients. Moreover, our ‘first basic rule’ (§ 9.43.4) forbids to accept a religious status for any word unless we cannot avoid to do so. • If so, could we not imagine that the humans designated by these animal looking names had *very close links* with some real animals? Perhaps the Thebans of the Mycenaean period had some totem habits and used animals as symbols to refer to themselves, their family or any

social groups of which they were members. We could also seek to compare these humans to some first millennium Greeks who were identified with animals in specific religious ambiances (cf. for instance the ὄρκτοι, ‘she-bears’, name given to young girls in the cult of, e.g., Artemis Brauronia); etc. Possibilities like these must be taken seriously. However, it seems likely that if such humans who were *very* closely linked with animals did exist in Mycenaean Thebes, they constituted a very special category. At all events, they were clearly much less numerous than the ‘ordinary’ humans in the Aravantinos tablets. If so, when several of these very ‘special’ humans were mentioned in one single tablet, we might have expected that the scribes would have put into practice one of their favourite principles: ‘birds of a feather flock together’. In other words we should have expected that such names would have been grouped together and written in a sequence one after the other — this is the way that e.g. horses, foal(s), asses and asses’ foals (§ 9.4) or divine names (§ 9.17), etc. are regularly arranged in our LB texts. In fact, there are no less than five tablets where two supposed ‘humans *very* closely linked with animals’ are listed. This gives five opportunities to test the original hypothesis. The result is that the *supposed ‘special’ humans that we are discussing are never directly associated*: in every case, they are separated by one or two other entries — notice especially TH Ft 169, where two ‘rather long’ (three and perhaps four signs) forms (*ke-re-ɳq[-i* and *]q-ni-si*) are separated by at least two entries. • Could we not make yet another trial and suppose that the ‘animal-like names’ would refer, in fact, to the *people in charge of living animals* (as suggested by A. Morpurgo Davies: pers. com.)? This may seem a better proposal, but it nevertheless raises some difficulties. First, we have the proof that at least one group of animal keepers in the Aravantinos tablets was *not* referred to by the word for the animals themselves: this is shown by the *i-qo-po-qo-i vel sim.*, *ikkʷophorgʷoihi*, ‘horse-keepers’ — notice that there is no single example of the animal name *i-qo* in the Aravantinos tablets. Second, in TH Ft 169, we find in the same tablet *i-qo-po[-qo*, the ‘horse-keepers’, *ke-re-ɳq[-i* and *]q-ni-si*. If *ke-re-ɳq[-i* and *]q-ni-si* designated respectively the crane and the bird *keepers*, we would expect that they would be grouped together with the ‘horse-keepers’ (see above for this scribal principle). In fact, at least seven and four recipients, respectively, separate *i-qo-po[-qo* from *ke-re-ɳq[-i* and *]q-ni-si*... • One could nevertheless argue that *TOP* provides no less than eleven forms which seem to match alph. Gr. names of animals. Is such an accumulation not impressive? And does it not *exclude* coincidence? This issue must obviously be faced. The *first* thing to note is that the eleven ‘animal-like names’ of Thebes are not homogeneous:

(1) they are not written by the same scribe nor are they found in the same series: at least six scribes (305, 305?, 306, 306?, 307, 310, 311, —) and four series (Fq, Ft, Gf, Gp) are involved; (2) they never constitute a coherent list nor do they follow or precede each other directly (see above); (3) their grammatical number and their case vary: *TOP* thinks that they are in the nominative, genitive or dative singular or plural. A *second* point to consider is that six of these eleven different forms have only two signs: such short forms increase considerably the number of possible readings and the risk of homography (see above). *Third*: it is not enough to look at the problem from a general point of view. We must be practical. Is it or is it not possible to find several LB words which *look like but are definitely not* animal names? Let us make an experiment and take very well known LB texts, where nobody ever imagined the existence of a group of animals, whether sacred or not. Will we succeed in transforming ordinary LB words referring to human realities into seemingly names of animals? If not, *TOP*'s ‘sacred animals’ cannot be dismissed as pure coincidence. But if so, this will *prove* that coincidence may really happen. For this experiment I will take tablets of Pylos written by only one scribe (scribe 1) — *TOP* uses at least six different scribes — and found in three different series (An, Cn, Es) — *TOP* uses four different series. I will choose words which could, in theory, be understood as names of animals if we use a purely ‘etymological method’, i.e. if we look only at correspondences with alphabetic Greek words without considering the LB contexts. Here is the harvest (it is by no way exhaustive: I stopped when I reached as many forms as *TOP*'s ‘sacred animals’): (1-3) *a-re-ku-tu-ru-wō*, *a-re-ku-tu-ru-<wo>-ne*, *a-re-ku-tu-ru-wō-no* is an animal name if read as nominative, dative and genitive sing. of the word for ‘cock’, *alektruwōn* (PY An 654.8; Es 644.2, 649.1, 650.2; cf. ἀλεκτρυών); (4) *e-ki-no-jo* is an animal name if read as the genitive sing. *ekhinojo*, ‘hedgehog’ (PY An 661.1; cf. ἐχῖνος); (5) *e-ra-po* is an animal name if read as a form of *elaphos*, ‘deer’ (PY An 657.12; cf. ἔλαφος); (6) *ka-ra-u-ko* is an animal name if read as a form of a ‘fish’ name, *glaukos* (PY Cn 285.4; cf. γλαῦκος); (7) *ke-ro-si* is an animal name if read as the dative plur. *khellōnsi* of a ‘fish’ name (PY An 261.v.4; cf. χελλῶν); (8) *ko-ni-jo* is an animal name if read as the nominative sing. *skhoiniōn* of a ‘bird’ name (PY An 610.14; cf. σχοινίων); (9) *ko-ro* is an animal name if read as a form of *khoiros*, ‘young pig’ (PY Cn 131.11; cf. χοῖρος); (10) *qo-o* is an animal name if read as the accusative plur. *gʷōns* of the ‘ox’ name (PY Cn 3.2; cf. βοῦς); (11) *o-no* is an animal name if read as a form of *onos*, ‘donkey’ (PY An 724.14, 615 *lat. inf.* [?]; cf. ὄνος). We have thus eleven different forms (just as *TOP*) which can be read as animal names. They are

written by one single scribe (*TOP*: at least six) in three series (*TOP*: four), their mean length is 3.9 signs (*TOP*: 2.8), eight of them (*TOP*: five) have more than two syllabograms and the two longest have seven signs (*TOP*: the longest has five signs). Moreover, one of our eleven forms is identical with one of the *TOP*'s list: *ko-ro*. Finally, all our eleven forms match perfectly alph. Gr. forms — in *TOP*'s list, *ke-re-na-i* lacks such an exact correspondence. It is now time to abandon the ‘etymological method’ procedure: we will no longer look at the mere forms but check the contexts. What is the correct interpretation of these eleven forms? Here is the answer. There is *only one of them which refers to an animal*: *qo-o*, which really means ‘ox’. Most of the others are certain MNs: *a-re-ku-tu-ru-wo*, *a-re-ku-tu-ru-<wo>-ne*, *a-re-ku-tu-ru-wo-no*, *e-k̄i-no-jo*, *ka-ra-u-ko* and *ko-ro*. There is one certain PN: *e-ra-po* (in *e-ra-po ri-me-ne*: see below). One of them, *ko-ni-jo*, could be a MN or an ethnic. There are two non animal vocabulary words: *ke-ro-si* and *o-no*, which are to be read as *geronsi<jā>* (the scribe forgot to write the final *-ja*), ‘council of Elders’ and *onon*, ‘price’ (see § 9.26). The interesting thing is that several of these forms are currently thought to come *etymologically* from animal names: ἀλεκτρύων, ‘cock’ > the MN *a-re-ku-tu-ru-wo vel sim.*; ἔχινος, ‘hedgehog’ > the MN *e-k̄i-no-jo*; the PN *e-ra-po ri-me-ne* must have originally meant ‘at the Deers’ Harbour’, *Elaphōn Limenei*, cf. ἔλαφος and λιμήν; to these forms we could *perhaps* add *ka-ra-u-ko*, *ko-ni-jo* and *ko-ro*. But we should not confuse the etymological uses with the actual ones: whereas a Mr. Young may be extremely *old*, ‘animal looking names’ may apply to non animal beings. All this may seem right, but we could nevertheless ask why so many ‘animal looking names’ do appear in the texts we are looking at. Several reasons are at hand, but a major one seems to me that the forms selected either by *TOP* or by me for the sake of my test do not constitute a natural structure. They are almost randomly picked up here and there, instead of arising from a genuine textual unity, sharing coherent associations and reinforcing each other. It is no wonder then that the final result is, let us admit, puzzling. My conclusion is easy to guess: if the tablets of scribe 1 of Pylos can yield eleven rather long forms looking like animal names which are in fact MNs (mostly), a PN, two non animal vocabulary words and a single animal one, then we should seriously consider the possibility that the rather short ‘animal-like names’ of the Aravantinos tablets are in fact purely human designations. • If so, how can they be interpreted? Here is a quick review of some proposals — several of them are *etymologically* based on animal names (see above). (a) *e-mi-jo-no-i*[: instead of *hēmionois*[, ‘to the mules’ (*TOP*), *e-mi-jo-no-i*[ can be read as the dative-locative plur. *Hermijo-noihi*[ of a PN (cf. the PN Ἐρμιών/Ἐρμιόνη/Ἐρμιόνā in Argolis) — a PN

is especially welcome in TH Gp (*e-mi-jo-no-i*[ is not found elsewhere) which has an ethnic *te-qa-jo-i*[ and a PN \*63-*te-ra-de*. (b) *e-pe-to-i*: instead of *herpetois*, ‘to the snakes’ (*TOP*), *e-pe-to-i* can be read as a PN (*e-pe-to-i* is found only in TH Gp) or as a occupational name, e.g. a compound like *empeltoihi*, ‘for the people with a shield (???)’ (cf. ἐν- and a form of the family of πέλτη, ‘small light shield of leather’). (c) *ka-no* and *ka-si*: instead of χανῶν and χασί, genitive and dative plur. of the word for ‘goose’ (*TOP*), *ka-no* and *ka-si* can be read as forms of a PN *Khānes* (lit. ‘The Geese’, cf. PNs as Χῆν or Χῆναι) — all the certain examples of *ka-no/ka-si* occur in TH Ft, where Ft 140 lists several PNs. If so, there would be an *etymological* link with an animal name. (d) *ke-re-na-i*: instead of *gerenais*, ‘to the cranes’ (*TOP*), *ke-re-na-i* can be a trade name, for instance *gerenāhi*, ‘for the women making barley-groats (???)’ – if so, there would be an *etymological* link with an animal name; see § 9.44 for other possibilities. (e) *ko-ro* and *ko-ro-qe*[: instead of *khoirōi*, ‘to the young pig’ (*TOP*), *ko-ro* can be read as a MN, e.g. *Khoiros*, (cf. the MN Χοῖρος — with an *etymological* link with an animal name), *Khōlos*, (cf. the MN Χῶλος), etc. (f) *ku-si* and the pair *ku-ne/ku-no*: instead of *kusi*, *kunes* and *kunōn*, dative, nominative and genitive plur. of the word for ‘dog’ (*TOP*), *ku-si* and *ku-ne/ku-no* can be understood as purely human designations. *ku-ne/ku-no* can be read as forms of a MN *Kuōn* — there would be an *etymological* link with an animal name. On the other hand, *ku-si* could be a MN *Kursis vel sim.* (see above). (g) *o-ni-si*: instead of *ornisi*, ‘to the birds’ (*TOP*), *o-ni-si* can be read as a MN *Ornisis* (cf. a MN like Ὀρνιθᾶς). A PN in the dative plur. *Ornisi* (cf. the PN Ὀρνίς near Corinth — there would then be an *etymological* link with an animal name) is less likely, since *o-ni-si* appears only in TH Fq (see above). • We can make the same hypothesis for TH Fq 130 as in § 9.44 about the social level of the presumed deceased and about the circumstances of the barley distribution.

**§ 9.46. TH Fq 254[+]255** (clay tablet; dimensions: [a] Fq 254: 10.4 × 7.1 × 1.4 cm — [b] Fq 255: 10.4 × 6.9 × 1.0 cm; scribe 305; find-spot: odos Pelopidou; date: last decennia before 1200/1190; location: AMT 28 697[+]28 698).

**Content:** Two distributions of barley grain to several individuals or groups. After the quantity of barley of the first distribution, the date of the second is given. Several bone styluses used by the scribes were found with the group of ca 70 tablets which included Fq 254[+]255.

**Selected bibliography:** see § 9.43.10.

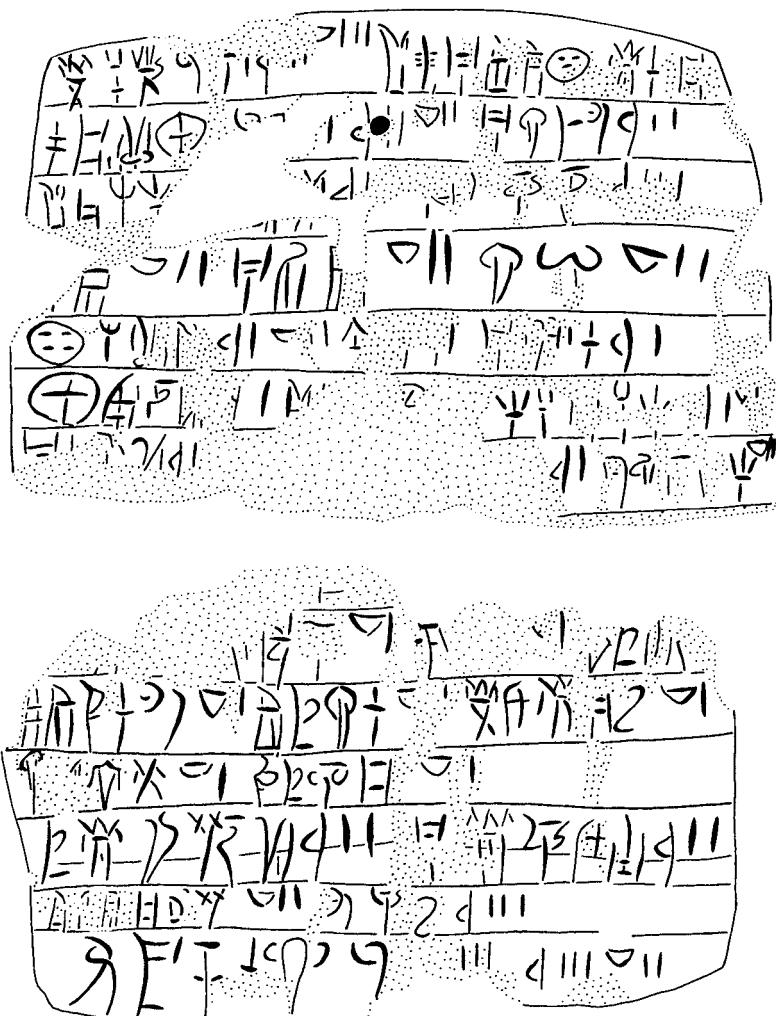


Fig. 9.53. TH Fq 254[+]255 (TOP, 105)

- .1 de-qo-no HORD T 1 v 2 z 3 o-te , a-pi-e-qe , ,ke-ro-t̪  
 .2 pa-ta , ma-ka HORD T 1 v 2 z 2 a-ko-da-mo v 2 vac.  
 .3 o-po-re-i[ ]ma-di-je v 1[Z]1 k̪a-ne-jo v 3 vac.  
 .4 k̪o-wa z 2 a-pu-wa z 2 ko-ru z 2  
 .5 qe-re-ma-o v 1 z 2 z̪o-w̪a y 1 a-me-ro v 1 vac.  
 .6 ka-wi-jo-\*65 y 1 \*63[ ]k̪a[ ]i-ko-po-qo-i v 1 z 1  
 .7a z 2

Although it is clear that Fq 254 and Fq 255 were originally two parts of one single tablet, it has not been possible to join them physically: these two halves constitute thus a *quasi-join*. • The whole text is a palimpsest. • .2 In *ma-ka* HORD T 1 v 2, the point of a stylus made a hole in the tablet between v and '2'. • .3 After v 1[, there is enough room for [z] before ]1|. • .5 Trace of an erased ruling. • .6 TOP reads \*\**ka-wi-jo* FAR but see § 9.43.6. A better reading is *ka-wi-jo-\**65. • .7b TOP reads \*\**a-ra-o* FAR (see above). • There could have been two entries (*ca* 11 signs) lost in the lacuna. • Before ]v 1, trace of a sign (perhaps *ljo*). • .8-9 There were likely *ca* 3 entries in each of these lines. • .10 ]*to-jo*[ ]z 1: *Tithemy*<sup>2</sup> reads ]*to-tu*[ -no] z 1. • .11 *de-u-ke-[·]-we*: TOP reads *de-u-ke-nu-we*; *Tithemy*<sup>2</sup>, *de-u-ke-sq-e-we*. On the *se/nu* sign, see below. • .13 Trace of an erased double ruling. • *ra-ke-<da>-mi-ni-jo-\**65: cf. *ra-ke-da-mi-ni-jo-\**65 elsewhere and see below; TOP reads \*\*...-*jo* FAR (see above).

- |             |  |                   |
|-------------|--|-------------------|
| <b>.1-2</b> | <i>de-qo-no:</i>   | HÖRD T 1 v 2 z 3. |
|             | <i>Hote amphiheskʷe</i> (?) <i>geronṭas</i> (???) [.2] <i>pa-ta-</i> |                   |
| <b>.2</b>   | <i>ma-ka</i>   | HÖRD T 1 v 2 z 2; |
|             | <i>A(r)godāmōi</i> 2;  |                   |
| <b>.3</b>   | <i>o-po-r-ehi[</i>   | ;                 |
|             | <i>]mq̥-di-jei</i>   | v 1[z] 1;         |
|             | <i>ḳa-ne-jo</i>  | v 3;              |
| <b>.4</b>   | <i>k̥o-wa</i>  | z 2;              |
|             | <i>a-pu-wa</i>   | z 2;              |
|             | <i>ko-r-us</i>   | z 2;              |
| <b>.5</b>   | <i>qe-re-ma-o</i>  | v 1 z 2;          |
|             | <i>z̥o-wa</i>  | v 1;              |
|             | <i>Āmerōi</i>  | v 1;              |
| <b>.6</b>   | <i>Skaiwijō juṣ?</i>   | v 1;              |
|             | *63[ ] <i>ḳa[</i>  | ];                |
|             | <i>ikkʷophorgʷoi hi</i>  | v 1 z 1;          |

.7	<i>a-raq-ō̄ jus?</i>	v 1[;
	<i>ca 11</i>	;
		]v 1;
	<i>me-to-raqhi</i>	z 2;
.8	[ <i>deest</i>	;
		;
		];
.9	]vestigia[	;
		;
		;
.10	[ <i>ca 6</i>	;
	<i>]Anutoi</i>	z 1[;
	<i>]t̪o-jō[</i>	]z 1;
	<i>Milātijōi[</i>	];
.11	<i>Epidromōi</i>	z 1;
	<i>Philaglkrōi</i>	z 1;
	<i>de-u-ke-[·]-we</i>	z 1;
.12	<i>ko-dū-*22-je</i>	z 1;
	<i>do-ra-a₂-ja</i>	z 1;
.13	<i>Lake&lt; dai&gt;mnijō jus?</i>	v 2;
	<i>akhneusi</i> (?) v 2;	
.14	<i>q̪-u-wa-j-āwōni</i>	z 2;
	<i>mo-n-ēwēj</i>	v 3.
.15	<i>Ksun(s)trokʷ(h)ā</i>	HORD [T ] 3 v 3 z 2.

.1-2 ‘To *de-qo-no*: 14[ ] litres BARLEY.

When [.2] *pa-ta* [.1] gathered (??) the Elders (???) around him:

.2	to <i>ma-ka</i> :	13.6[ ] litres BARLEY;
	to A(r)godamos (?):	3.2 litres;
.3	to <i>o-po-r-es</i> [:]	litres];
	]to <i>ma-di</i> :	2[ litres];
	to <i>k̪a-ne-jo</i> :	4.8 litres;
.4	to <i>k̪o-wa</i> :	0.8 litre;
	to <i>a-pu-wa</i> :	0.8 litre;
	<i>ko-r-us</i> :	0.8 litre;
.5	to <i>qe-re-ma-o</i> :	2.4 litres;
	to <i>z̪o-wa</i> :	1.6 litre;
	to Ameros:	1.6 litre;
.6	the <i>son</i> of Skaiwios:	1.6 litre;
	to * <i>q̪3[ ]k̪a[: ]</i> litres;	
	to the horse-keepers:	2 litres;

- .7      the son of *a-raq-o*:            1.6[ litre;  
       [        *ca* 11            ]1.6 litre;  
       to *me-to-r-eṣ*:            0.8 litre;
- .8      [     *deest*            ;  
                                 ;  
                                 ];
- .9      ]*vestigia*[            ;  
                                 ;  
                                 ];
- .10     [                    *ca* 6            ];  
       ]to Anytos:            0.4[ litre;  
       to ]*to-jo*[:            ]0.4 litre;  
       to Milatios[:            litre];
- .11     to Epidromos:            0.4 litre;  
       to Philag/kros:        0.4 litre;  
       to *de-u-ke-[·]-we*: 0.4 litre;
- .12     to *ko-dy-\*22-je*:        0.4 litre;  
       to *do-ra-a₂-ja*:        0.4 litre;
- .13     the son of Lace<dae>mnios: 3.2 litres;  
       to the winnowers (??): 3.2 litres;
- .14     to *o-ゅ-wa-j-awon*:        0.8 litre;  
       to *mo-n-eṣ*:            4.8 litres.
- .15     In total:                [ ]34.4 litres BARLEY.'

According to *TOP*, 16-18, this text was written in the very last hour of the life of the palace — while TH Fq 126 and 130 were written earlier. • .1 This tablet begins with an entry *de-qo-no...* which is directly followed by a typical *hote...* date formula (see below). The *de-qo-no...* and *hote...* entries are probably independent. We may even perhaps wonder if *de-qo-no...* could not be the last entry of a preceding tablet. This would be a quite unusual feature, but the position of the *hote...* sentence is exceptional too — in the two other Thebes examples known, *hote* is always the very first word of the tablet (§ 9.44-45). However, if *de-qo-no...* was the last item of a longer list beginning in a preceding tablet, we would wait for a totalling formula put directly afterwards, like l. 15 in our text and in several other TH Fq tablets of scribe 305 (§ 9.43.2). Since this formula is lacking, it is better to assume that *de-qo-no...* is not linked with another document. • The tablet ends with a totalling line (l. 15). As it stands, our text is thus likely divided into two major parts: (a) l. 1-14 beginning with *de-qo-no...*; (b) l. 15, with *ku-su-to-ro-qa* introducing the total amount of barley added up from the l. 1-14. The first part is itself divided into: (a1) l. 1 with the *de-qo-no...* entry; (a2) l. 1-14 beginning with *o-te a-pi-e-qe...* This

structure is confirmed by a peculiarity in the use of the BARLEY ideogram: it occurs three times only, and always at the beginning of each of the sections and subsections. • ***de-qo-no*** is a *hap. leg.* ('very high' barley quantity — even slightly higher than the 'probable MN' *ma-ka* here, l. 2). The best default interpretation (§ 9.43.4) of *de-qo-no* is a 'probable MN'. In fact *de-qo-no* is currently understood otherwise. A trade name *deipnos*, 'caterer' is proposed by *TOP* — the word would be linked with another *hap. leg. po-ro,-de-qo-no* known at KN, understood as *prodeipnos*, 'subcaterer' (so, *TOP*). The etymology of δεῖπνον is unknown, however. A variant is *deipnōi*, 'for the dinner' (with *prodeipnōi*, 'for pre-dinner'). • ***Hope...***: this sentence gives the date of the distribution that follows ('<What follows was done> when...'); see § 9.6.

• ***a-pi-e-qe, amphiheesk<sup>w</sup>e (???)***: this is the only one of the three words after *hote* which can be a verb. It obviously begins with the preverb ἀμφι- and is very probably the third person sing. of an indicative aorist active (ending in *-e*). Its root is likely to begin with an aspirate: otherwise, we should normally expect a spelling \**a-pi-je-qe*. A first attempt at interpretation could start from the Greek active verb ἐν(ν)έπω, 'tell' built on a root \**sek<sup>w</sup>*- (same meaning) — *hote amphi-he-sk<sup>w</sup>-e (???)* would then perhaps mean something like 'when he solemnly proclaimed around'. There are morphological problems, however.

(a) In alph. Gr. this verb has almost always the preverb ἐν- (and has never ἀμφι-).

(b) *amphi-he-sk<sup>w</sup>-e (???)* implies a reduplicated LB aorist, while ἐν(ν)έπω lacks this form in Greek and in the other Indo-European languages — the augmented form of a non reduplicated aorist, *amphi-e-sk<sup>w</sup>-e (???)* seems excluded because of the clear unaugmented forms elsewhere (especially *theto* used by the same scribe: § 9.3, 9.44-45) and the spelling *a-pi-e-qe* without a glide between *-i-* and *-e-*. There are two other possible comparisons: with ἔπω and with ἔποματ. Semantically, ἔπω, 'be about' (especially ἀμφιέπω, 'be busy about, look after') is excellent — but the traditional etymology supposes a root \**sep*-, without the labiovelar of *a-pi-e-qe*. This cannot be objected to the root \**sek<sup>w</sup>*- of ἔποματ, 'follow': its reduplicated aorist (without augment) would precisely be *amphi-he-sk<sup>w</sup>-e*. There are nevertheless difficulties with the \**sek<sup>w</sup>*- interpretation. The first is morphological: we expect a medio-passive (cf. ἔσπόμην) and not an active form. The second is semantic: how could a meaning like 'follow' fit here? The solution was found by C.J. RUIJGH, *Mnemosyne* 57 (2004), 31-32, 42: *a-pi-e-qe* could be an *active causative* aorist, which coexists with a medio-passive non causative form. If so, we could read *amphiheesk<sup>w</sup>e (???)*, with the root of ἔποματ *but* with active voice and a causative meaning. This is the reading tentatively adopted here. If we add to the meaning 'follow, be after, be in company with' the sense of the preverb ἀμφι-, 'on both sides', *amphiheesk<sup>w</sup>e (???)* could be understood as 'he made people to follow/be round him', i.e. 'he

gathered people around him (??)'. • ***ke-ro-ta*** (*hap. leg.*) and ***pa-ta***: these two words are not normal recipients of TH Fq, but elements of a complete verbal sentence. We must thus be prepared to accept that at least one of them could be either a MN or a lexical item. • If ***pa-ta*** was a normal recipient of TH Fq, we should consider it as a 'probable MN' (although *pa-ta* is a certain MN at PY and a possible one at MY, it is only two syllabograms long: it has thus the 'characteristic 3' and not '1') — cf., with an appropriate suffix, MNs in *Pant-* [Πάντων, etc.], *Spart-* [Σπάρτων, etc.], *Phant-* [Φάντων, etc.]). However, *pa-ta* has been or could be interpreted in various other ways: (a) an adjective *panta(s)*, 'everything/everybody/all' (??; from πᾶς, 'all' — cf. the regular use of πᾶς in LB). (b) a substantive — e.g. *palta*, 'darts (???)' (cf. πάλτον and LB *pa-ta-ja*, *paltaja*, 'javelins'). • The *hap. leg.* ***ke-ro-ta*** could be: (1) a MN either in the accusative (*Geronta* [??]: cf. the MN Γέρων) or in the nominative or accusative (*Gerontas/n* [??]: cf. the MN Γεροντίδης — with a suffix like e.g. -ᾶς, genitive -ᾶ). (2) a substantive like *geronta(s)* (??), 'the Elder(s) (??)' (accusative sing. or plur. of γέρων — cf. LB *ke-ro-te*, *ke-ro-si-ja*, *gerontes*, *geronsija*, 'Elders', 'council of Elders') or even *khērōstān(s)* (??), 'far-off kinsman/kinsmen (??)', i.e. people 'who seize and divide among themselves the property of one who dies without heirs' (*LSJ*) — the old legal term χηρωστής is found as early as Homer and comes from a root \*ghe-. • How could we combine *amphikeskwe* (??) with all these possibilities? Reading *gerontaṣ* (???) *pantas* (???), 'all (???) the Elders (???)' (accusative plur.), CHADWICK (§ 9.43.10) translates 'when he (presumably the king) assembled around him all the senators' whereas PALAIMA (§ 9.43.10) understands 'when all the elders were brought into attendance' (with an impersonal construction well known in alph. Gr.). RUIJGH (§ 9.43.10) translates 'when he (: the priest) has made all the Elders follow him on both sides'. These interpretations seem reasonable, but we could object to the lack of an explicit subject, in contrast with the only existing *hote* sentence with an active verb, *hote wanaks thēke...*, 'when the king appointed/buried...' (§ 9.36). If we try to find an explicit subject in *o-te a-pi-e-qe ke-ro-ta pa-ta*, this must be either *ke-ro-ta* or *pa-ta*. In a sentence like this one the word which is neither the subject nor the verb should presumably be a complement. So, we have two possible schemes: *ke-ro-ta* subject and *pa-ta* complement, or vice versa. The choice should then depend on what meaning we get for the whole sentence. We can envisage it in two basic ways: (1) 'when *pa-ta* (MN [??]) gathered (??) the Elder(s)/far-off kinsman/kinsmen (???) around him'; (2) 'when *Gerontaṣ* (MN [??]) gathered (??) everything/everybody/all/the darts (???) around him'. The most plausible of these translations seems to be the first: *pa-ta* would thus be a MN (this agrees with our tentative diagnosis, when we were tempted to consider it as a 'probable MN': see above) while *ke-ro-ta* would

then preferably be linked to γέρων because this word is known in LB; these ‘Elders’ could refer to the members of the Mycenaean *geronsijā* (see above). If so, the man named *pa-ta* should obviously be extremely wealthy. It must however be stressed that on the whole the meaning of this sentence remains basically difficult, even if some of the interpretations above offer interesting possibilities. Here, I have conventionally selected ‘when *pa-ta* (???) gathered (???) the Elders (???) around him’. *TOP* understands ‘when *Kerota?* dished up/prepared the mashed barley’: there would be a MN ‘*Kerota?*’, an aorist of ἀμφιέπω meaning ‘dish up’ or ‘prepare’ and *pasta*, ‘mashed barley’. This interpretation seems *extremely* difficult to support: there are not only morphological objections to ἀμφιέπω (see above), but also semantic ones and the interpretation of *pa-ta* is based on a rare late gloss. • About the ‘characteristics’ used below to check the identifications of recipients as ‘probable’, ‘obvious’ or ‘certain’ MNs, see § 9.43.4. • .2 *ma-ka, A(r)godāmōi*: ‘probable MNs’ (§ 9.44). • .3 *o-po-r-ehi*[: ‘probable MN’ (§ 9.44). • *ma-di-jei*: ‘probable MN’ (with ‘characteristics 3 [*ma-di* is a certain MN at KN] and 5’; *TOP*: MN). On the dative in ...*ei*, see § 9.6. • *ka-ne-jo*: *hap. leg.*; ‘probable MN’ (with ‘characteristics 4-5’; *TOP*: trade name or MN; cf. the MN Κάρψειος [?]). • .4 *kɔ-wa*: ‘probable MN’ (§ 9.44). • *a-pu-wa*: ‘probable MN’ (with ‘characteristic 5’). *TOP* interprets it tentatively as the goddess *Harpuja*, ‘the Snatcher’ (cf. “Αρπυία). This is very difficult: first, *a-pu-wa* is directly associated with ‘probable MNs’ and its barley quantities are comparable with the human ones; second, the LB form expected for “Αρπυία should end in \*-ja and not \*\*-wa; third, since the ‘doublet’ syllabogram (§ 9.1) *a₂* (= [ha]) is not used in *a-pu-wa*, there is not certainty about its initial aspiration (scribe 305 does use *a₂*). • *ko-r-us*: ‘probable MN’ (§ 9.44). *ko-ru* is a clear nominative: on the alternation of cases, see § 9.44. • .5 *qe-re-ma-o*: ‘certain MN’ (with ‘characteristics 1’ [certain MN at KN and PY] and ‘5’; *TOP*: MN). • *zɔ-wa*: ‘probable’ MN’ (with ‘characteristics 4-5’; *TOP*: MN). • *Āmerōi*: ‘obvious MN’ (§ 9.43.7). • .6 *Skaiwījō jus*<sup>7</sup>, ‘the son of *Skaiwios*’: ‘obvious MN’ (§ 9.43.7). On the case of *Skaiwījō* and *jus*<sup>7</sup>, see § 9.43.6-7. • *ikkʷophorgʷoihi*: cf. ἵπποφορβός. • .7 *a-ra-q-ju*<sup>7</sup>: *a-ra-o* without *jus*<sup>7</sup> is a ‘probable MN’ (with ‘characteristic 5’; *TOP*: MN or ethnic) but the *a-ra-o jus*<sup>7</sup> formula makes *a-ra-o* an ‘obvious MN’ (§ 9.43.7). *TOP* reads \*\**a-ra-o* FAR (see above). On the case of *jus*<sup>7</sup> and *a-ra-o*, see § 9.43.6-7. • *me-to-r-ehi*: ‘certain MN’ (with ‘characteristics 1’ [certain MN at KN and PY] and ‘4-5’; *TOP*: MN); dative of a MN in -ης. • .10 ]*Anutōi*: ‘certain MN’ (with ‘characteristics 1’ [certain MN at KN and TH (stirrup jars)] and ‘4-5’; *TOP*: MN); cf. the MN Ανυτός. • *]to-jo*[ or *]to-tu[-no]*: *to-jo* is a ‘probable MN’ in TH Fq (with ‘characteristics 4-5’; *TOP*: MN or trade name); *]to-tu[-no]* would be a ‘certain MN’ (with ‘characteristic 1’ [certain MN in KN Da 1276]; *TOP*: MN). • *Milātijōi*[: ‘probable MN’ (with ‘characteristics 4-5’). *TOP* understands it

not as a MN, but as an ethnic. In fact this is its *etymological* value (lit. ‘Mile-sian’; the feminine equivalent is known at PY), but this word is obviously a MN (see § 9.43.8; cf. the MN Μιλήσιος). • .11 *Epidromōi*: ‘probable MN’ (with ‘characteristic 5’; TOP: MN; cf. the MN Ἐπίδρομος). • *Philag/krōi*: ‘probable MN’ (with ‘characteristic 4’; TOP: MN); there is a MN Φίλαγρος, but a \*Φύλακρος could also exist, cf. the MN Φιλάκριος. • *de-u-ke-[·]-we*: *hap. leg.*; ‘probable MN’ (with ‘characteristic 5’; TOP: MN) apparently in -εύς. The spelling *de-u-ke-[·]-we* with -ṣe- or -ṇu- written between ...ke- and -we is curious, because a very similar MN, *de-u-ke-we*, is written six times elsewhere by the same scribe (305). In fact *de-u-ke-[·]-we* and *de-u-ke-we* could refer to the same person: this is suggested by the direct association of each of them with the same ‘probable MN’ (‘characteristic 5’; TOP: MN) *pi-ra-ko-ro* (here and elsewhere in TH Fq) and by their identical ‘very small quantities’ of z 1. The spelling variants can be explained in different ways. The first is an error, like, two lines further in this very tablet, the certain mistake *ra-ke-<da>-mi-ni-jo-ju*? with its missing sign (see below); here, we would have a superfluous sign: if so, we should delete the -ṣe- or -ṇu- and the original MN could have been *Deukeus*, with the radical of δεύκω and the suffix -εύς — cf. MNs like *de-u-ki-jo-* (MY), etc. and Δεύκον (?)}. Another possibility, suggested by A. Morpurgo Davies (pers. com.), is that *de-u-ke-ṣe/ṇu-we* and *de-u-ke-we* reflected perhaps different pronunciations and/or spellings of the same form, with a \*[swei] or \*[nwei] ending after -ke- — for different spellings of the same MN at TH, see § 9.43.8. • .12 *ko-ḍu-\*22-je*: ‘probable MN’ (with ‘characteristics 4-5’; TOP: MN) perhaps in the dative. • *do-ra-a<sub>2</sub>-ja*: ‘probable MN’ (with ‘characteristics 4-5’; TOP: MN). • .13 *Lake<dae>mnijō jus*?, ‘the son of Lace<dae>mnios’: the restoration of <da> is as certain as possible, because *ra-ke-<da>-mi-ni-jo-ju*? is directly followed by *a-ke-ne-u-si* in our tablet, just as [ra-ke-]ḍa-mi-ni-jo-ju? is directly followed by *a-ke-ne-u-si*[ in TH Fq 284.3. Moreover, *ra-ke-da-mi-ni-jo-ju*? is written several times elsewhere by scribe 305. See § 9.43.6-8. • *akhneusi* (?), ‘to the winnowers (??)’: probably trade name (§ 9.45). • .14 *o-u-wa-j-āwōni*: ‘probable MN’ in -āwōn (§ 9.45). • *mo-n-ēwei*: ‘probable MN’ (with ‘characteristic 4’; TOP: MN) in -εύς in the dative. About the dative in -ei, see § 9.6. • .15 *Ksun(s)trok"(h)ā*, ‘in total’. TOP interprets *ku-su-to-ro-qa* as *ksuntrophā*, ‘total amount of food’ (cf. τροφή, ‘food’). This is impossible. First, KN Bg 817 shows that *ku-su-to-ro-qa* may be used to add up men and boys, *not* food (§ 9.2); second, the root of τρέψω, ‘rear’ is \*dhrebh-, with no labiovelar, so *trophā* should be written \*to-ro-pa in LB, not \*\*to-ro-qa. In fact the second element of this compound must be linked to either στρέψω or τρέπω (§ 9.2). • The total given here is at least HORD [T ]3 ȝ 3 z 2, i.e. [ ]34.4 litres BARLEY. The many important gaps in the document make it difficult to check the numbers.

**§ 9.47. TH Wu 75** (clay nodule; dimensions:  $2.2 \times 2.09 \times 1.02$  cm; scribe —; find-spot: odos Oidipou, House III, Room Z<sub>2</sub> — several bone styluses used by the scribes were found in this room; date: last decennia before 1275/1250 — this text is thus several generations older than the three preceding ones; location: AMT 9 938).

**Content:** identification of accidentally dead pigs. While more than forty TH Wu nodules accompanied animals meant to be slaughtered and eaten in an official banquet (on the importance of the Mycenaean banquets, see § 9.36, 9.41), this nodule deals with pigs considered as lost because of some disease or other circumstances. The Mari archives similarly register ‘one sheep accidentally dead’ (*Mari*, 267 n° 310). The person in charge has impressed his seal on face .α — the same imprint is found on two other nodules, TH Wu 54 and 62, dealing with he-goats.

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**Fig. 9.54-56.** TH Wu 75 (V.L. ARAVANTINOS – L. GODART – A. SACCONI, *Thèbes. Fouilles de la Cadmée III. Corpus des documents d'archives en linéaire B de Thèbes (1-433)*, Pisa – Rome, Istituti Editoriali e Poligrafici Internazionali, 66).

- .α SUS<sup>m</sup> *supra sigillum*
- .β e-qi-ti-
- .γ -wo-e

SUS<sup>m</sup> *ek<sup>w</sup>hthiwohe(s)*.

‘Dead MALE PIGS.’

A nodule like this one is a small lump of clay pressed round a string. Its face .α was first impressed with a seal, and then the MALE PIG ideogram was written upon it. The participle *ek<sup>w</sup>hthiwohe(s)* was written both on faces .β and .γ. The nodule probably accompanied the dead pigs: the seal gave the identification of

the person in charge and the proof of an official check as well. • *ekʷhthiwohe(s)*: perfect participle (plur. or dual) of φθίνω, ‘waste away, pine, perish’ — the only alph. Gr. perfect known of this verb is ἔφθικα. The LB spelling duly writes the expected initial labiovelar consonant of φθίνω. The same root occurs in the feminine MN *a-qi-ti-ta*, *Akʷhthitā*, which is presumably built on an Indo-European formula for ‘immortal glory’ (κλέος ἄφθιτον, etc.: see E. RISCH, *KZ* 100 [1987], 3-11).

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## CHAPTER 10

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# INDICES

## 1. General Index

(LB transl.) indicates that the preceding form is a transcribed Linear B word (Chapter 2.4.1.1. above).

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**Order of the syllabograms:** *a a<sub>2</sub> ai/a<sub>3</sub> da de di do du dwe e i ja je jo ju' ka ke ki ko ku ma me mi mo mu na ne ni no nu nwa o pa pa<sub>2</sub> (= qa) pe pi po pte pu pu<sub>2</sub> qa qe qi qo ra ra<sub>2</sub> ra<sub>3</sub> re ri ro ru sa se si so su ta ta<sub>2</sub> te ti to tu twe two u wa we wi za ze zo \*18 \*19 \*22 \*34 \*47 \*49 \*56 \*63 \*64 \*65 \*79 \*82 \*83 \*86 \*89*

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## 5. Index of Linear B Abbreviations/Ideograms (see above, Chapter 2.3.3)

Measures, numbers and word dividers are not included. Some of the definitions given below may differ from those found elsewhere in this book.

### A

- AES, 'bronze', 223, 267, 268, 279, 280, 281  
<sup>AES\*</sup>246<sup>VAS</sup>, 'bronze bathtub (?) of basin type (?)', 279  
 ALV(eus), 'bathtub', 280, 281  
 'amphora', see \*132, \*209<sup>VAS</sup>, \*211<sup>VAS</sup>  
 '(in) apprenticeship', see *di*  
 AREPA, 'unguent', 344, 345  
 ARM(a), 'a kind of armour', 213, 214  
 'armour', see ARM, TUN  
 AROM(a), 'aromatic stuff', 229, 261, 283, 341  
 AROM+KO, 'coriander', 283  
 'aromatic stuff', see AROM, AROM+KO  
 'arrow', see SAG  
 AU (= SUS), 'pig', see SUS, SUS<sup>m</sup>  
 AUR(um), 'gold', 279, 325, 326, 327, 328, 329, 333  
<sup>AUR\*</sup>213<sup>VAS</sup>, 'golden bowl', 279, 326, 327

### B

- 'basin', see \*200<sup>VAS</sup>, \*219<sup>VAS</sup>, \*246/\*246<sup>VAS</sup>, \*301<sup>VAS</sup>, \*302<sup>VAS</sup>, \*305<sup>VAS</sup>  
 'bathtub', see <sup>AES\*</sup>246<sup>VAS</sup>, ALV, \*246/\*246<sup>VAS</sup>  
 'barley', see HORD  
 BIG(ae), 'chariot', 206, 207, 210, 288  
 BOS, 'ox', 33, 346  
 BOS<sup>m</sup>, 344  
 'bow' (?), see \*256  
 'bowl', see <sup>AIR\*</sup>213<sup>VAS</sup>, \*155<sup>VAS</sup>, \*213<sup>VAS</sup>  
 'bronze', see AES, <sup>AES\*</sup>246<sup>VAS</sup>

### C

- CAP(er), 'goat', 33  
 CAP<sup>f</sup>, 297, 298  
 CAPS(us), 'chariot frame', 209  
 'chalice', see \*216<sup>VAS</sup>

'chariot', see BIG, CAPS, CUR

'cheese', see TURO<sup>2</sup>

'cloth', see TELA, TELA<sup>2</sup>, TELA<sup>3</sup>, TELA<sup>x</sup>, TELA+TE

'coriander', see AROM+KO, KO

'cumin', see KU

'cup', see \*218<sup>VAS</sup>, \*221<sup>VAS</sup>

CUR(rus), 'chariot without wheels', 178, 209, 272

CYP(eros), 'cyperus', 31, 34

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CYP+O, 66

'cyperus', see CYP, CYP+KU, CYP+O, \*124 (= PYC)

### D

- DA, 168, 307, 308  
 'dagger', see GUP, PUG  
 DE, 283, 284  
 'deficit', see *o*  
*di*, 'in apprenticeship', 34, 251  
 DI, 'di-pa vase', see \*202<sup>VAS</sup>, \*214<sup>VAS</sup>+DI (= \*202<sup>VAS</sup>+DI)  
 'double axe', see \*232

### E

- EQU(us), 'equid', 210, 255, 256, 288  
 EQU<sup>f</sup>, 255  
 EQU<sup>m</sup>, 255  
 'equid', see EQU, EQU<sup>f</sup>, EQU<sup>m</sup>

### F

- ', 'female', 33  
 FAR, 'spelt' or (?) 'flour', 33, 190, 344, 346-347, 353-356, 359, 372, 375, 383  
 'female', see '  
 'figs', see NI

'flask', see \*207<sup>VAS</sup>, \*217<sup>VAS</sup>  
 'fleece', see KO, \*153  
 'flour' (???) or 'spelt', see FAR  
 'footstool', see \*220  
 'fruits', see KAPO

**G**

GAL(ea), 'helmet', 214, 273, 274  
 'garment', see \*146  
 'goat', see CAP, CAP<sup>F</sup>  
 'goblet', see \*208, \*215  
 'gold', see AUR, <sup>AUR</sup>\*213<sup>VAS</sup>  
 GRA(num) (= \*120), 'wheat', 28, 29, 31,  
     33, 43, 66, 163, 167, 172, 190, 249,  
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 GUP, 'a kind of dagger', 216

**H**

HAS(ta), 'spear', 216  
 'helmet', see GAL  
 'hide', see WI, \*152  
 'honey', see ME, MERI  
 HORD(eum) (= \*121), 'barley', 33, 163,  
     249, 346, 347, 350, 353, 362, 363,  
     366, 367, 372, 373, 382, 383, 384,  
     385, 386, 389

**J**

JAC(ulum), 'javelin', 216  
 'javelin', see JAC  
 ju' (= FAR), 'spelt' or (???) 'flour', see FAR

**K**

KA, 'stirrup jar', 95, 311; see also: \*210<sup>VAS</sup>,  
     \*210<sup>VAS</sup>+KA  
 KAPO, 'fruits', 229, 341, 342  
 KE, 312, 313  
 KO: 'coriander', 283 - see also: AROM+KO;  
     'fleece', 345  
 KU, 'cumin', 34, 283; see also: CYP+KU

**L**

'ladle', see \*228<sup>VAS</sup>, \*229<sup>VAS</sup>

LANA, 'wool', 67, 177, 188, 217, 229,  
     269, 285, 297, 298, 341  
 'linen', see SA  
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**M**

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 'male', see m  
 'man', see VIR  
 ME: 'honey', 192, 229, 341, 342;  
     'unknown meaning', 312, 313  
 MERI, 'honey', 34, 37  
 MO, 'single', 276  
 'month', see LUNA  
 mu (= BOS), 'ox', see BOS  
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**N**

NI, 'figs', 34, 287, 288, 289, 297, 298

**O**

o, 'deficit', 67, 192, 366  
 O, 213, 312, 313; see also: CYP+O  
 'oil', see OLE, OLE+WE  
 OLE(um), 'oil', 190, 192, 194, 228, 256,  
     258, 259, 311  
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     OLIV+TI, 287, 288, 289  
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     OVIS<sup>f</sup>, 33, 39, 68  
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'pitcher', see *204 <sup>VAS</sup> , *205 <sup>VAS</sup> , *206 <sup>VAS</sup> , *303 <sup>VAS</sup>	'unguent', see AREPA
'pithos', see *203 <sup>VAS</sup>	
PO, 193	V
'pot', see *212 <sup>VAS</sup>	
PUG(io), 'a kind of dagger', 216, 270, 271	'vase', see DI, *183, *202 <sup>VAS</sup> , *202 <sup>VAS</sup> +DI, *214 <sup>VAS</sup> , *214 <sup>VAS</sup> +DI (= *202 <sup>VAS</sup> +DI), *222 <sup>VAS</sup> , *250 <sup>VAS</sup>
Q	VIN(um), 'wine', 120, 229, 287, 288, 297, 298, 344, 354
qi (= OVIS), 'sheep', see OVIS	VIN <sup>a</sup> , 341, 342
R	VIN <sup>b</sup> , 341, 342
'rhyton', see *227 <sup>VAS</sup>	VIR, 'man', 31, 38, 140, 171, 249, 251, 252, 293, 294, 297, 298, 306, 326, 328, 329, 330, 331
RI, 217, 312, 313	
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ROTA+TE, 314	wa, 'royal', 236, 367
'royal', see wa	WE, 'of we-(ja)-re-pe type', 311; see also: OLE+WE
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