

'CONTIGUITIES' IN THE LINEAR B TABLETS FROM PYLOS

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Introduction

Here I present an account of a discovery that I made in the company of Emmett L. Bennett, Jr. and José Melena in the tablet storeroom of the National Archaeological Museum in Athens on December 4, 1989¹. I have subsequently and most recently benefitted from discussing the tablets of the Sh series with Kerri Cox and Bruce LaForse in the course of their preparation for comprehensive examinations in the Ph.D. program at the University of Texas at Austin. Our discovery pertains to the physical arrangement of individual tablets relative to one another at the moment immediately preceding the destruction by fire of the structure (in this case Room 7 of the Archives Complex at Pylos) in which the tablets were stored. I have used the term 'contiguities' to stress that our observations permit us to reconstruct the original position of individual tablets 'contiguous' or 'next to' one another. Here I limit my discussion to the Pylos Sh series, but I have no doubt that further study of other coherent sets from the various tablet-producing Mycenaean sites would allow us to find 'contiguities' there as well. In fact, as we shall see below, Sa 787 and Sa 843, two totalling tablets from the Pylos chariot-wheel series, form a 'contiguity'². 'Contiguities' are important because they allow us to establish the order in which tablets were stored and perhaps written. In the case of the Sh series, we are dealing with a group of

¹ As always, we thank Katie Demakopoulou and the staff of the prehistoric section of the National Archaeological Museum for their kind assistance in making our work possible. Erik Hallager was also working in the room on that morning, and it was his interest in ideograms for chariot wheels on the Sa tablets that brought out the trays in which tablets of the Sh series are now kept.

² For a discussion of other series in which contiguities are likely to appear, see Appendix 2.

ten leaf-shaped individual-entry tablets together with two leaf-shaped ‘re-capitulative’ or ‘heading’ tablets. In addition the series is associated by content and find-spot with a label (Wa 732: figure 1 and Appendix 1) that can be restored to read *to]-ra-ke* or ‘breast-plates’. Through ‘contiguities’ we can establish the order in which the tablets were placed in their wicker transport basket³. Here that order produces an arrangement which corresponds to, and consequently confirms, sub-divisions of the Sh tablets proposed by scholars on the basis of their contents and physical characteristics⁴. The ‘contiguities’ thus provide us with new information which we can use in interpreting these tablets, and part of this paper will explore questions connected with the writing of the Sh tablets and their initial and eventual purpose.

‘Contiguities’ in the Sh tablets

The general interpretation of the Sh tablets is clear, but some particular problems remain. Text Sh 740 (figure 1 and Appendix 1) contains on its main line a description:

pa-ra-jo, ARM ZE 5 wi-so-wo-pa-na L 10-pa-wo-ta, me-zo-a₂ O 20 me-u-jo-a₂ O 10

‘old ARMOR 5 pairs equal-xxx suspension-pieces larger-sized SP 20 smaller-sized SP 10’ and then continues above the main line:

ko-ru-to O 4 PA 2

‘of the helmet SP 4 PA 2’.

Here the scribe uses **O** (in translation **SP**) as a phonetic abbreviation for and referring back to the term *o-pa-wo-ta* (‘suspension-pieces’) which make up the armor and helmet, but **PA** does not have any lexical referend on this

³ There is clear evidence from the find-spots of tablets in the Archives Complex at Pylos that in most cases clay labels (Series Wa) were attached to wicker baskets used to bring tablets from the areas where they were written to the central archives for processing and/or storage. See T. G. Palaima and J. C. Wright, «Ins and Outs of the Archives Rooms at Pylos», *AJA* 89 (1985) 260-261.

⁴ The three main commentaries on the textual organization of the Sh series are: F. Vandebaele and J.-P. Olivier, *Les idéogrammes archéologiques du linéaire B* (Paris 1979) 18-39, specifically 22-24; T. G. Palaima, *The Scribes of Pylos* (Rome 1988) 121-122; J. L. Melena, «Further Thoughts on Mycenaean *o-pa*», in A. Heubeck and G. Neumann eds., *Res Mycenaeae* (Göttingen 1983) 276, which mistakenly attributes to me a theory that Sh 740 is a heading text for one of the identifiable sub-groups of single-entry texts.

tablet. The scribe on Sh 740 provides a lexical referend for **SP** and writes out phonetically ‘of the helmet’ which is abbreviated on some other of the tablets in the series. Given his care in these two cases to make his text intelligible, we must wonder why he did not do so for *PA*. The alternatives are either that the phonetic abbreviation *PA* is standard enough so that it can be used without a prior lexical referend, or else that this tablet was written after the other tablets in the series, one of which (Sh 737: figure 2 and Appendix 1) provides a full lexical referend *pa-ra-wa-jo* for the abbreviation: *pa* = *pa-ra-wa-jo* = ‘cheek-pieces for a helmet’. Unfortunately this is our only armor series at Pylos, and it is also the only work assigned to this particular stylus S733 Cii⁵. So we do not know what his standard procedures (or level of tolerated ambiguity in such shorthand) for phonetic logographic abbreviations would have been, nor do we know those of other scribes who were concerned with defensive armor. *pa* does stand for other words elsewhere: among other occurrences, *pa* is used as an abbreviation for *pa-ko-we* = ‘sage-scented’ in the Pylos Fr oil series and notably *pa-ra-jo/-ja* ‘old’ as applied to women and sheep in the Knossos Ak, C, and Dd series. Without a full knowledge of the specific context, the abbreviation here might be misleading and perhaps even mistaken for this latter alternative: given the occurrence of *pa-ra-jo* = ‘old’ in the heading to Sh 740, one might assume that the initial *pa-ra-jo* referred only to the body armor that followed and that *pa* written in the upper space somehow designated two out of six components of the helmet as old⁶. To conclude this point, it is a reasonable working hypothesis that this heading text, which serves as a ‘fiche d’entrée’, truly is recapitulative, i.e., it was written *after* the 10 individual entry tablets in this series, although it seems to describe the original condition of the armor.

The other exceptional tablet is Sh 736 (figure 1 and Appendix 1), which has been interpreted as a ‘fiche de sortie’. It gives information apparently about the final state of the armor, which was described in Sh 740 as *pa-ra-jo* ‘old’. Here we have in first position the word *to-ra-ke* (= ‘breast-plates’), instead of the ideogram *163 ARM. These ‘breast-plates’ are then described as the *o-pa* (‘work [to be performed or done upon supplied materials in order to bring them into a finished state of repair]’)⁷ of an individual named *a-me-ja* who perhaps recurs as the possessor of two chariot wheels on PY Sa 834.

⁵ *Scribes of Pylos*, 121-122.

⁶ The space available in the upper area of the tablet is sufficient for the scribe to have written out the word *pa-ra-wa-jo* fully.

⁷ For the meaning of *o-pa*, see Melena (supra n. 4) 284-286. See the forthcoming paper by J. T. Killen, «Mycenaean *o-pa*», for a thorough and convincing interpretation of the textual occurrences of this word that distinguishes *o-pa* from *ta-ra-si-ja* in that the former refers to work on «a completed manufactured item or a unit of livestock», while the latter refers to «an issue of raw materials (or an object manufactured with the help of such an issue)».

There follow two words which do not yield any clear interpretation: *me-za-na* which might somehow be connected with a place-name (cf. Μεσσήνα) and *wo-ke* which should be connected with an o-grade form of the root *Fεργ-, designating 'work' of some kind. The tablet most probably ends with a declaration of the reworked state of the armor: *ne-wo ZĒ 5*, i.e., '5 pairs (of breast-plates) worked new'. We should note that this particular text does not contain any description of the construction of the body armor and makes no reference at all to helmets, which might, however, be assumed to be part of the defensive panoply, and included in *to-ra-ke*⁸. The occurrence of the proper name *a-me-ja* at Pylos only on Sh 736 (body armor) and Sa 834 (chariot wheels) should not be undervalued as a mere coincidence. In the Knossos Sc series from the Room of the Chariot Tablets, individuals are regularly⁹ associated with 2 sets of body armor, a chariot, and a pair of horses. That the simultaneous possession and/or allocation of armor and chariots by or to individuals was carefully recorded by the Knossian administration increases the likelihood that an individual at Pylos would be associated with both chariot parts and armor. From tablet find-spots we surmise that the Sa tablets probably were originally written in the Northeast Workshop at Pylos before being brought to the main archives¹⁰. It is possible that work on the armor – and the recording of that work in the Sh series – should also be located there.

The ten individual tablets of the Sh series break down into two groups. Each tablet begins with the ideogram ARM (a representation of body armor with helmet) in large size and then proceeds to give formulaic and repetitive

⁸ The same problem applies to the label Wa 732. Although it seems to be complete enough so as to have included only the word *to-ra-ke* 'breast-plates', making no reference to helmets *per se*, it does have a rule line under *to-ra-ke*, and other ruled labels contain more than a single line of text. The Tiryns tablet Si 5 lists individual TUN as *to-ra-ka* and the form of the ideogram also includes a helmet. At Knossos the form of the ideogram does not have a helmet, but it is nowhere found in conjunction with its lexical form. In the Knossos Sk series, texts are headed by *to-ra*, an alternative singular form of *to-ra-ka*. In the breakdown of elements which follows this heading, a helmet is mentioned and described. Thus it seems that the word *to-ra* or *to-ra-ka* was meant to include the defensive helmet.

⁹ TUN 2 on 20 tablets; TUN 1 or TUN 'blank' on 18 tablets. Other fragmentary tablets contain TUN where the number is ambiguous. On still others TUN has been erased. It is interesting that in the Sc series horses are recorded as a 'pair'. On the two preserved lines of the Tiryns fragment Si 5 we have recorded *to-ra-ka* TUN 1.

¹⁰ *Scribes of Pylos*, 93. Two facts confirm that the tablets were moved from another area to the central archives complex. First, as we have mentioned, the existence of a clay transport label in the same palaeographical stylus found in conjunction with the tablets in grid 52 of Room 7. Second, the theory proposed by E. L. Bennett, Jr., at this conference that the string holes running through the Sh tablets and similar leaf-shaped tablets at Pylos (series Ad, Eb and Sa) were for grass string that would prevent pieces of tablets that were accidentally broken *during their transport* from becoming separated from their original tablets, thus confusing the information of a tablet set.

information using smaller phonetic signs for words and as logographic abbreviations. Group A consists of six tablets (figure 2 and Appendix 1). Sh 733, 741, 742, 743 and 744 all repeat the same information without variation in contents:

ARM 1 *me-zo-a₂* O 20 *me-u-jo-a₂* O 4 *PA*2

‘ARMOR 1 larger-sized **SP** 20 smaller-sized **SP** 10 of the helmet **SP** 4 *PA* 2’.

The only variation in format of presentation is the insertion of word-dividers (marked in figure 2 by arrows) after *me-zo-a₂* on Sh 741 and Sh 743 and after *ko-ru-to* in Sh 744 and just possibly Sh 742¹¹. Sh 733 lacks word-dividers. The sixth tablet for group A Sh 737 records the same information but spells it out more fully lexically so that the abbreviations O (which the scribe himself subsequently uses on this very tablet) and *PA* (which he does not use on Sh 737, but does on all other texts of the series except Sh 736) will be intelligible. That the scribe is so careful to define these abbreviations here makes it virtually certain that Sh 737 was the first tablet written among this group of six tablets and that the ‘fiche d’entrée’ Sh 740 must have been written after this ‘lead text’ which ‘activates’ the abbreviation *PA* within the scribe’s record-keeping process¹².

The remaining four tablets (Group B: Sh 734, 735, 738 and 739: figure 3 and Appendix 1) are all palimpsests. Two tablets (Sh 734 and Sh 739) preserve traces of original ruling into two lines. Thus these tablets could not have been used originally for recording information in the style of Group A. The original text of Sh 735 ends *]to* or *]wε-to* and thus also was not of the Group A format. The verso of Sh 734 and Sh 739 preserve traces of texts – badly smudged and nearly obliterated – that on Sh 739 are thought to have been intentionally erased. Very few characters can be read with certainty, and on Sh 739 the text is arranged into upper and lower unruled lines. Given the limited number of signs used by S733 because of the repetitious nature of these texts, we can make no certain paleographical judgments. However, the simple form of sign *o* in the two verso texts differs from that normally employed by S733 frequently on the recto where the sign *o* has always a two-stroke ‘scepter’. I would tentatively conclude that the original use of these

¹¹ Unrecorded in *PTT* I, 228, but possibly visible in a small oblique stroke near the base of the left vertical of the following sign O.

¹² N.B. This does not guarantee that the scribe will be so observant when eventually arranging the tablets as a unified set for some further references, as our discussion of the ‘contiguities’ will make clear. Sh 737 is also of a larger size than other tablets in Group A.

four tablets was not to record information that belonged to this particular series and that they were not originally written by the scribe identified as S733. However, these four tablets are manufactured in the same distinctive style as the other Sh tablets and the Sa chariot tablets of Hand 26: they are all molded in fine clay around some sort of fibrous cord or straw running through them along their long axis¹³. We should also note that *PTT* I reads for *the end* of the verso text on Sh 734: ARM 1, again establishing that it did not have a textual format like that eventually used for the final texts of the Sh series which *are headed* by ARM 1. Thus our combined observations lead to the suggestion that these four tablets originally were being used by another scribe, perhaps in the Northeast Workshop and perhaps to record other information having to do with body armor. We have a clear parallel for such a borrowing of tablets by scribes working on similar subjects: Ad 684 of Hand 23 is identical in shape to tablets of Hand 4 and both scribes record information about female workers¹⁴.

The texts of the group B tablets are all identical:

ARM 1 me-zo-a₂ O 22 me-u-jo-a₂ O 12 ko-ru-to O 4 PA 2

‘ARMOR 1 larger-sized SP 22 smaller-sized SP 12 of the helmet SP 4 PA 2’.

They differ in their information from the texts of group A merely in the number of O following ARM¹⁵. They consistently have 22 larger suspension-pieces and 12 smaller, i.e., two more of each than the armor in group A. Also the texts in Group B do not contain any punctuation marks, a feature which they share with Sh 733, the last tablet therefore of Group A.

How are we to make sense of this series in terms of Mycenaean administrative procedures and in terms of work and materials that were of some importance to the palatial administration? First let us note some further peculiarities. We have ten individual tablets each recording a single set of defensive armor described as to the number of component elements only, but both the ‘fiche d’entrée’ and the ‘fiche de sortie’ record 5 *pairs* of sets of

¹³ This technique of manufacture is shared at Pylos only with the Ad series of Hand 23 and the Eb series of Hand 41 (see *supra* n. 10). Unfortunately on these Sh tablets there are no clear prints of papillar lines left by the tablet manufacturer. See K.-E. Sjöquist and P. Åström, *Pylos: Palmprints and Palmleaves* (Göteborg 1985) 71.

¹⁴ See also Ed 411, completed by Hand 1 from a tablet started by Hand 41. *Scribes of Pylos*, 38, 89; T. G. Palaima, Appendix to Sjöquist and Åström (*supra* n. 13) 101.

¹⁵ Discounting the full lexical spellings of *o-pa-wo-ta* and *pa-ra-wa-jo* on the lead-text of Group A Sh 737, which in other respects clearly conforms to the Group A pattern of information.

defensive armor. Since it is actually less economical for a scribe, who in other ways resorts to space- and labor-saving abbreviations, to write '5 pairs' in Mycenaean as opposed to the simple horizontal stroke '—' for '10', there must be a reason for his doing so. Moreover, the ten individual leaf-shaped tablets stand alone in the Mycenaean corpus in being headed by an ideogram. Ideograms, as in the verso text of Sh 734, generally stand at the *end* of entries and are *preceded* by qualifying information. We may contrast a typical tablet of the Sk series at Knossos which is headed by *to-ra* in capital signs. *to-ra* then is described by component elements like *ko-ru* GAL and *qe-ro*₂. The ideogram, therefore, is the primary and emphatic piece of information for each Sh tablet. The ten tablets of Groups A and B are also unusual in being undifferentiated within their groups, i.e., in Group A we have sextuplicates, in Group B quadruplicates. Thus these texts disappoint all the expectations we have formed through a familiarity with all other single-entry leaf-shaped documents, where even within sets recording standard information by means of formulae, the quantities of items and/or the references that make sense of those items (personal names, place names, occupational terms etc.) differ and thereby make each record unique¹⁶. Our two questions become why was such a series as this recorded and why was it sent in this state to the central archives? Why not have sent four tablets:

1. the 'fiche d'entrée' (Sh 740) that records the old conditions of 5 pairs of breast-plates (made with 20-10 suspension-pieces) with helmets;
2. the 'fiche de sortie' (Sh 736) that records the fact that the same 5 pairs of breast-plates (now with the number of suspension-pieces unspecified) had been renovated as the *o-pa* work of the person *a-me-ja*;
3. one tablet that records apparently that six (or 3 pairs of?) sets of armor are (or were?) 20-10 breast-plates with helmets;
4. one tablet that records apparently that four (or 2 pairs of?) sets of armor are 22-12 breast-plates with helmets?

Before addressing these questions, let us turn to the evidence of 'contiguities'.

In the National Museum we observed, without paying attention at all to the contents of the texts, that the tablets of the Sh series could be placed together in pairs with the recto surface of one text placed face down on the recto surface of a bottom text, the verso of which rested on the bottom of the

¹⁶ The only duplicate texts at Pylos otherwise are Ae 765 (Hand 1) and Ae 574 (Class ii) from the Archives Complex which each record *pe-re-ke-we* VIR 13. These differ from the Sh tablets in that Ae 765 and Ae 574 are each by a different scribe, and most likely Ae 765 by the main archivist is somehow a copy, direct or indirect, of the information provided by a scribe of palaeographical Class ii. See *Scribes of Pylos*, 49-58.

wicker basket. Not only did the tablets in the pairs match up well in size and contour, but the pairs then suggested an arrangement next to one another in such a way that the tablets rested against one another neatly and the breaks running through the tablets for the most part lined up. The best illustration of this is figure 4, where Sh 742 nestles perfectly on its right upper edge against the curved left upper edge of Sh 744, placed upside down. Notice the alignment of the breaks running through all the tablets of the bottom row (Sh 741, Sh 742, Sh 743, Sh 739 and Sh 734) in their left halves and at least through tablets Sh 744, 742 and 743 in their right halves. One can also observe (figure 5) the crack running through all the tablets Sh 741, 737, 733, 735, and 738 as well as the two special tablets Sh 736 and Sh 740. Most remarkable was that Sh 736 and Sh 740 (figure 5), our 'fiche de sortie' and 'fiche d'entrée' respectively, curved perfectly against one another. Judging from the tracks of the stylus incisions made in writing the texts, these two tablets had obviously been inscribed when their clay was extremely moist. It was still moist when the two tablets were placed together so that one literally drooped against the other. We discovered that the same thing had happened to Sa 787 and Sa 843 (figure 6) two equivalent tablets (totalling documents) from the chariot-wheel series. Sh 736 and 740 also had uniformly light-colored surfaces, indicating that they had been less covered and better exposed to oxygen in firing¹⁷. Most significantly, they had the same color as the verso of clay label Wa 732 which had been pressed onto the wicker basket. Sh 736 and 740 also were so moist that, much more than other tablets, they had clear traces of impressions on their versoes from the plaited straw of the transport baskets in which they had been placed.

The arrangement by contiguities produces the following pairs in the basket (figure 5): Sh 741 on top of Sh 744; Sh 737 on top of Sh 742; and Sh 733 on top of Sh 743. These are all tablets of Group A. It is interesting that Sh 733 is the last tablet of Group A to be placed in the basket, for it alone of the Group A tablets lacked punctuation as did all four tablets of Group B. This suggests that it was indeed *written* last in Group A and immediately before the Group B texts were written. Sh 737, the 'lead tablet', for Group A which gives a full spelling of *pa-ra-wa-jo* as a referend for *PA* is on top of the second last pair. It, therefore, was not placed in the basket in the order in which it was written, nor in any way to allow it to be read first among the ten single-entry texts when the tablets were removed from the basket. The four palimpsestic tablets of group B which vary from those of Group A in recording larger numbers of suspension-pieces are then placed in the basket in the pairs

¹⁷ In certain areas on the paired tablets, too, patches of lighter color on the edge of one tablet corresponded to patches of similar color on an adjoining tablet, indicating areas where a bit more oxygen had seeped in during the accidental burning of the tablets.

Sh 735-Sh 739 and Sh 738-Sh 734. In the front of the basket are placed Sh 736 and Sh 740, both face up so that they could be read immediately upon opening it. They are fired to the same color as the verso of label Wa 732.

Consequently the tablets and label were placed in and on the basket in the approximate order in which they were written. How then did the scribe imagine they would be read when taken out of the basket later? Of course, there are many scenarios we could construct here. If the scribe himself took the tablets out, whether for his own use or the use of another administrator, the order would not need to be so rational. He could sort out the tablets. The care which seems to have been taken to preserve the groupings of the texts and to place the two explanatory heading texts in the front where they could be read immediately suggests that the scribe wanted to make things relatively easy and clear for himself or others later.

Here is what I imagine was the intended effect. The basket containing tablets of the Sh series was delivered to the Archives Complex Room 7 where it was placed in Grid 52 alongside the door leading to Room 8. The label Wa 732 on the outside of the basket insured that its general contents would be known: *to-ra-ke* = sets of 'defensive body armor' (perhaps comprising breast-plate and helmet)¹⁸. For further information one opens the basket and reads tablets Sh 736 and Sh 740, nestled together as they are face upward, as if they were a single two-line document, beginning with Sh 736. The message is as follows:

These records pertain to: «5 pairs of sets of defensive body armor renovated as the *o-pa* work of *a-me-ja* in connection with (the place?) *me-za-na*». «Originally there were 5 pairs of sets of defensive armor and each set consisted of <breast-plates – denoted by the ideogram – of> 20 larger and 10 smaller equal-? suspension-pieces and helmets of 4 suspension-pieces and 2 *PA* [=cheek-pieces]».

So far the only potential problem is the meaning of *PA* if the eventual reader of the tablets is unfamiliar with the abbreviations used to record military equipment. The reader can then actually count ten tablets arranged as 5 pairs which should satisfy him that he could, if necessary, confirm the details about the renovated sets of armor. Thus the reckoning of the ten sets of armor as five pairs on Sh 736 and Sh 740 may be a mere product of this storage arrangement. The recapitulative heading texts were, as we have seen, written last. They might have been written after the tablets were grouped into pairs in the basket. The other alternative is that the pairs are meaningful, pairs of sets of armor being a normal allocation as they are in the assignments of pairs of sets of armor, single chariots and pairs of horses regularly to individuals in

¹⁸ See above note 8 and related discussion.

the Knossos Sc series. We can also explain why no mention is made in Sh 736 of the fact that 4 of the sets of renovated armor now have a greater number of suspension-pieces. If this was essential to the purposes of this record-keeping assignment, for example, because administrators had to keep track of the number of suspension-pieces removed from a store, it would have been noted on Sh 736. Instead it was considered secondary information that could be accessed readily by looking at the 2 front pairs of tablets of Group B.

This reconstruction of the last stage of use that we can reconstruct for the Sh tablets makes it clear that the individual entry tablets eventually served almost as receipts or tokens that confirmed the existence of the renovated sets of defensive armor. What mattered most to the central administration was knowing that the repair had taken place, the individual connected with that repair, and the number of sets of armor that were repaired. Scribe S733 in producing these records at the beginning made this clear. He obviously knew the responsible individual and the other circumstances surrounding the repair work – or he knew that he would eventually know it, and therefore left this information out of his individual texts. He simply made out individual tablets that described the final state of each set of armor¹⁹. I believe that he did this with the actual pieces before his eyes. He saw the first set and recorded on a tablet: armor (big ideogram) and then the component elements. This explains the unparalleled use of the ideogram in first position. He put that tablet aside and moved onto the next set of armor, and so on until he had completed recording the six sets of armor on the six tablets of Group A. Next he began dealing with the enlarged sets of armor. I believe that this change was unanticipated or that the scribe wrote these texts at some different time or location. By this last suggestion, I do not mean necessarily a shift to another site or even to another room, but perhaps to another point in a room. I base my belief on the fact that he was reduced to using four palimpsestic records that had originally perhaps been used by another scribe working also on sets of armor. He therefore either had not expected to have to produce four more tablets or his original source of clay for tablets was no longer available because of a shift in time or place. Given the movement we have traced within the tablets from punctuated to unpunctuated at the end of Group A, I would tend to think that the time between the two groups of tablets was short. Having completed writing these tablets, which serve essentially as tokens, and perhaps even after having placed them in their transport basket, he then

¹⁹ What is interesting is that these tablets do not otherwise differ very much from a tablet like KN Sc 103 + 5069 + 5145 which catalogues ideographically an appropriate allotment of TUN, BIG, and EQU, but records there items as assigned to an individual whose name is written lexically as a heading: *ki-ra₂-i-jo*. We might imagine that the PY Sh texts would have been used eventually as a basis for such distribution texts if and when the restored armor was allotted to particular individuals: e.g. PERSONAL NAME^{dativ} ARM 1 KO 1.

provided them with an explanatory context on the two heading tablets that described their states before and after the repair work took place. These heading tablets are read as if they were a single two-line tablet, since they are the only texts visible when the basket is open, the top row of tablets of Groups A and B being upside down. It may have been then that he conceived of referring to the sets of armor as pairs.

In conclusion, the study of the contiguities of the Sh armor tablets enables us to understand not only the process by which they were recorded, but the reason the central administration needed these texts. They were proof that a scribal administrator had inspected with his own eyes sets of renovated armor that were the *o-pa* of a Mycenaean named *a-me-ja*.

APPENDIX I: THE TEXTS OF THE Sh ARMOR TABLETS
ACCORDING TO THE FINAL BASKET ORDER:

Label:

Wa 732 .1]-ra-ke
 .2]*vacat*

Heading tablets:

Sh 736 to-ra-ke, a-me-ja-to, o-pa, me-za-na, wo-ke, ne-wo[]5

Sh 740

.a
 pa-ra-jo, ARM ZE 5 wi-so-wo-pa-na_L 10 pa-wo-ta, me-zo-a₂ O 20
me-u-jo-a₂ O 10

Group A:

Sh 744 ARM 1 me-zo-a₂ O 20 me-u-jo-a₂ O 10 ko-ru-to, O 4 PA 2

Sh 741 ARM 1 me-zo-a₂, O 20 me-u-jo-a₂ O 10 ko-ru-to O 4 PA 2

Sh 742 ARM 1 me-zo-a₂ O 20 me-u-jo-a₂ O 10 ko-ru-to, O 4 PA 2

Sh 737 ARM 1 o-pa-wo-ta, me-zo-a₂, O 20 me-u-jo-a₂, O 10 ko-ru-to, O 4
pa-ra-wa-jo 2

Sh 743 ARM 1 me-zo-a₂, O 20 me-u-jo-a₂ O 10 ko-ru-to O 4 PA 2

Sh 733 ARM 1 me-zo-a₂ O 20 me-u-jo-a₂ O 10 ko-ru-to O PA 2

Group B:

Sh 739 ARM 1 me-zo-a₂ O 22 me-u-jo-a₂ O 12 ko-ru-to O 4 PA 2

739v.a [[to-mi-ṛe-[]wā-[]-re-[]e-ḵo-ṣi]]
 b [[o-tō-pe-dā-ḵo-we-de-[.]ḵe[]]]

Sh 735 ARM 1 me-zo-a₂ O 22 me-u-jo-a₂ O 12 ko-ru-to O 4 PA 2

Sh 734 ARM 1 me-zo-a₂ O 22 me-u-jo-a₂ O 12 ko-ru-to O 4 PA 2

734 v. tō jo mē dō mī [.] o wō to rā rō ARM 1

Sh 738 ARM 1 me-zo-a₂ O 22 me-u-jo-a₂ O 12 ko-ru-to O 4 PA 2

APPENDIX 2: FIND-SPOTS OF TABLETS:²⁰

Group A listed back to front in pairs bottom and top (see figure 5)

Sh 744	5245	<i>bottom</i>	
Sh 741	5232-41-43	<i>bottom</i>	
Sh 742	5241	<i>bottom</i>	
Sh 737	5234-41-44	<i>top</i>	
Sh 743	5243	<i>bottom</i>	
Sh 733	5224-34-43	5224-43-54	<i>top top</i>

Group B listed back to front in pairs bottom and top (see figure 5)

Sh 739	5224-35-43	<i>bottom</i>
Sh 735	5224-43-54	<i>top</i>
Sh 734	5224	<i>bottom</i>
Sh 738	5235-53	<i>top</i>

Heading texts (see figure 5)

Sh 736	5234
Sh 740	5233

²⁰ See *Scribes of Pylos*, 214-215, 217, and 184 figure 25.

Basket label (see figure 5)

Wa 732 5214

*Commentary on Appendix 2 and on Procedures for Further Research on Contiguities in Other Sets of Tablets:*²¹

As was mentioned in the text, the 'contiguities' of the Sh series were reconstructed by handling the tablets and noting their physical characteristics (size, shape, coloring) for evidence of how the tablets originally fit together in their transport tablet basket. Thus the 'contiguous' pairs of texts were laid out independently of textual clues as to their ordering and even independently of the final find-spots of the tablets. This should be the *Grundprinzip* for all future work with 'contiguities'. For only in this way will research on 'contiguities' be an uncontaminated method for obtaining an approximate ordering of the tablets of a given series that can then be compared with the evidence provided independently by find context and textual contents, format and writing procedures. In the above discussion, I have used the evidence of textual groupings into sub-sets, the palimpsestic nature of the Group B tablets, and writing clues such as the presence or absence of punctuation as corroborating evidence. I think that other series of tablets would offer other kinds of writing clues. For example, the work of Perpillou and Maurice on scribal errors and the work of Chadwick on oral-aural methods of information-gathering might be useful²². Textual groupings would be particularly relevant in cases like the Eb, Eo, En and Ep series at Pylos where we could use the order of entries on final documents (En, Ep) to test any ordering of the tablets (Eb, Eo) with preliminary texts that might be proposed by studying 'contiguities'. In regard to find-contexts, a set like the PY Es series, which comes from one limited area, would be a good candidate for the study of 'contiguities'. One might also study the MY Oe tablets of Hand 56. These come from a single location (Room 2 of the house of the Oil Merchant) and fluctuate in their representation of consonant-stem datives as *-e* or *-i*. Doubtless fellow Mycenologists will think of other good possibilities. As I wish us all «Happy hunting!» in the cooperative spirit of Gif, I must again express

²¹ I would like here to acknowledge the comments of Louis Godart after my paper in Naples as the inspiration for my thinking about future opportunities to discover 'contiguities'.

²² J.-L. Perpillou, «Repentirs de scribes», *Revue de Philologie* 51 (1977) 237-248; N. Maurice, «Fautes de scribes. Pour une critique verbale appliquée aux textes mycéniens», *Minos* 19 (1985) 29-50; J. Chadwick, «Traditional Spelling or Two Dialects?» in A. Heubeck and G. Neumann eds., *Res Mycenaeae* (Göttingen 1983) 78-88.

my heartfelt appreciation to Katie Demakopoulou, the staff of the National Museum in Athens, and their predecessors and contemporaries at all museums in Greece who continue to support so graciously our work of re-discovering how Mycenaean scribes worked.

Finally, I should note that a mapping of the find-spots of the Sh tablets and fragments and Wa 732 also supports the ordering proposed here²³. Notice that all five top tablets of group A and B are fragmented and spill in a consistent spread left and right of a center piece – the leftward spills being parallel: 5232-5245 and 5234-5241 and 5234-5243 and 5234-5241 and 5235-5253. By contrast all the bottom tablets except for Sh 739 are unfragmented. This we would expect if they were made more secure by the weight of the upper tablets and their slight sticking on the plaited surface of the tablet basket. The upper tablets would be more easily subject to breakage and spillage. Our heading tablets sit together side by side in 5233 and 5234. Most other contiguous pairs show similar patterns of clustering (See especially Sh 743 – Sh 733 and Sh 739 – Sh 735). The label Wa 732 sits slightly apart in grid 5214 in closest proximity to the two bottom tablets of Group B (5224), the heading tablets (5234 and 5233), and components of the top tablets of Group B (5224 and 5235). The label therefore was affixed to the front or front top of the tablet basket closest to the heading tablets and Group B tablets, just as we might have expected from our study of ‘contiguities’.

²³ The reader is asked to consult the grid diagram in *Scribes of Pylos*, 184, or E. L. Bennett, Jr., and J.-P. Olivier eds., *The Pylos Tablets Transcribed. Part II* (Rome 1976) 25.



Sh 736



Sh 740



Wa 732



Fig. 1



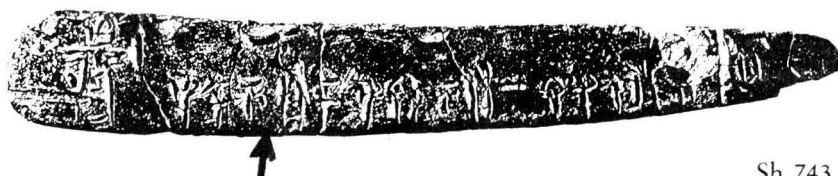
Sh 737



Sh 741



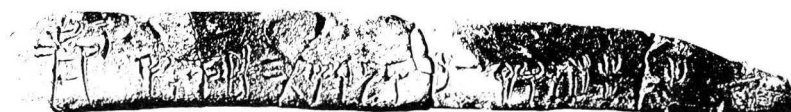
Sh 742



Sh 743



Sh 744

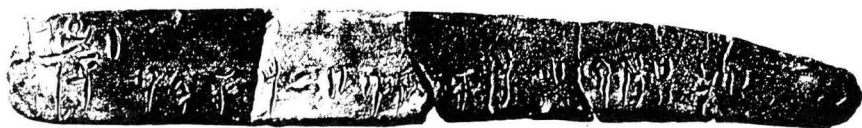


Sh 733

Fig. 2 – Sh 'contiguities'. Group A tablets.



Sh 734 recto



Sh 739 recto



Sh 735



Sh 738

Fig. 3 – Sh ‘contiguities’. Group B tablets.



Sh 744



Sh 742



Sh 743



Sh 739 verso



Sh 734 verso

Fig. 4 – Sh series ‘contiguities’. Bottom tablets.

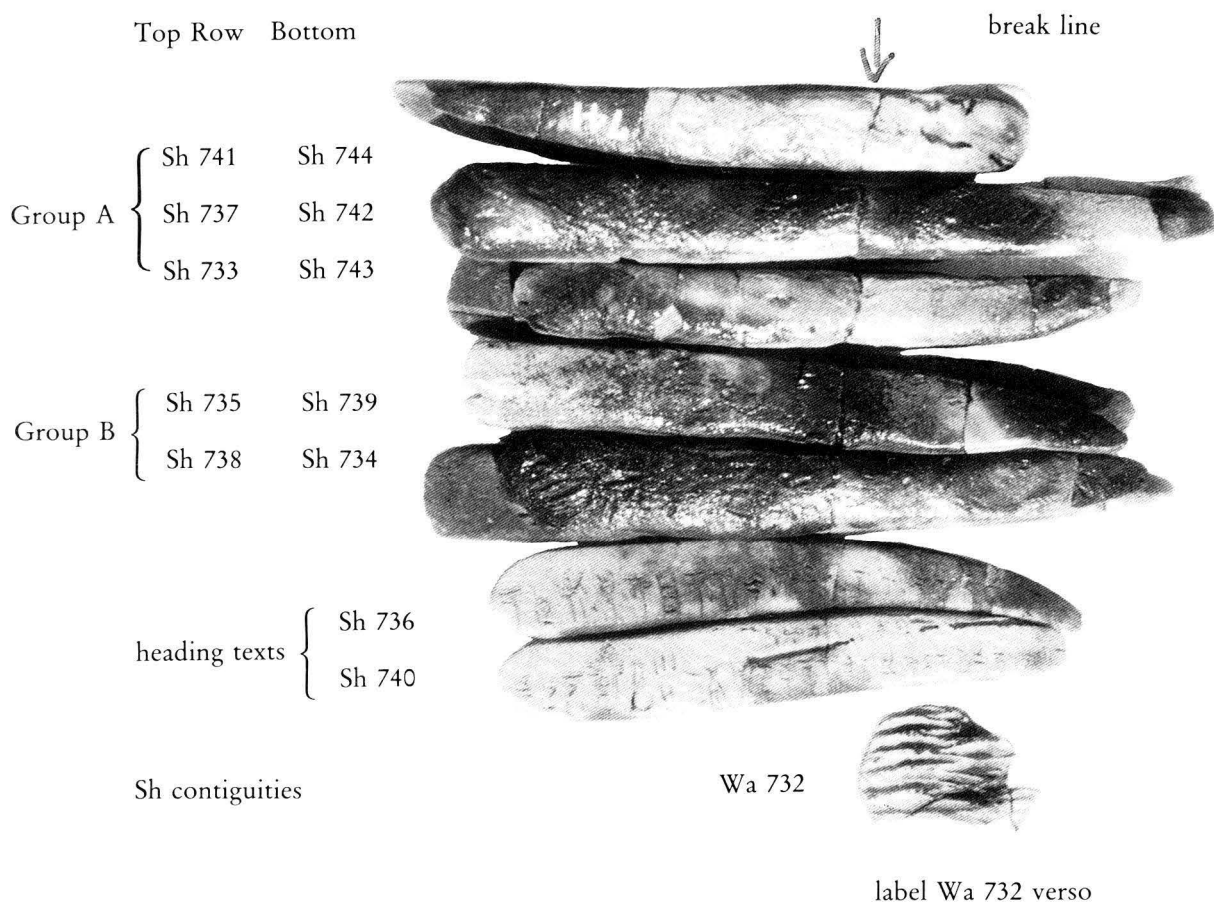


Fig. 5 – Sh series ‘contiguities’. Discovered 12-4-89; ELB, JLM, TGP; EM Athens.

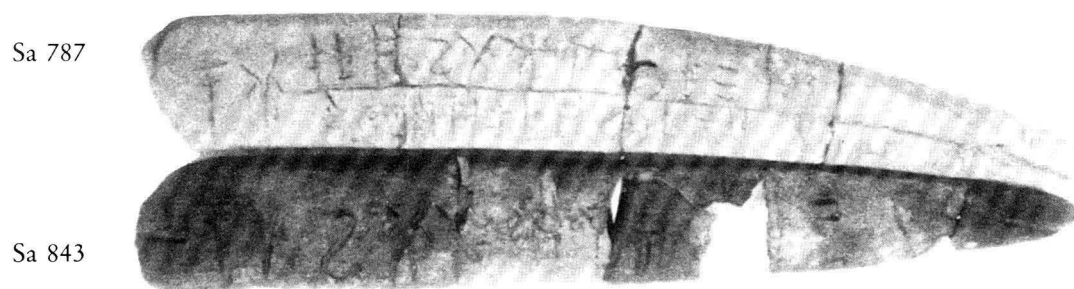


Fig. 6 – Totalling texts for Sa chariot wheel series: a ‘contiguity’