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FURTHER THOUGHTS ON PY Vn 46

To re-examine a tablet with as many uncertainties and problems as PY Vn 46 needs no justification; whether such a re-examination will yield any positive results, is another matter. But I am attempting it nevertheless, in the hope that something of interest may emerge.

PY Vn 46, as well as the other Va and Vn tablets, are particularly difficult to interpret because of the absence of ideograms to act as a check on interpretations of vocabulary words. What makes the interpretation of Vn 46 even more difficult, is the fact that many of the vocabulary words occur here and nowhere else, or, where a word does occur elsewhere, it seems to have a different meaning. One of the few Vn tablets which repeats some of the vocabulary words of Vn 46, and which seems to contain the same kind of subject-matter, is PY Vn 879, and in many ways it is just as obscure as Vn 46. A further difficulty is caused by the fact that the tablet is broken across the top right-hand corner, thus obscuring most of the first line and the numerals in the following lines. The tablet is also damaged across the middle with result that the readings of many of the signs and numerals in lines 5 and 6 are uncertain.

The text that follows is the revised text of Bennett and Olivier<sup>1</sup>; cf. the readings of E. L. Bennett and J. Chadwick in *Nestor* 1.iv.66. For comparison I am including the text which appeared in *Documents* in 1956, and I am also adding the text of Vn 879.

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<sup>1</sup> I am indebted to Prof. E. L. Bennett and Dr. J.-P. Olivier for permission to use the text of the tablet before the appearance of *PTT*. Dr. Olivier informs me that he now prefers the earlier reading *e-po-wo-ke* in line 9; the sign is so unclear on the photograph of the tablet I have seen that there is very little to choose between the readings; to my unpractised eye, there is slightly more resemblance to *so* than *po*.

- Vn 46
0. sup. mut.
  1. *pi-ra<sub>3</sub>-*[
  2. *ka-pi-ni-ja* , *a-ti-ja* 6[
  3. *ka-pi-ni-ja* , *e-ru-mi-ni-ja* 4[
  4. *ka-pi-ni-ja* , *ta-ra-nu-we* 12[
  5. \*35-*ki-no-o* 81 *o-pi-ra<sub>3</sub>-te-re* 40[
  6. *e-to-ki-ja* 23[ ]-*ke-te-re* 140
  7. *pi-ri-ja-o* , *ta-ra-nu-we* 6
  8. *qe-re-ti-ri-jo* 2 *me-ta-se-we* 10
  9. *e-ʒo-wo-ke* , *pu-to-ro* 16
  10. \*35-*ki-no-o* , *pu-to-ro* 100
  11. *ta-to-mo* , *a-ro-wo* , *e-pi-\*65-ko* 1
  12. *e-ru-mi-ni-ja* 2 *ki-wo-qe* 1

Earlier reading as in *Documents*:

1. *pi-te*[
2. *ka-pi-ni-ja* , *po-ti-ja* [ ]
3. *ka-pi-ni-ja* , *e-ru-mi-ni-ja* [ ]
4. *ka-pi-ni-ja* , *ta-ra-nu-we* 11 [ ]
5. *ai<sub>3</sub>?-ki-no-o* 80 *o-pi-te-te-re* 50+
6. *e-to-ki-ja* 13 [? *pa*]-*ke-te-re* 140
7. *pi-wo-ta-o* , *ta-ra-nu-we* 6
8. *qe-re-ti-ri-jo* 2 *me-ta-se-we* 10
9. *e-po-wo-ke* , *pu-to-ro* 16
10. *ai<sub>3</sub>?-ki-no-o* , *pu-to-ro* 100
11. *ta-to-mo* , *a-ro-wo* , *e-pi-\*65-ko*
12. *e-[ru-mi]-ni-ja* 2 *ki-wo-qe* 1

- Vn 879
1. *a-ti[- -]* , *pe-\*65-ka* 8
  2. *ko-ni-ti-ja-ja* , *pe-\*65-ka* 24
  3. *e-to-ki-ja* , *qa-ra-de-ro* 10
  4. *pa-ke-te-re* , *qa-ra-de-ro* 86

In spite of the absence of ideograms, certain words on Vn 46 were immediately recognised by Ventris and Chadwick<sup>2</sup> as words connected with the construction of a building, e. g. *ka-pi-ni-ja* =

<sup>2</sup> *Documents*, p. 349.

καπνία = κάπνη, *e-ru-mi-ni-ja* = ἑλύμνιαι· δοκοὶ ὀροφῆναι (Hsch.), and most scholars have followed them in interpreting this tablet as a list of building materials; so Palmer in his *Interpretation*<sup>3</sup> and Stella in *La civiltà micenea*<sup>4</sup>. H. van Effenterre<sup>4</sup>, however, has recently tried to interpret this tablet as a list of materials used in ship-building, basing his interpretation first on the identification of *ka-pi-ni-ja* with a derivative of σκάφη, σκάφος, and further on what he claims to be a reasonably exact correspondence of the numerals on the tablet with the parts necessary for the construction of the hull of a triaconter. Some of the suggestions are tempting, e. g. 2 *qe-re-ti-ri-jo* as 'ailes de support des avirons de gouverne'; a Mycenaean ship on a fragment of a vase from Eleusis supplies early evidence for the later practice of having two steering oars astern<sup>5</sup>. Further, the interpretation of *ta-ra-nu-we* as plural of θρήνυς 'rower's bench' could be supported by θρήνυς ἑπταπόδης of *Iliad* 15.729. But what would be the difference between *ka-pi-ni-ja ta-ra-nu-we* and *pi-ri-ja-o ta-ra-nu-we*, and why are there 12 of the former and 6 of the latter? If this is an inventory of materials for the construction of a triaconter, one would expect a number which would provide seating for 30 rowers. Then there is the word *e-to-ki-ja*, interpreted by van Effenterre as 'gunwale'. I am no expert in the terminology of ships, ancient or modern, but 23(+?) seems to me to be a strange number of gunwales to have on a ship. On the whole, I should say that the readings of some of the numerals on this tablet are too uncertain to justify van Effenterre's claim that the numbers correspond reasonably well with the materials required for the different parts of the hull of a triaconter.

There are further objections to this theory. On linguistic grounds, *ka-pi-ni-ja* is unlikely as a derivative of σκάφος. On contextual grounds, *ta-ra-nu-we* cannot possibly mean 'rowers' benches' as in line 4 it is associated with *ka-pi-ni-ja*, the most likely interpretation of which is still a derivative of καπνία = κάπνη, while in line 7 the word is found with *pi-ri-ja-o*, which has been fairly generally accepted as φλιάων.

<sup>3</sup> Palmer, *Interpretation*, pp. 366 f.; L. A. Stella, *La civiltà micenea*, p. 100.

<sup>4</sup> H. van Effenterre, *REG* 79, 1966, p. XII.

<sup>5</sup> J. Morrison and R. T. Williams, *Greek Oared Ships*, p. 10; see also pp. 52-53.

What reason have we, however, for holding to the view that the tablet is an inventory of building materials? I propose to examine now the vocabulary words and numerals as they appear on the tablet itself, to see if the tablet makes sense as a list of building materials.

The only word in line 1 which can be partly read, is, according to the new reading, *pi-ra<sub>3</sub>*-[. Possible interpretations for *pi-ra<sub>3</sub>* include *pil(l)ai-*, *pir(r)ai-*, *phil(l)ai-*, *phir(r)ai-*, *sp(h)il(l)ai-*, *sp(h)i-r(r)ai-*, but none of these suggest appropriate words in the context. If this word is part of a lost heading to the tablet (something like e. g. *o-di-do-si du-ru-to-mo* in PY Vn 10), it could be a personal name or place-name, a compound of  $\phi\iota\lambda$ - and a root beginning with  $\alpha\iota$ -.

Lines 2, 3 and 4 should be taken together, as they all contain the word *ka-pi-ni-ja*, which seems to describe *a-ti-ja*, *e-ru-mi-ni-ja* and *ta-ra-nu-we*. That it is an adjective in the nom. plur. is unlikely because of the gender of *ta-ra-nu-we* (poss. masc. plur. *thrā-nuwes* in the sense of later  $\theta\rho\tilde{\alpha}\nu\omicron\varsigma$  'beam'). Also,  $\kappa\alpha\pi\nu\acute{\iota}\omicron\varsigma$  as an adjectival form is late. It is possible that the word *ka-pi-ni-ja* is to be considered a genitive or dative singular (i. e. different kinds of beams 'of or for the chimney-stack'); the genitive singular is more likely, however, in view of *pi-ri-ja-o* (gen. plur.) *ta-ra-nu-we* in line 7. Here Palmer<sup>6</sup> objects that *ka-pi-ni-ja* can «hardly» mean «smoke-stack» because of the large amount of wood implied in words like *e-ru-mi-ni-ja* and *ta-ra-nu-we*; but Chadwick<sup>7</sup> points out that the actual chimney-pipe would be of earthenware, supported by wooden structures of roofing-beams and other timbers. One can point to the fragments of a cylindrical chimney pot found in a house at Mycenae about 75 metres east of the Treasury of Atreus<sup>8</sup>, similar to those found at Pylos<sup>9</sup>. What the distinction is between the different kinds of timbers implied in *a-ti-ja*, *e-ru-mi-*

<sup>6</sup> Palmer, *Interpretation*, p. 424.

<sup>7</sup> Chadwick, *Gnomon* 36, 1964, p. 326.

<sup>8</sup> Archaeological Reports of *JHS*, 1963, p. 15.

<sup>9</sup> Blegen and Rawson, *Palace of Nestor* I, part 1, pp. 78, 81, 89, 200 f.; part 2, figs. 271 nos. 2, 3, 7, 8; 272 nos. 6-9. That a large amount of timber was used for the main support of the chimney is suggested by Blegen and Rawson, *loc. cit.*, and by Vermeule, *Greece in the Bronze Age*, pp. 166 f.

*ni-ja* and *ta-ra-nu-we*, is not entirely clear. *a-ti-ja* was formerly read as *po-ti-ja*, but the new reading has been confirmed by Chadwick and Bennett, and receives support from a possible *a-ti-[ja]* in PY Vn 879. Whether this is the same word as *a-ti-ja*-[ on the fragmentary MY X 1, is uncertain. The word on MY X 1 was interpreted by Ventris<sup>10</sup> as a verbal form *antia[ei?]*, but it is as likely to be a personal name, and is probably unconnected with *a-ti-ja* in Vn 46 and Vn 879. ἑλύμνιαι are described by Hesychius as δοκοὶ ὀροφῆναι ‘roofing timbers’; Ruijgh points out that this would be a pre-Hellenic root with -μν.<sup>11</sup> The singular *ta-ra-nu* is found in the PY Ta tablets with an ideogram representing a footstool, and it has been plausibly identified in these tablets with the later θρῆνυς of *Od.* 14.240 and elsewhere; in PY Vn 46 the meaning of *ta-ra-nu-we* is closer to the meaning of later θρᾶνος, which as an architectural term means a wooden beam or the top course of masonry in a temple. In view of the use of θρῆνυς as ‘bench’, it is likely that *ta-ra-nu-we* means ‘horizontal beams’. Perhaps these ‘horizontal beams’ are distinguished from upright or sloping members, so that *a-ti-ja* might be a form of ἄντιος and imply vertical beams (cf. ἄντιον as part of a loom in Aristoph. *Thesmoph.* 822). Then the ἑλύμνιαι could be sloping or diagonal members; the entry in Hesychius would support this, if Hesychius is speaking of timbers for a pitched roof. But exactly how the 6 (?) *antia*, 4 *elumniai* and 12 *thrānuwes* would fit in with each other to form the supporting frame-work of the chimney-stack, is hard to visualise, especially in view of the uncertainty of the numbers on this part of the tablet. If the numbers are correct, it may be of some significance to note that 4 and 6 are both factors of 12; i. e. two *ta-ra-nu-we* to each *a-ti-ja(-jo?)*, three *ta-ra-nu-we* to each *e-ru-mi-ni-ja*. On the whole, we know too little about the shape and size of these wooden elements to be able to attempt a plausible reconstruction.

In line 5, the word \*35-*ki-no-o* remains problematic. The sign \*35 was at first tentatively transcribed as *a<sub>3</sub>*, and the word identified with *a<sub>3</sub>-ki-no-o*, apparently part of a chariot in KN Se 879

<sup>10</sup> *Documents*, p. 398; *MT II*, p. 112.

<sup>11</sup> Ruijgh, *Etudes*, p. 108.

and Se 891. Though the identification of \*35 with  $a_3$  has since been questioned, the identity of \*35-*ki-no-o* with  $a_3$ -*ki-no-o* remains a strong possibility. The KN tablets on which the word  $a_3$ -*ki-no-o* appears, suggest that  $a_3$ -*ki-no-o* are objects made of wood (elm-wood is mentioned) and that they serve some purpose in fitting out chariot bodies. The  $a_3$ -*ki-* part of the word may reflect the same pre-Hellenic element found in αἰγιαλός and place-names such as Αἰγίνα; in fact, the whole word may be pre-Hellenic, and if \*35-*ki-no-o* is connected, it would be pre-Hellenic too.

In view of the large numbers of \*35-*ki-no-o* mentioned (80 or 81), Palmer<sup>12</sup> suggests small items of carpentry; one might point out that in the building trade large numbers do not necessarily imply small objects. Gallavotti<sup>13</sup>, who reads \*35 as *pra*, suggests that the word is a derivative of πλόξ and means 'stone slab', but the value *pra* for \*35 is too uncertain to make this interpretation readily acceptable. It has also been suggested that  $a_3$ -*ki-no-o* could be a personal name or sobriquet<sup>14</sup>, and that \*35-*ki-no-o* could be interpreted in the same way<sup>15</sup>, but this interpretation raises more problems than it solves. In a list which appears to contain numbers of objects, it is unlikely that a man's name would appear in any position other than the heading. None of the proposed suggestions bring one nearer to a solution of this word.

In the second half of the line, the new reading is a tentative  $o$ - $\pi$  $\grave{i}$ - $\rho$  $\alpha_3$ - $t$  $\grave{e}$ - $t$  $\acute{e}$ - $r$  $\acute{e}$  instead of the earlier  $o$ - $\pi$  $\grave{i}$ - $t$  $\acute{e}$ - $t$  $\acute{e}$ - $r$  $\acute{e}$ . It must be pointed out that only the base of the sign before -*te-re* survives, so that it could just be an undersized *te*. However, the position of the sign in relation to the following *te* makes this unlikely. The numeral is read tentatively as 40, but it may be greater, as the tablet is broken at this point. It was formerly pointed out by Palmer<sup>16</sup> that the quantity of these objects was exactly half the quantity of \*35-*ki-no-o*, but now that the numeral with the latter is read

<sup>12</sup> Palmer, *Interpretation*, pp. 367, 465.

<sup>13</sup> Gallavotti, *PdP* 16, 1961, p. 30.

<sup>14</sup> Lejeune, *Mémoires*, p. 52; Palmer, *Interpretation*, p. 487; Ruijgh, *Etudes*, pp. 370 f.

<sup>15</sup> Ruijgh, *ibidem*; in discussion, Ruijgh suggested that \*35-*ki-no-o* might be a personal name used as an element of building construction; this is not unlikely, but it brings one no nearer to a satisfactory interpretation of the word.

<sup>16</sup> Palmer, *Interpretation*, p. 488.

as 81, this correspondence disappears, if indeed the 1 after the 80 is not merely an accidental mark on the tablet. It may be of interest that apart from the possible 23(+) *e-to-ki-ja*, 81 is the only large odd number on the tablet, though there may be some significance in the fact that 81 is  $9 \times 9$ .

As far as the word itself is concerned, it is likely that we have a compound of *opi-* here, with the *-τηρ* suffix of an agent/instrument noun. Chadwick<sup>17</sup> earlier suggested *opi(r)raistēres* 'hammers', but has abandoned this suggestion in view of the oddity of listing tools among building materials, and the number of men needed to use the hammers. I suppose as many as 40 hammers could be used in the construction of a building; ten or more workmen each using three or four hammers of different kinds would keep 40 hammers usefully employed. The first objection is harder to overcome, though one could say that in a bureaucratic system like the one at Pylos, such a check on implements in a list of building materials would not be surprising; but then the question can be asked why there is no mention of saws, chisels and other implements here.

It seems safer, therefore, to try to find an item of building material in this word. It is conceivable that the word may still be connected with ῥαιστήρ, if the *o-pi-ra<sub>3</sub>-te-re* are metal fittings (caps) hammered on to prevent damage to the ends of beams; the use of the suffix *-τήρ* to denote the instrument is well attested in later Greek, e. g. ῥαιστήρ, ζωστήρ, κρατήρ; possible further examples in Mycenaean include *pa-ke-te-re* (see below), and *]ka-ra-te-ra* (MY Ue 611) in a list of vases, interpreted as a form of κρατήρ. The earlier reading *o-pi-te-te-re*, though doubtful, would give equally good sense here, if it means *opithetēres* in the sense of 'covers' on the ends of beams. Though we have no direct evidence for such protective covers or caps on the ends of beams, it is not impossible that these existed, as beam ends which are left exposed are easily damaged<sup>18</sup>.

<sup>17</sup> Chadwick, *Nestor* 1.iv.66, p. 431.

<sup>18</sup> There is also the possibility of finding in *o-pi-ra<sub>3</sub>-te-re* or \*35-ki-no-o a layer of reeds covered with clay above the beams; see A. W. Lawrence, *Greek Architecture*, p. 66; Graham, *The Palaces of Crete*, pp. 148, 160 f.; Blegen-Rawson, *op. cit.*, p. 82 *et passim*.

In line 6, the latest reading shows 23 *e-to-ki-ja* (earlier read as 13; the number may be even greater); the word recurs in Vn 879.3, where ten of these objects, described as *qa-ra-de-ro*, are listed. *qa-ra-de-ro* is likely to be the name of a type of wood, if *pe-\*65-ka* in the preceding lines of Vn 879 is πεύκη 'fir'. No known Greek word suggests itself, however, as a type of wood which can plausibly be identified with *qa-ra-de-ro*.

For *e-to-ki-ja*, Ventris and Chadwick<sup>19</sup> suggested a form of ἐντοίχιος 'on a wall' ('wall plates'). Palmer<sup>20</sup> suggests the posts etc., forming the frame-work of half-timber construction. Whether this is so or not, the connexion of the word with the τειχ- / τοιχ-root is probably sound, though what element of construction is represented here, is unclear. If we assume a definite order in the list of building materials, starting from the chimney-stack and reaching the doors in line 7, we note that the part of the construction missing here is the main part of the roof, which was probably flat<sup>21</sup>. Lines 5 and 6 may well contain the materials for the roof; perhaps *e-to-ki-ja* are the rafters, which fit into holes in the wall at either end. The numbers of \*35-*ki-no-o*, *o-pi-ra<sub>3</sub>-te-re* and *e-to-ki-ja*, however, are too uncertain to allow one to come to any conclusions about how they fitted in with each other to form the part of the construction concerned.

In the same line, 140 objects called ]-*ke-te-re* are listed. The missing sign is usually supplied as *pa-*; in Vn 879 86 *pa-ke-te-re*, described as *qa-ra-de-ro*, are listed immediately after *e-to-ki-ja*; the association of these two objects here makes the restoration *pa]-ke-te-re* on Vn 46 extremely plausible. The large number of these objects —140 and 86— makes it likely that they are objects which would be much used in building, something like pegs or dowels. Ventris and Chadwick's<sup>22</sup> suggestion of *pāktēres* (from the root of πήγνυμι) would fit the meaning.

The word *pa-ke-te-re* recurs at Mycenae in a list mainly of vases, and a derivative *pa-ke-te-ri-ja* (perhaps adjective, perhaps

<sup>19</sup> *Documents*, p. 349.

<sup>20</sup> Palmer *Interpretation*, p. 367.

<sup>21</sup> Blegen and Rawson, *op. cit.*, pp. 34, 82 and 82 note 31.

<sup>22</sup> *Documents*, p. 349.

diminutive) occurs on a sealing from Mycenae<sup>23</sup>. It has been suggested by Lejeune and Taillardat that the words used at Pylos and Mycenae are from two different roots; Chadwick<sup>24</sup>, however, points out that there is no need to distinguish two different words here; if *ka-na-to*, associated with both *pa-ke-te-re* and *pa-ke-te-ri-ja* at Mycenae, are = γνάθοι in the sense of 'metal cramps', there is no reason to suspect the presence of 30 (metal?) dowels in a list of vases which may also be of metal. This interpretation would explain the reasonably large number of *pa-ke-te-re* in MY Ue 611. One could perhaps go even further and suggest that here the *ka-na-to* and *pa-ke-te-re* were clamps and rivets of some kind used in the manufacture of vases. The excavators of Pylos do in fact mention pieces of lead, possibly from clamps, found with sherds against the north-west wall<sup>25</sup>. In the context of Vn 46, and in comparison with the occurrence of the word in other tablets, the restoration *pa]-ke-te-re* and the interpretation as *pāktē-res* 'dowels' *uel sim.* from the root of πήγνυμι seems the most likely solution. If *qa-ra-de-ro* is a type of wood, as suggested above, the dowels listed on Vn 46 would have been of wood, not metal.

That the *e-to-ki-ja* and *pa-ke-te-re* are listed in the same order in both PY Vn 46 and Vn 879 would suggest that they are in some way connected. The numbers of each in the two tablets do not, however, correspond sufficiently to allow any firm conclusions to be drawn as to the number of *pa-ke-te-re* used with each *e-to-ki-ja* (or-*jo*?). Perhaps the *pa-ke-te-re* were used to fix the *e-to-ki-ja* into place in the wall.

In line 7, there is an entry of 6 *pi-ri-ja-o ta-ra-nu-we*. *pi-ri-ja-o* is the new reading for earlier *pi-wo-ta-o*, and makes excellent sense as gen. plur. φλιάων 'door-jambs'<sup>26</sup>. Six beams for door-jambs, therefore; does this mean a sufficient number of beams for three door-frames, or would the lintel be included giving only two? In Homer the word seems to be used of door-jambs only, while

<sup>23</sup> MY Ue 611; Wt 506.

<sup>24</sup> Lejeune, *RPh* 34, 1960, p. 24; Taillardat, *Nestor* 1.iii.64, p. 313; Chadwick, *Eranos* 57, 1959, p. 2.

<sup>25</sup> Blegen and Rawson, *Palace of Nestor* I, Part 1, pp. 321 f.; Part 2, fig. 315, nos. 1-6.

<sup>26</sup> Chadwick, *Minos* 6, 1960, p. 146; Palmer, *Interpretation*, p. 367.

in a passage in Apollonius Rhodius<sup>27</sup> it seems to have the meaning of lintel. In view of the improbability of listing door-jambes without lintels in a list of building materials, it is likely that the lintels are included in the number, and that we have materials for two door-frames here.

In line 8 we have 2 *qe-re-ti-ri-jo*. Palmer<sup>28</sup> interprets this as the dual of a word ending in -τρια, *qe-re-* representing either *g<sup>w</sup>ele-* or *g<sup>w</sup>lē-*, βελετρίω or βλητρίω. In support of the latter form, he quotes βλήτροισι in *Iliad* 15.678, where the sense is 'bands' or 'hoops'. But it is hard to see what the function or purpose of two bands or hoops would be in the context. In view of the fact that this entry follows immediately after the material for two door-frames, without mentioning the actual doors, it is tempting to find a word for 'doors' here, but no word in later Greek suggests itself as a likely candidate.

Following the two *qe-re-ti-ri-jo*, there are ten *me-ta-se-we*. This is clearly, as Palmer<sup>29</sup> pointed out earlier, a technical word with suffix -εύς, cf. πνιγεύς, and a verbal root, something like *metar-sēwes*. It is unlikely that the word is connected with μετάρσιος, since this presumably has *-awer-sios*. It is tempting, in the context, to think of woodwork for windows here, but no obvious Greek interpretation suggests itself. It is likely that we have to do with technical terms in both *qe-re-ti-ri-jo* and *me-ta-se-we* which did not survive into later Greek. The existence of such technical terms which defy interpretation, need not surprise us, if we think of the many technical terms for architectural features used in our own language which make sense only to the trained architect or builder.

Lines 9 and 10 list items *e-ṣo-wo-ke* and \*35-*ki-no-o*, each followed by the word *pu-to-ro*. Stella<sup>30</sup>, basing her interpretation on a reading πύθρος (for πίθος) in Tzetzes *ad Lyc.* 1108, a reading already stigmatised as «vitiose» in Stephanus *Thes. Ling. Graec.*, interprets this word as *puthros* in the sense of πύελος (bath-tub?), and suggests that *e-ṣo-wo-ke* and \*35-*ki-no-o* represent two dif-

<sup>27</sup> *Od.* 17.221; *Ap. Rhod.* 3.278.

<sup>28</sup> Palmer, *Interpretation*, p. 367; see also Ruijgh, *Etudes*, p. 116.

<sup>29</sup> Palmer, *Interpretation*, p. 367.

<sup>30</sup> Stella, *La civiltà micenea*, p. 100.

ferent qualities of the *puthroi*. Apart from the fact that she bases her identification of the word on wrongly interpreted source material, the interpretation of *pu-to-ro* as the name of the object listed, not the epithet describing it, is unlikely for other reasons. Though in lines 2, 3, 4 and 7 the epithet (in the genitive) precedes, and the second word is the substantive, the reverse seems to be the case here, and *pu-to-ro* is likely to be the descriptive word, as Palmer<sup>31</sup> has already noted. This is supported by the fact that in line 5 \*35-*ki-no-o* appears by itself, not as an epithet, so that both it and *e-ṣo-wo-ke* must be the names of the objects listed. *pu-to-ro* could be nom. plur. of an adjective, or perhaps rather gen. plur. of a noun. The word recurs as a man's name in KN As 1516.9; there is no obvious connexion between the man's name and the word as used in Vn 46. For *e-ṣo-wo-ke* Palmer<sup>32</sup>, still reading *e-ḫo-wo-ke*, suggests a compound with the latter half from \**worg-*. No obvious interpretation springs to mind, and the word remains obscure; the uncertainty of the reading is a further factor which makes interpretation difficult, if not impossible.

In line 11, one *ta-to-mo* is listed, described as *a-ro-wo* and *e-pi-65-ko*. Here, too, the order seems to be the substantive followed by the epithets, as in lines 9 and 10. The word *ta-to-mo* recurs in two of the Pylos Cn-tablets<sup>33</sup>, as the heading of lists of deficits of sheep, in which the sheep ideogram + *TA* is used. The interpretation of the word here as *σταθμός* or plur. *σταθμοί* is fairly generally accepted, in the sense of 'sheep-pens' or 'steadings'. It has already been suggested that the *TA* adjunct to the sheep ideogram should be connected with *ta-to-mo*; 'sheep kept in pens' would be a likely interpretation. *ta-to-mo* further appears on a KN sealing<sup>34</sup> followed by *o-nu-ke*. As Palmer<sup>35</sup> points out, this would suggest a textile context. In Vn 46, the identification of *ta-to-mo* with *σταθμός* 'upright post' has won fairly general acceptance. It seems likely that *ta-to-mo* in the Mycenaean language reflects the different usages of the word in later Greek; *σταθμός*

<sup>31</sup> Palmer, *Interpretation*, p. 367.

<sup>32</sup> Palmer, *Interpretation*, pp. 367, 418.

<sup>33</sup> PY Cn 4, Cn 595.

<sup>34</sup> KN Ws 1703.

<sup>35</sup> Palmer, *Interpretation*, p. 456.

as a standing-place for animals is found in Homer, as also σταθμός in the sense of an upright post, e.g. παρὰ σταθμὸν τέγεος, παρὰ σταθμὸν μεγάροιο<sup>36</sup>. The other meaning of the word in later Greek, 'balance' or 'weight', could be the meaning in KN Ws 1703, if this refers to the weight of a substance used in textile manufacture.

*a-ro-wo* as a description of *ta-to-mo* remains obscure. Chadwick<sup>37</sup> initially suggested, tentatively, gen. sing. *halōwos* 'of the threshing-floor'; the gen. ἄλωος is found in *Anth. Pal.* 6.258. But the appearance of a threshing-floor is strange in a list of such items as chimney-stacks and roof-beams, and Chadwick has abandoned the interpretation. The form *a-ro-we* is found with a jug ideogram but without further context in KN K 774; if these forms are connected, the identification of *a-ro-wo* with the genitive of ἄλωος is even less likely; on the other hand, we are brought no nearer to a solution of *a-ro-wo* by its possible connexion with *a-ro-we*.

The word *e-pi-\*65-ko* presents many difficulties. Assuming the value *ju* for *\*65*, Palmer<sup>38</sup> connects the word with the IE *\*jug-* root, which appears as ζευγ- or ζυγ- in later Greek. He proposes ἐπίζυγος or ἐπίζυγον for the word as it appears on the tablet, quoting in support of his view later ἐπιζυγίς in the sense of 'crossbeam', and the entry in Hesychius ἐπιζύγιον μέρος τῆς νέως. He compares the word with *pe-\*65-ka* in Vn 879, which he interprets as περ(1)ιυγα or πέρζυγα 'tie-beams'.

There are a number of objections to this interpretation. First, there is the uncertainty of the identification of the rare sign *\*65* with *ju*. It is tempting to give it this value; it would make good sense in *pe-\*65-ka* if this is *peukā* 'fir-wood'. But the identification, though likely, has not been conclusively proved. Further, there is the ready assumption that *ju* is the equivalent of *zu* in *e-pi-\*65-ko* and *pe-\*65-ka*, whereas the IE *\*jug-* root already appears with *z* in Mycenaean in *ze-u-ke-si* and *ze-u-ke-u-si*<sup>39</sup>. Granted that it is uncertain what the exact phonetic value of the *z*-series is in Myce-

<sup>36</sup> *Il.* 2.470; *Od.* 1.333, 17.96.

<sup>37</sup> *Documents*, p. 389.

<sup>38</sup> Palmer, *Interpretation*, pp. 20, 37, 367, 417.

<sup>39</sup> PY Ub 1318; Fn 50, Fn 79.

naean, and that *z* appears to be the product of *\*gj*, *\*dj*, *\*j* and perhaps even *\*kj*, it is still strange to find *ju* arbitrarily equated with *zu* as the product IE *\*jug-* in Mycenaean. Further, Palmer does not make clear what the relationship is between *ta-to-mo* and *e-pi-\*65-ko* in this line; he does not establish whether we have to do here with one *ta-to-mo* for the *e-pi-\*65-ko*, or one *e-pi-\*65-ko* for the *ta-to-mo*. In either case the numeral 1 is problematic. If *pe-\*65-ka* in Vn 879 is a kind of wood, it would be tempting to think of *e-pi-\*65-ko* as a kind of wood also, but there is no obvious candidate for this, and the word remains obscure.

In the last line of the tablet, the reading of the first word as *e-ru-mi-ni-ja* is extremely doubtful; the numeral 2 with a plural where we should have expected a dual adds to the difficulties<sup>40</sup>.

The final word on the tablet reads *ki-wo-ge* with the numeral 1. This is usually interpreted as *kiwōn-q<sup>u</sup>e* ‘and one column’. Palmer<sup>41</sup> draws special attention to the use of *-ge* for the last item mentioned in a list, but gives no further examples of such a usage. The accusative of the word with allative *-de* probably occurs as *ki-wo-na-de* in Vn 48.4, though there is some doubt about the reading.

If the interpretation *kiwōn* is correct, the question arises, what the difference is between a *ta-to-mo* and a *ki-wo*. If the reading *e-ru-mi-ni-ja* immediately preceding *ki-wo-ge* is correct, perhaps a *ki-wo* was a pillar or column supporting the roofing-beams, as seems to be the case in *Od.* 19.38 and elsewhere. But we have already seen this to be a meaning of *σταθμός* in the examples from Homer quoted above. Could the difference be between free-standing columns, such as existed in the entrance to the palace at Pylos, or surrounding the hearth in the megaron, and engaged columns such as those found at the entrance to the Treasury of Atreus at Mycenae? Or perhaps there is no distinction of meaning at all<sup>42</sup>.

<sup>40</sup> Palmer, *Interpretation*, p. 366.

<sup>41</sup> Palmer, *ibidem*; *i-\*65-ge* in PY Jn 725.8 is possibly an example of *-ge* added to the last of a list of names.

<sup>42</sup> My attention was subsequently drawn to a fragment from Eumelos quoted by Clement of Alexandria (*Strom.* 1.164 = Eumelos F 11 Kinkel) which reads:

ὄφρα θεῶν δεκάτην ἀκροθινιά τε κρεμάσσιμεν  
σταθμῶν ἐκ ζαθέων καὶ κίονος ὑψηλοῖο.

Having examined the vocabulary words on the tablet, and finding that many of them can be interpreted as constructional terms and names of building materials, it remains to consider a general point. What would be the purpose of this list? Two possibilities exist. First, it could be a list of the contents of a store-room, i. e. the stock of timber kept in the palace, or an inventory of what remained in stock after the erection of a building. Against this one might object that the references to specific parts of the building (chimney, door-jambs, etc.) would imply that chimney beams, for example, were a different sort of thing from door-post beams, whereas it is likely that they would probably all be *ta-ran-u-we* until measured and used for specific purposes. Further, the order that is possibly to be seen in the list, starting at the highest point and moving downwards, would not be the obvious order for a stock of timber, where one might expect objects of similar size and shape to be stored and listed together.

The second possibility is that this is a list written with the definite object of providing for a particular construction, whether it is a new building or a repair job. The question arises, what kind of construction could be erected with the materials and quantities of materials listed here. The materials mentioned, including one *σταθμός*, one *κίων*, enough material for two doors only, would certainly not be sufficient for the erection of a full-sized palace or even house, unless these were materials for an ante-room or porch where only a single column would be needed. This difficulty can be overcome by suggesting that this tablet is only one of a number of tablets listing the requirements for a full building, and that the other tablets of the set are lost. The difficulty remains, however, of fitting the given numbers into a comprehensible pattern.

I should like to suggest that this is a list of building materials needed for repairs. In a building where interior columns were usually made of wood, there must have been a constant need

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See Huxley, *Greek Epic Poetry from Eumelos to Panyassis*, p. 76. Though Huxley denies the identity of Eumelos with the author of the *Europiae*, from which this fragment is said to come, this does not invalidate the importance of the fact that here *σταθμός* and *κίων* are mentioned in the same line without any obvious distinction of meaning, in an author dated to the 6th century at the latest.

for replacement of columns that had become worn out or damaged. The difficulty of fitting in the numbers, such as 81 \*35-ki-no-o and 23(+) e-to-ki-ja, as well as the small number of beams for lintels, could possibly be explained in this way<sup>43</sup>. Against the repair theory one might object that the replacement of doors and columns is a major undertaking which would involve changes to the surrounding structure, but I do not think that this is an insurmountable objection; the uninterpreted words on the tablet may well be the words for the parts of the building affected by the carrying out of the repairs. It is not unlikely, therefore, that this is a list of materials for repairs sanctioned by Nestor's «Public Works Department».

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<sup>43</sup> That repair work was going on in the palace at the time of its destruction, is suggested by Blegen and Rawson, *op. cit.*, pp. 256 and 423.