

## CONTEXT AND ETYMOLOGY IN MYCENAEAN INTERPRETATIONS

BY

JOHN CHADWICK

(Cambridge)

The progress of Mycenaean studies, since Michael Ventris first announced the decipherment of the Linear B script in July 1952, has been so rapid and so enthusiastically developed by his colleagues and supporters, that there is some danger of the basic principles and limitations being overlooked. There are some on one hand who complain that the decipherment is incomplete because it does not permit us to distinguish  $\chi\alpha\lambda\kappa\acute{o}\varsigma$  from  $\kappa\alpha\kappa\acute{o}\varsigma$ <sup>1</sup>, while on the other hand others protest that too many words have been identified as Greek on insufficient evidence<sup>2</sup>. I neglect here those critics whose attitude is totally negative; the following remarks are based on the assumption that Linear B is successfully deciphered as Greek.

This means that, with the exception of a few rare signs, any Mycenaean word can be given an approximate phonetic shape. Given the spelling  $\oplus \text{ ?}$

we can say that it is a dissyllabic word, in which each syllable has a velar stop at the beginning, the vowel of the first syllable has an *a*-quality, that of the second an *o*-quality, facts which we express by our transcription *ka-ko*. This pattern fits equally well the common Greek words  $\chi\alpha\lambda\kappa\acute{o}\varsigma$  and  $\kappa\alpha\kappa\acute{o}\varsigma$ , not to mention inflexional variants such as  $\chi\alpha\lambda\kappa\acute{\omega}$ ,  $\kappa\alpha\kappa\acute{\omega}$ , etc. It is clear that phonetic patterns alone are quite insufficient to determine in this case which Greek word is spelt by *ka-ko*. On the other hand, the fact that the language of the Mycenaean inscriptions is Greek imposes a limitation; but since we do not know Mycenaean Greek except through the medium of the Linear B script, it cannot be an absolute limitation. We cannot say that

---

<sup>1</sup> N.G.L. Hammond, *A History of Greece*, Oxford 1959, p. 34.

<sup>2</sup> „The ‘etymological’ method of using the spelling rules to ransack the Greek lexica, though it occasionally yields results of self-evident correctness, is most dangerous.” L.R. Palmer, *Gnomon* 29 (1957), p. 564.

χαλκός and κακός are the only possible interpretations of the word *ka-ko*; other words, not in use in classical Greek, might have had the same approximate phonetic pattern. But there is at least a certain degree of probability that *ka-ko* will correspond to one or other of these common words. On the other hand a row of syllables such as *a-re-ku-tu-ru-wo e-te-wo-ke-re-we-i-jo*<sup>1</sup> bears such a strong phonetic resemblance to the Greek words Ἀλεκτρυών Ἐτεοκλῆιος that it is hard to reject the conclusion that we have here the name of a man Alektruon, son of Eteokles, and this conclusion is reinforced by the observation that the name Ἐτεοκλῆς is known historically to be derived from \*ἘτεΦοκλέΦης. In other words, the longer and more specific the pattern to be identified, the less chance there is of a random resemblance to known Greek words. Mere length is not the only factor; certain syllables are more specific than others, and a word such as *se-ri-no* offers so few phonetic alternatives that identification with Greek σέλιον would be attractive even if there were no other evidence upon which to base it<sup>2</sup>.

In the case of a short and unspecific word like *ka-ko* we must invoke another principle to allow us to choose between the alternatives. It may of course compel us to reject both. This is the so-called combinatory method, though it would be better named 'contextual' since it depends upon an analysis of the contexts in which the word appears. Certain deductions may be made from the context in the widest sense; it was clues of this kind which enabled the decipherment to begin from words whose sense could be determined while their phonetic shape was still unknown. But the progress of the decipherment makes much plainer the contexts in which each word is found, and the deductions thus become interdependent. The identification of one word is assisted by the identification of others, and the coherence of the system thus revealed constitutes a check upon the correctness of the deductions.

*Ka-ko* is found in two contexts: tablets dealing with wheels, and tablets characterised by ideogram No. 140 (the Pylos *Jn* series). The context of the wheel-tablets is illuminating:

PY Sa794 *ka-ko de-de-me-no no-pe-re-a<sub>2</sub>* **WHEEL** ZE 1.

Clearly comparable with this is:

PY Sa287 *a-ku-ro de-de-me-no* **WHEEL** ZE 1.

In other words *ka-ko* appears to be interchangeable with *a-ku-ro* in the same formula. The word *de-de-me-no* common to both examples is long and specific; there is only one Greek word of a suitable phonetic shape, the perfect medio-passive participle of δέω, and taking into account the entry ZE 1 = 'one pair', we can confidently equate this with δεδεμένω 'bound'. Which of our two probable candidates for *ka-ko*, 'bronze' or 'bad', will fit this context better? Since the phonetic range permits interpretation as a dative singular in -ω, 'bound with bronze' is clearly an acceptable meaning, though we could not exclude 'bad (and) bound'<sup>3</sup>. Here we must bring in the substitutable *a-ku-ro*; can this

<sup>1</sup> PY An654.8.

<sup>2</sup> Contra: A. J. Beattie, *Minotca*, pp. 6–34.

<sup>3</sup> It might be excluded if we had already identified *no-pe-re-a<sub>2</sub>* as the Mycenaean form of Attic ἀνωρελῆ, since the wheels would be unlikely to be described as both 'bad' and 'useless'.

also be interpreted as (a) a material suitable for binding chariot-wheels, or (b) an adjective which might describe such wheels? There is an obvious Greek word in class (a), none in class (b). We can therefore confidently interpret *a-ku-ro* as ἀργύρεω, 'with silver', and this in turn confirms our preference for χαλκῶ 'with bronze' as the correct interpretation in Sa794. We may then notice other words in similar contexts and this will lead us to *ka-ki-jo* and *ka-ko-de-ta* KN So894.2, again applied to wheels, which we can readily interpret as χάλκια = χάλκεα 'brazen' and χαλκόδετα 'bronze-bound'.

We can now turn our attention to the Pylos *Jn* tablets, where we have several times the formula *to-so-de ka-ko* \*140<sup>1</sup>, and without going into all the details it can easily be shown that *ka-ko* is the name of ideogram No. 140. This in turn is a substance measured by weight, amounts of several talents being recorded. It is therefore not extremely rare or precious. The same ideogram is used as an annotation to other pictograms, especially vessels of various kinds<sup>2</sup>. It is therefore almost certainly a metal. The only common, non-precious metal in use in Mycenaean Greece was bronze. Hence we arrive at the conclusion that \*140 = 'bronze' = *ka-ko*. Once again the pattern must be interpreted χαλκός not κακός. We can find confirmation in the presence on these *Jn* tablets of the word *ka-ke-we*. There is of course no incontrovertible link between the two words, but when we find *ka-ke-we* in association with *ka-ko* it is at least probable that the connexion is not fortuitous. Following this line of thought we reach the highly satisfactory interpretation χαλκῆρες 'bronze-smiths'.

It is therefore through a combination of such deductions that the final interpretation is reached. The key-method is the contextual, since that alone can give an unequivocal answer, provided the contexts are sufficiently numerous and revealing. But in the case of a name its scope is extremely limited; once it has been demonstrated that a particular word is a man's name, the contextual method is exhausted. Appeals to the principle of the 'speaking' name, one which is appropriate to the man's profession, carry little weight; it is possible that a man responsible for θύεα was called Θυέστης<sup>3</sup>, or that a smith rejoiced in the name of Χαλκεύς<sup>4</sup>, but these identifications carry no more weight than they would if their professions were reversed. It must be a very long time since any high proportion of the Englishmen called *Smith* were engaged in metal-work.

The etymological and the contextual methods should therefore advance hand in hand, wherever possible. But in this imperfect world such cooperation cannot always be guaranteed. Take for example the word *a-pu-do-si*. Contextual analysis comes to a premature halt with the observation that it can stand alone and in isolation<sup>5</sup>, or it can introduce an amount or quantity, either of one or a number of objects<sup>6</sup>. We might perhaps guess that it was a term of accountancy, appropriate to taxation records; it is more doubtful if we

<sup>1</sup> Jn320.11, 389.9, 415.7, 431.7, 20, etc.

<sup>2</sup> PY Tn996.3, 4: KN K 740. 1, 2.


<sup>3</sup> PY Un267.2; L.R. Palmer, *Achaean and Indo-Europeans*, Oxford, 1955, p. 4.

<sup>4</sup> *Ka-ke-u* PY Jn750.8; *Documents*, p. 419.

<sup>5</sup> PY Wr01, a sealing with ideogram No. 152 (OXHIDE) on the reverse.

<sup>6</sup> E.g. KN Fh349: *ru-ki-to a-pu-do-si* OIL 53; PY Ma123.

could legitimately conclude from its use on the Pylos *Ma* tablets that it was opposed to *o*, and that since *o* is an abbreviation of *o-pe-ro* meaning 'deficit', *a-pu-do-si* therefore meant 'payment' or 'contribution'. It is possible to construct such an argument from hindsight; without any inkling of the Greek word involved I doubt whether a satisfactory contextual deduction of the meaning could have been achieved. But as soon as we apply the test of Greek parallels, ἀπόδοσις springs to the mind, and any doubts about the validity of the equation are set at rest by the observation that ἀπό is normal in Arcadian and Cypriot for Ionic and Doric ἀπό. Again the etymological method has proved its worth, though it is to be noted that only contextual analysis can determine which of the possible meanings of the Greek word is actually appropriate.

Let us now examine a rather more difficult problem. In PY Ta641.2 we have *qe-to*  3. Since all the other vessels on this tablet have their names written syllabically, *qe-to* must be the name of the vessel shown in the pictogram. It recurs, again in a list of vessels at MY Ue611.4, another list of vessels and the like, but this time without pictograms: *qe-to* 2. The preceding entry is *qe-ti-ja* 10. This leads us to the probability that *qe-to* represents a Greek word in -ος (plural -οι and dual -ω both spelt -o), with a diminutive in -ιον. The contextual evidence tells us only that it is the name of a vessel having approximately the outline shown by the pictogram; it is important to note that there is no indication of scale, so we do not know whether to look for a small vase or a large storage-jar. We can proceed only by way of etymology. We need to find an appropriate Greek word, beginning with (σ)τε/η-, (σ)θε/η-, δε/η-, such that the dental here represents an original labio-velar, and if the vowel is η this is original ē and not derived from ā. In view of such words as σβέννυμι (< \*zg<sup>w</sup>es-) the search might be widened to σβ-, but even so no suitable Greek word emerges from our scouring of the vocabulary.

I believe it was E. L. Bennett who, in ignorance of the severity of the phonological difficulties, first put forward the idea that *qe-to* might represent πιθος<sup>1</sup>. \*k<sup>w</sup>idh- could of course only produce πιθ-, if the word were generalised in the Greek dialects from Aeolic, and this there is no reason to suppose; but we could sidestep this objection by positing an original \*g<sup>w</sup>idh- which (on the analogy of θφις) might produce \*φιθ-, whence regularly πιθ- by Grassmann's law<sup>2</sup>.

Reference to the etymological dictionaries<sup>3</sup>, however, gives us no reason to suppose an original initial labio-velar. Latin *fidelia* could, it is true, be derived from \*g<sup>w</sup>hidh- as well as \*bhidh-, but Icelandic *bida* admits of no choice; the initial element must be labial. Either therefore πιθος is not from \*g<sup>w</sup>hidh- or it does not belong to the same family as *bida*. But the only reason for positing an initial labio-velar is our desire to connect the word with *qe-to*, which has the added complication of *e* where the Greek word has ι. It is true that a very small number of Mycenaean words show a confusion

<sup>1</sup> Letter to M. Ventris 1/12/53.

<sup>2</sup> Contra: A.J. Beattie, *J.H.S.* 76 (1956) p. 12: "Certainly we must reject on phonological grounds any connection with πιθος".

<sup>3</sup> Boisacq, s.v.

of *e* and *i*, and that one of these is the name of a vessel (*di-pa* = δέπας). But the analysis of the examples shows that this is infrequent and may well be restricted to loan-words of unknown origin<sup>1</sup>. It is therefore possible to connect *qe-to* with πίθος on the theory that it is a loan-word in Greek from a source having an original \**g<sup>h</sup>h-*, and the etymological connexion with *bida* is abandoned. This may be too high a price to pay for an identification, especially since the diminutive \*πίθιον is not found in later Greek<sup>2</sup>, and the shape of the vessel is not encouraging.

Then let us consider another case, that where the contextual method gives an unambiguous answer, but the most subtle etymological rearrangements will not permit equation with a later Greek word. We find the word *a-ja-me-no* applied to chariots and furniture and associated with *e-re-pa-te* = ἐρέφαντι in a way which makes it certain that it means something like 'decorated'<sup>3</sup>; the meaning 'inlaid' is probable and accepted by most writers. The termination *-me-no* clearly represents a medio-passive participle in -μενος, but all attempts at identifying the root of the verb have failed. There is no Greek verb of suitable meaning. It is tempting in these cases to invoke the help of comparative etymology, and to look for a suitable root in another Indo-European language, which might have yielded \*αἶα(ι)μενος in an early Greek dialect, though the word became obsolete before the period of our alphabetic texts. This method was well expressed by Professor L. R. Palmer:

"Our technique will be simply to play Indo-European themes across this defective instrument to see whether it responds intelligibly in an Arcado-Cyprian idiom."<sup>4</sup>

The perils of this method have long been known and appreciated; I may quote Professor J. Friedrich, writing on Hrozný's work on Hittite:

"Die Verfolgung solcher Gleichklänge ohne sachliche Begründung schliesst nun die grosse Gefahr in sich, auch einmal einem falschen Gleichklang sein Ohr zu leihen."<sup>5</sup>

It is important to differentiate between the etymological method applied to Hittite, an unknown Indo-European language, and its restricted application to the interpretation of Mycenaean words by the historical Greek vocabulary. No one, except the few fundamental critics, doubts that Mycenaean is a dialect of the known Greek language; how closely related it is to historical Greek may be legitimately disputed; but the resemblances in phonology, morphology, syntax and vocabulary are such that Mycenaean can only be separated from the historical dialects at the expense of re-defining the Greek language<sup>6</sup>.

We shall therefore approach with the greatest caution the attempts which have been made to interpret *a-ja-me-no* by comparative means. The comparison with Hieroglyphic Hittite and Luvian *aiami-s* 'made' first proposed by

<sup>1</sup> D.A. Hester, *Minos* VI (1958), pp. 24–36.

<sup>2</sup> Except as a name for the plant colt's-foot; whether this presupposes its use as the name of a vessel is a moot point.

<sup>3</sup> "Geschmückt": A. Furumark, *Eranos* 52 (1954) p. 57; cf. P. Chantraine, *Minos* IV (1956), p. 56.

<sup>4</sup> *Achaean and Indo-Europeans*, p. 4.

<sup>5</sup> *Entzifferung verschollener Schriften und Sprachen*, Berlin 1954, p. 63.

<sup>6</sup> Cf. E. Risch, *Etudes mycéniennes*, Paris 1956, p. 167.

Georgiev and Meriggi<sup>1</sup>, is suitable in form, but too vague in semantic connexion to support the theory of a common origin. We must be content to regard *a-ja-me-no* as etymologically obscure, and if we had been in any doubt about its meaning we should have learnt nothing from this comparison.

The similar attempt to interpret etymologically the word *o-pi-i-ja-pi*, an article of chariot equipment frequently mentioned on the Knossos *Sd* tablets, is equally unsafe; a statement I record the more confidently as the author of the suggestion that the second member of the compound might be identified in Vedic *īśā*, Hittite *hiššaš*, both meaning 'the pole of a chariot'<sup>2</sup>. Here the contextual method leads us no further than the fact that this is an article of harness or the like, usually made of horn, but occasionally of bronze. Etymology contributes the information that it is a compound of *\*opi* and an element which is either an *a*-stem or a consonant stem modified by a *-φι* suffix (like *a-di-ri-ja-pi* = *\*ἀνδρίαφι*). In all such cases only the contextual method can give reliable results; the rest is speculative, if not without interest.

To sum up, we may feel confident that the interpretation of Mycenaean words rests upon two solid foundations, the contextual deduction of their meaning and their phonetic resemblance to historical Greek, due allowance being made for the sound-changes characteristic of the latter. Neither of these alone is sufficient to provide an unshakeable foundation, and any interpretation which is built merely upon one of these is open to attack; the combination of the two yields unassailable strength. It is obvious that each method produces results of widely varying degrees of reliability: the contextual method may produce nothing or a mere classification; the etymological method may yield a bewildering variety of choices in the Greek vocabulary or none. But it is these two elements which have to be weighed every time a new interpretation is proposed. The use of comparative material from outside Greek is always suspect, though in particular cases it may supply a tempting etymology; this should not be used to determine meaning, since, apart from the danger of accidental assonance, semantic change may have distorted the comparison. We shall therefore continue, for example, to equate *qa-si-re-u* with βασιλεύς, until such time as it can be shown contextually that the meaning of *qa-si-re-u* is so far removed from that of βασιλεύς that such a semantic change between the 13<sup>th</sup> and the 7<sup>th</sup> centuries is out of the question<sup>3</sup>. The etymological method, in this restricted sense, and tested at every point by contextual deductions, is still a mainstay of Mycenaean studies.

<sup>1</sup> *Etat actuel*, Sofia 1954, p. 72; *Minos* III (1955), p. 81.

<sup>2</sup> *Documents*, p. 365.

<sup>3</sup> cf. L.R. Palmer, *Gnomon* 29 (1957), p. 565.