

## MINOAN INSCRIPTIONS ON LIBATION VESSELS

### INTRODUCTION

Although none of the extant hypotheses concerning the language of Linear A has won general acceptance, it cannot be denied that the decades that have followed the decipherment of Linear B have brought about considerable progress in the field. The scholars who approached the Minoan script with the phonetic values established for its Mycenaean counterpart have produced an impressive list of words (presumably, proper names and the names of commodities) which are actually identical with words encountered in Linear B texts, especially in those of the Knossos tablets<sup>1</sup>. The significance of this achievement is hard to overestimate. Indeed, if the name *Kukadaro*, which appears in a Knossos tablet in a context leaving no doubt that this is a proper name, emerges as *Kukudara* in a similar Linear A context, and if the same is true of a considerable number of other words, it is evident that this can hardly be due to the casual repetition of identical clusters of signs<sup>2</sup>. It is not surprising, then, that those scholars who tried to study the language of Linear A proceeding from the phonetic values of Linear B have brought about highly significant results. Thus, in his «Mycénien QAQARO / minoen QAQARU» Michel Lejeune threw light on two features in Minoan word-building —reduplication and the

\* I am greatly indebted to Alexander Uchitel for his expert advice, especially on Hieroglyphic Luwian.

<sup>1</sup> See in particular G. Pugliese Carratelli, «La decifrazione dei testi micenei», *Annuario della Scuola Archeologica Italiana di Atene* 14-16, 1952-1954; P. Meriggi, *Primi Elementi di Minoico A*, Salamanca 1956; A. Furumark, *Linear A und die altkretische Sprache*, Berlin 1956; V. Georgiev, «Les deux langues des inscriptions crétoises en linéaire A», *Linguistique balkanique* 7, 1963, pp. 1-104; G. P. Goold and M. Pope, *The Cretan Linear A Script*, Cape Town 1966; G. Nagy, «Greek-like Elements in Linear A», *GRBS* 4, 1963, pp. 181-211.

<sup>2</sup> *Kukadaro* Uf 836; *kukudara* HT 117 a7. Cf. also such Minoan/Mycenaean correspondences as *paito/paito*, *kumina/kumina*, *dideru/didero*, *qaqaru/qaqaro*, *aranare/aranaro*, etc. For a representative list see Nagy (n. 1), pp. 186-91.

abundance of *u*-stems. Above all, however, Lejeune's list of the Minoan-Mycenaean doublets, *akutu/akoto*, *dideru/didero*, *karu/karo*, *maru/maro*, *qaqaru/qaqaro*, showing as it does that the Linear A *u*-endings are answered by the *o*-endings in parallel Linear B words, provided valuable evidence in favour of the view that the signs of Linear B must also hold good for the Linear A syllabary<sup>3</sup>.

Some significant alternations within the Minoan script itself seem to point in the same direction. Thus, in HT 95 we find two identical lists of words which, interpreted in the phonetic values of Linear B, would read *dame*, *minute*, *saru*, *kunisu*, *dideru*, *qeryau*. The same list, divided however into two parts, is also found in an additional Hagia Triada tablet, HT 86 ab. The only difference between the two lists is that the *qeryau* of HT 95 is represented in HT 86 as *qaryawa*. The identity of the contexts to which both words belong leaves no doubt that these are in fact two variant spellings of one and the same word<sup>4</sup>. Not only the *qe/qa* and *u/wa*, but also the *a/ja* doublet, which is firmly attested for Minoan, can easily be accounted for in terms of phonetic alternations. It goes without saying that such alternations can only be possible if the Linear A / Linear B graphic equivalents have closely similar phonetic values.

Comparison of the two Aegean scripts leads to the same conclusion on a more general scale. To begin with, it is now generally recognized that the overwhelming majority of signs used in Linear A script have graphic equivalents in the Linear B syllabary<sup>5</sup>. This is not to say, however, that the two scripts operate with the same number of signs. A simple count of Linear A signs as placed within the new AB series in the *GORILA* edition shows that they cover only sixty four of the eighty nine signs in Bennett's Linear B list. Taking into account the signs that are used in Linear A only (*GORILA*'s A-series) increases the total by no more than a few items, because these are mainly the commodity signs which do not form part of Linear A words<sup>6</sup>. That is to say, while almost every Linear

<sup>3</sup> See M. Lejeune, *Mémoires de philologie mycénienne* II, Rome 1972, pp. 203-209.

<sup>4</sup> Cf. A. Karetsou, L. Godart, J.-P. Olivier, «Inscriptions en linéaire A du sanctuaire de sommet minoen du mont Iouktas», *Kadmos* 24, 1985, p. 128 and n. 58.

<sup>5</sup> This was one of the reasons for the new numeration of Linear A signs proposed by L. Godart and J.-P. Olivier in *Recueil des inscriptions en linéaire A* (= *GORILA*) V, Paris 1985.

<sup>6</sup> Of the signs of the A-series, only A 301 is definitely a syllabic sign, although this may also be true of A 302 and A 303.

A sign can be provided with an equivalent in Linear B script, this principle does not apply in the opposite direction. The undeniable fact is that the Minoan script possessed a considerably smaller number of signs than its Mycenaean counterpart<sup>7</sup>.

In terms of phonetic values, the Linear B signs that, according to *GORILA*, are not represented in Linear A constitute the following list: *so* (B 12), *do* (B 14), *mo* (B 15), *a<sub>2</sub>* (B 25), *qo* (B 32), *ra<sub>3</sub>* (*rai*) (B 33), *jo* (B 36), *wo* (B 42), *ai* (B 43), *nwa* (B 48), *no* (B 52), *pte* (B 62), *ri<sub>2</sub>?* (B 65), *two* (B 66a), *ro<sub>2</sub>* (B 68), *dwe* (B 71), *pe* (B 72), *we* (B 75), *dwo?* (B 83)<sup>8</sup>. The Linear B syllables missing in the Linear A syllabary clearly fall into three categories: (a) complex syllables (*a<sub>2</sub>*, *rai*, *ai*, *nwa*, *pte*, *ri<sub>2</sub>?*, *two*, *ro<sub>2</sub>*, *dwe*, *dwo*), (b) syllables of the *o*-series (*so do, mo, qo, jo, wo, no, two, ro<sub>2</sub>, dwo*, and probably also *zo*)<sup>9</sup>, and (c) syllables which do not belong in either of the two former categories (*pe* and *we* in *GORILA*). Clearly, only the latter category can be thought of as due to the hazards of representation: the absence of the complex syllables is naturally explained as indicative of an earlier stage in the development of the script, whereas the systematic underrepresentation of the *o*-series obviously calls for phonological explanation<sup>10</sup>. In other words, the

<sup>7</sup> It would be a fallacy, then, to seek for Linear A equivalents to every single sign in the Linear B syllabary: however ingenious scholars' attempts may be, they will never contrive to bridge the gap of more than twenty signs which separates the two scripts. This would apply first of all to the practice, superseded in the *GORILA* edition, of splitting a single Linear A sign in such a way that it would stand for two signs in the Linear B syllabary. But attempts to discern two signs in Linear A no. 28 (L 100 in traditional numeration), one of which would stand for the Linear B *i* and the other for the Linear B *no*, have proved unconvincing, and the same is true of the new no. 53 (L 72 and L 94 in traditional numeration), into which the values of the Linear B signs for *ri* and *we* have been read by various scholars.

<sup>8</sup> We should also add to this list the Linear B signs 18, 19, 35, 63, 64, 71, 83, 84, 88 and 89, whose phonetic value is unknown, see E. L. Bennett, *The Pylos Tablets*, Princeton 1955, p. 201.

<sup>9</sup> The sign identified in *GORILA* as equivalent to Linear B n. 20 (*zo*) is a hapax in the Linear A script.

<sup>10</sup> The extremely poor representation of the *o*-series is indeed the most characteristic feature of Minoan vocalism as reflected in the Linear A syllabary. The signs for *so, do, mo, qo, jo, wo, no* are entirely missing, the sign for *zo* is hardly relevant (see n. 9), and the equivalents of Linear B signs for *o, to* and *po* are relatively rare. In view of this, it becomes highly questionable whether *ro* and *ko*, two frequently encountered Linear A signs, should be taken as belonging to the *o*-series, and the fact is that some scholars actually treat all the extant *o*-signs as part of the *u*-series.

discrepancy between the two scripts is anything but fortuitous, which can only be explained if we assume that the graphic equivalents in the two are also phonetically equivalent<sup>11</sup>.

Still, approaching Minoan words with the phonetic values of Linear B have led to hypotheses as mutually exclusive as the Greek hypothesis of V. Georgiev, the Semitic hypothesis of C. Gordon, and the Luwian hypothesis of L. R. Palmer, to mention only the more influential. None of them, however, has been generally accepted as the conclusive solution of the Linear A problem. At this point, it is appropriate to ask what are the conditions that interpretation of an unknown language must meet. Clearly, the simple indicating of outward resemblances with words in other languages cannot be such a condition. Only when it is possible to show that the language of Linear A cannot be associated with language X because the phonological and morphological regularities it displays are alien to language X, and that it can be brought together with language Y because these regularities are the same in the language of Linear A as in the language Y, only then shall we be in the position of resorting to etymology without risking involvement in unfounded speculations. Thus, whatever the resemblances between Minoan and Greek words, the poor representation of *o* in Minoan, though it goes well with both the Anatolian and the Semitic hypothesis, actually excludes the possibility that the language of Linear A is a form of Greek<sup>12</sup>. Similarly, the ensuing conclusion that Minoan vocalism was based on *a*, *u*, *i* and *e*, though it creates difficulties neither for the Semitic hypothesis nor for the Anatolian hypothesis in general, does not substantiate Palmer's view that the language of Linear A should be identified as Luwian, for Luwian stands apart from other Anatolian languages in that it has no phoneme *e*<sup>13</sup>. The test of morphology is even more important. Thus, the Luwian reading proposed by Palmer for KN Za 10, an inscription on a libation table from Knossos, is untenable for the simple

<sup>11</sup> Note also that, as was pointed out by J. Chadwick, «an important argument in favour of assigning closely similar, if not identical, values to Linear A and Linear B syllabic signs can be drawn from the Cypriot syllabary», see M. Ventris and J. Chadwick, *Documents in Mycenaean Greek*<sup>2</sup>, Cambridge 1973, p. 387.

<sup>12</sup> Actually, this was the immediate conclusion of Lejeune's study (n. 3).

<sup>13</sup> Such Linear A doublets as *qeryau/qaryawa* (see above) and *diredina* (HT 98, 2-3) / *.]diradina* (PH 1 al) seem to point in the direction of an *e/a* alternation; this, however, does not alter the fact that Minoan possessed the phoneme *e*.

reason that it includes identification of Minoan *ija* with Lycian *ije*, the dative case of the 3rd person enclitic pronoun, thus ignoring the fact that the dative case of this pronoun in Luwian would be *-tu*<sup>14</sup>. In other words, only the interpretation that can propose a consistent morphological picture of the language of Linear A would be a satisfactory one. The question is, of course, whether the material at our disposal is sufficient to make such an interpretation possible.

The extant Linear A sources fall into two clearly distinct groups. The larger part of our corpus is formed by the tablets of the Hagia Triada archives: this group of texts is generally seen as belonging to Late Minoan Ib (presumably, from 1500 B.C.). What remains consists of scattered tablets from other archives, occasional inscriptions and graffiti mainly of single words, a few longer inscriptions on clay vessels and metal objects and, finally, inscriptions on libation vessels of stone, from different Cretan sites. Of these, only the inscriptions on libation vessels constitute a coherent group of texts: they have been traced back to the beginning of Middle Minoan IIIb (presumably, 1600 B.C.) or even an earlier period<sup>15</sup>. Although the Hagia Triada tablets provide sufficient material to permit a systematic study of Minoan phonetics, word-building, and especially onomastics, the fact that these texts are probably no more than lists of names and commodities participating in various transactions does not allow us to take them as sentences bearing an articulate message. It is not here, then, that the conclusive evidence as to the identity of the language of Linear A can be found. As distinct from this, the inscriptions on libation vessels, few as they are, form the only group of Linear A texts that allows for application of the combinatorial method, in that at least some of them give us the opportunity of analysing complete syntactic units. If, as a result of such analysis, we are able to isolate the morphological elements that underlie the relations between the words in Minoan sentence, and if the picture formed by these elements is a consistent one, this

<sup>14</sup> L. Palmer, *Mycenaeans and Minoans*<sup>2</sup>, London 1965, pp. 333-38.

<sup>15</sup> See S. Dow in *CAH*<sup>3</sup> II (1), p. 593, Ventris and Chadwick (n. 11), p. 28, cf. Karetsou, Godart, Olivier (n. 4), pp. 108-109. In quoting the Hagia Triada texts I follow the standard numeration, accepted in all editions; in quoting the other inscriptions I follow the system used in *GORILA* IV (Paris 1982); the inscriptions on libation vessels correspond to the Za series («Inscriptions sur vases de pierre») in this edition. I also adopt the new numeration of the Linear A signs as introduced in *GORILA* V.

can give us solid evidence as to the identity of the language of Linear A.

### 1. TYPES OF MINOAN SENTENCE

*The introductory formula.* The majority of the inscriptions on libation vessels whose beginnings have been preserved open with a group of signs reading *atai-301-waja* (KO Za 1, PK Za 12, TL Za 1, IO Za 2, IO Za 3, IO Za 7, SY Za 1, SY Za 2, SY Za 3, and probably also IO Za 4). Considering that both the *a/ja* and the *u/wa* alternation is firmly attested for Minoan, we can safely take the *jatai-301-uja*, which introduces AP Za 1, as a phonetic or graphic variant of the more widespread *atai-301-waja*, and it seems that a similar explanation can also hold good for the unique *atai-301-wae* at the beginning of PK Za 11<sup>16</sup>. That the introductory formula can have not only phonetic alternations can be seen from such variants as ]*anati-301-waja* at IO Za 8, *tanai-301-utinu* at IO Za 6 and *tanai-301-ti* at PS Za 2<sup>17</sup>. The full range of the alternations can thus be represented as follows:

*atai-301-waja* (10 times)  
*jatai-301-uja* (once)  
*atai-301-wae* (once)  
 ]*anati-301-waja* (once)  
*tanai-301-utinu* (once)<sup>18</sup>  
*tanai-301-ti* (once).

One can see that while both the beginning and the end of the introductory formula may vary, its middle, represented by the sequence *-i-301-*, is stable. This makes it unlikely that the introductory formula can stand for a single word: rather, we should speak of two words or two semantic units of which one ends and the other begins at the middle of the formula. The question is, of course, where we should draw the boundaries of each of the units in question.

<sup>16</sup> Cf. Karetsou, Godart, Olivier (n. 4) 128, P. Metaxa-Muhly, «Linear A Inscriptions from the Sanctuary of Hermes and Aphrodite at Kato Syme», *Kadmos* 23, 1984, p. 126.

<sup>17</sup> Although in their edition of PS Za 2 in *GORILA IV* Godart and Olivier took the last sign of the *tanai-301-ti* sequence as uncertain, in *GORILA V* the sign in question appears (correctly, in my opinion) as one of the graphic variants of AB 37 (= *ti*).

<sup>18</sup> Cf., however, *-utinu* at IO Za 2 (cf. n. 21) and ]*tinu* at IO ZA 11.

The fact that in the case of ]*anati*- the *i* of the invariable sequence *-i-301-* is part of the syllabic sign for *ti* seems to suggest that *i* should belong with the first rather than with the second part of the formula. This would make the sequences *atai-*, *tanai-*, ]*anati*- end in the same way, which may be due to the fact that *i* stands for an element in Minoan nominal or verbal flexion. In view of this, we can try to divide the introductory formula in such a way that its first part would end with *-i* (*atai-*, *tanai-*, ]*anati-*), whereas its second part would begin with A 301 (*-301-waja*, *-301-utinu*, *-301-ti*).

At the same time, although all the variants of the second part of the formula begin with A 301 and have such elements as *u/wa* and *ti* in common, it is in fact impossible to interpret them as different forms of the same word: the element *u/wa*, common to *-301-waja* and *-301-utinu*, is absent from *-301-ti*, the element *ti*, common to *-301-utinu* and *-301-ti*, is absent from *-301-waja*, whereas *-ja* and *-nu* are unique for their respective sequences only. On the other hand, the identical beginning and the common elements *u/wa* and *ti* make it unlikely that the variants of the second part of the introductory formula should stand for three different words. This can only lead to the conclusion that the sequences *-301-waja*, *-301-utinu* and *-301-ti*, rather than standing for a single semantic unit, or a «word», present conglomerates of such units, that is, that they are series of independent elements which can be arranged in a number of ways. As far as I can see, the only linguistic phenomenon that can account for such series of independent elements is the combination of particles.

Although combinations of enclitic particles are attested in many ancient languages, both Indo-European and otherwise, the chain of particles and enclitic pronouns at the beginning of the sentence is characteristic of Anatolian languages of the IE family only. This point has been emphatically stressed by A. Kammenhuber: «Die heth.-luw. Sprachen erhalten ihr charakteristisches Gepräge durch die Ketten von satzeinleitenden Partikeln, die jeweils an das erste Wort des Satzes gehängt werden» (Kammenhuber's italics)<sup>19</sup>. This

<sup>19</sup> A. Kammenhuber, «Hethitisch, Palaisch, Luwisch und Hieroglyphenluwisch» in B. Spuler (ed.), *Alt kleinasiatische Sprachen*, Leiden/Köln 1969, p. 252. As Kammenhuber pointed out (*ibidem*, pp. 252-53), this feature distinguishes the Anatolian from the other languages employing enclitic particles, both Indo-European (such as Greek and Aryan) and non-Indo-European (Hittic, Hurrian, etc.). Cf. also O. Carruba, *Die satzeinleitenden Partikeln in den indogermanischen Sprachen Anatoliens*, Rome 1969, pp. 107-108.

is not to say, of course, that this fact alone can amount to identification of the Minoan sequences of independent elements with the Anatolian chain of particles. We can argue in favour of such identification only in the case that the elements A 301, *u/wa*, *ti*, *nu* and *ja* can be shown to correspond to Anatolian particles in both form and sequence.

Now, although the phonetic value of A 301 is unknown, it is clear that both *u/wa* and *ti* can easily be accounted for in terms of the particle of the quoted speech *-wa-*, attested for all Anatolian languages, and of the reflexive pronoun *-ti-*, attested for Palaic, Luwian, and Lycian. Before forming our opinion as to the elements *-nu* and *-ja*, which ostensibly have no direct correspondences in Anatolian languages, we have to check whether the Minoan sequence is compatible with the fixed order of elements in the Anatolian chain of particles.

The order of the particles that can introduce an Anatolian sentence is as follows: (i) the conjunction «and» or «but»; (ii) the particle of the quoted speech *-wa-*; (iii) the reflexive pronoun; (iv) the personal pronouns; (v) particles indicating position. Except for the conjunction «and/but», any one of the elements can be omitted so as to conform to the message of the sentence; in that case, the particles actually present would follow the same order as described above. Let us now compare this scheme with the order of the elements in the Minoan sentence:

|       | (i) | (ii)        | (iii)       | (iv)        | (v) |
|-------|-----|-------------|-------------|-------------|-----|
| A 301 |     | <i>-u-</i>  | <i>-ti-</i> | <i>-nu-</i> | —   |
| A 301 |     | <i>-wa-</i> | —           | <i>-ja-</i> | —   |
| A 301 |     | —           | <i>-ti-</i> | —           | —   |

We can see now that the Minoan *u/wa* and *ti* do occupy the places of the Anatolian particle *-wa-* and the Anatolian reflexive pronoun, respectively. As to the elements *-nu* and *-ja*, both occupy the place at which in an Anatolian language one would expect to find a personal pronoun. In view of this, there seems reason to associate the Minoan *-nu* with the accusative case of the 3rd person enclitic pronoun, whose distinctive feature in the Anatolian languages is the sonant *n* (see the Table), whereas *-ja* can be associated with the dative case of this pronoun as attested in



Lycian *(i)je*<sup>20</sup>. Another identification that can follow from the above comparison is that of A 301, which invariably opens the Minoan sequence, with the conjunction «and» or «but», always found at the beginning of the Anatolian chain of particles.

As a result, Minoan A 301 can be compared to Hittite *-a/-ja*, «and», and *-ma*, «but», and to Luwian *-ha*, «and», and *-pa*, «but», all of them enclitic conjunctions attached to the first word in the sentence. Functionally, it can also be compared to the orthotonic Hittite *nu-* and Luwian *-a*, «and», in that they also open the chain of particles. Consequently, we can produce the following table of correspondences:

| MINOAN               | HITTITE                    | LUWIAN                      |
|----------------------|----------------------------|-----------------------------|
| -301- <i>u-ti-nu</i> | -and/-but- <i>wa-za-an</i> | -and/but- <i>wa-ti-(a)n</i> |
| -301- <i>wa-ja</i>   | -and/-but- <i>wa-ssi</i>   | -and/-but- <i>wa-tu/du</i>  |
| -301- <i>ti</i>      | -and/-but- <i>za</i>       | -and/-but- <i>ti</i> .      |

Note the close similarity of Minoan *-u-ti-nu* with Luwian *-wa-ti-(a)n*<sup>21</sup>.

To sum up, the second part of the introductory formula lends itself to analysis in terms of a combination of particles which displays such significant correspondences with the Anatolian chain as attachment to the first word in the sentence, some materially identical or similar elements, and sequence<sup>22</sup>. With this in view,

<sup>20</sup> Actually, *-ija* is a Luwian dative ending, of which the dative of the Lycian 3rd person pronoun is only a particular case (only Luwian and Lycian have this dative ending in addition to the common Anatolian *-i*). The full spelling *ija* is attested at KN Za 10, CR(?)Zf 1, and PR Za 1.

<sup>21</sup> Analysis of IO Za 2, a long and well preserved inscription on a libation table from Iouktas, allows to divide the inscription in question into three parts: the opening unit *atai-301-wa-ja jadikitu jasarā[me*, introduced by the familiar sequence *atai-301-wa-ja*, the formula *unakana]si ipinama sirute* which, together with its variants, is attested twelve times in Minoan (see below), and the concluding unit *tanarate-u-ti-nu ida-].* The fact that the last sequence also contains a chain of particles goes well with its identification as a self-contained syntactic unit which, owing to the presence of the formula in the middle of the inscription, has been isolated on independent grounds. This specific type of particle chain is paralleled in the Hieroglyphic Luwian *wa-ti-an* and other chains beginning with the non-enclitic *wa-*, see P. Meriggi, *Hieroglyphisch-Hethitisches Glossar*, Wiesbaden 1962, s.v. *wa* III.

<sup>22</sup> ZA Zb 3, incised on a pithos from Epáno Zakros, seems to be our only certain example of an introductory particle placed at the beginning of the second sentence, a practice which is widely attested in Anatolian languages (although the same may also be true of PS Za 2 and KN Zf 1). At the same time, there is no doubt that the regular Minoan

let us turn again to the first part of the introductory formula, that is, to the groups of signs which read *atai-*, *tanai-*, *ḵanati*. It was suggested above that the ending *-i*, common to all the variants, may represent an element in nominal or verbal flexion. The only Anatolian ending that would fit these forms seems to be the common Anatolian dative/locative case ending<sup>23</sup>. In view of this, the introductory formula as a whole can be tentatively rendered as follows<sup>24</sup>:

|                          |                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------|
| <i>atai-301-wa-ja</i>    | «To/in <i>ata-</i> , and/but-thus-to/in it (also: to him, here)...»                    |
| <i>ḵanati-301-wa-ja</i>  | «To/in ... <i>anati-</i> , and/but-thus-to/in it (also: to him, here)... <sup>25</sup> |
| <i>tanai-301-u-ti-nu</i> | «To/in <i>tana-</i> , and/but-thus-for himself-it/him...»                              |
| <i>tanai-301-ti</i>      | «To/in <i>tana-</i> , and/but-for himself...».                                         |

If *atai-*, *tanai-*, *ḵanati-* is the dative, these words would designate either the libation vessels on which the inscriptions were

usage consists in placing the introductory particle after the first word of the first sentence. This practice is paralleled in Lycian, see n. 84.

<sup>23</sup> The only Anatolian verbal ending that would fit these forms is the Hittite 3rd person singular present of the *-bi* conjugation. However, since this conjugation is characteristic of Hittite only, the identification of *-i* as a verbal ending would not be consistent with our interpretation of Minoan *-ti-* as comparable to the reflexive pronoun *-ti-*, which is not present in Hittite (see the Table).

<sup>24</sup> According to Meriggi (n. 21, s.vv. *wa*, *a-wa-*, *-ba-wa*), the Hieroglyphic Luwian particle *-wa-* does not necessarily have the force of the particle of quoted speech, cf. also Kammenhuber (n. 19) 172. Since the same seems to be true of the Minoan *-wa-/-u-*, I conventionally translate it as «thus» (Meriggi's translation is «dann», «ähnlich»).

<sup>25</sup> The dative ending *-ti* is known to us from Hittite and Luwian. According to J. Friedrich, *Hethitisches Elementarbuch*<sup>3</sup> I, Heidelberg 1974, p. 59, this is a Luwian replica of the Hurrian directive in *-ta*, but I agree with Kammenhuber (n. 19), p. 271, that it would be wiser to approach the dative in *-ti* from the general standpoint of Luwian. However, rather than connecting it with the Luwian ablative in *-ati*, I would think of the final *t* of the stem, being dropped in the nominative for reasons of spelling or orthography and emerging before *-i* in the dative, cf. Greek and Latin flexion of the type γέρον (nom.) / γέροντι (dat.) or *nox* (nom.) / *nocti* (dat.). Significantly, there seems reason to suppose that this kind of the dative is also attested in the Hagia Triada corpus. Consider, indeed, HT 104, consisting of a list of three names, each of which ends in *-ti*: *dakuseneti*, *idutiti*, *padasuti*; since two of the names on the list are attested elsewhere without this ending (*dakusene* HT 103, 2-3, 4-5; *padasu* HT 20, 1), we can suggest that HT 104 deals with three recipients of commodities (the latter are detailed after each name) and reads «For Dakusene... For Iduti... For Padasu...».

made or the deities to whom they were dedicated; if it is the locative, these words would rather designate the places where the libation vessels were consecrated. The same is true of the element *-ja*, associated by us with the dative case of the 3rd person enclitic pronoun<sup>26</sup>.

That the second part of Minoan introductory formula can be uncontradictorily analysed as a chain of particles of the Anatolian type justifies further approach to the language of Linear A along the same lines. The procedure that will be followed is, therefore, an empirical one: if at each subsequent stage of the analysis the Anatolian approach proves efficient, this will give us sufficient reason to take the next step in the same direction, and so on; if, on the other hand, at a certain stage of the analysis the Anatolian approach appears inapplicable, this will be taken as disqualifying the starting point itself. Although the introductory formula as such is attested on fifteen Minoan inscriptions, only seven of them —KO Za 1, PK Za 11, PK Za 12, TL Za 1, IO Za 2, IO Za 6, SY Za 2— allow one to read the text further. Naturally, these are the inscriptions on which our subsequent analysis of the Minoan sentence will mainly be concentrated.

*The jasarame-sentences.* The word *jasarame* is attested fifteen times in Minoan<sup>27</sup>; however, in only a few cases are the sentences containing this word complete. Let us consider IO Za 6, incised on an alabaster cup, and TL Za 1, incised on the so-called «ladle»:

IO Za 6 *tanai-301-u-ti-nu inataizu disika jasarame*  
 TL Za 1 *atai-301-wa-ja osuqare jasarame unaka-*[

At TL Za 1 the word *jasarame* is followed by the group of signs which evokes the formula *unakanasi ipinama sirute*, independently attested on other Minoan inscriptions (cf. n. 21). This seems to imply that the sequence *atai- ... jasarame* at TL Za 1 is com-

<sup>26</sup> It is worth noting that Friedrich's transcription of the quotation in the language of Kftjw (presumably, Crete) in an Egyptian papyrus of the 18th dynasty (circa 1580-1350 B.C.) makes it begin with the words *santi kapupi waja*, whereas Bossert's rendering of the same text, *santi kupapa waja* etc., although differing in some details, also has the element *waja* which follows the first two words in the sentence, see J. Friedrich, *Kleinasiatische Sprachdenkmäler*, Berlin 1932, p. 146 and n. 1.

<sup>27</sup> KN Za 10, PK Za 4, PK Za 8, PK Za 14, PR Za 1, PS Za 2, TL Za 1, IO Za 2, IO Za 6, IO Za 9, IO Zb 10, IO Za 12, PL Zf 1, and probably also PK Za 11 and PK Za 12.

plete. Since the same is obviously true of IO Za 6, we have good reason for regarding *atai- ... jasarame* of TL Za 1 and *tanai- ... jasarame* of IO Za 6 as self-contained sentences. This gives us the opportunity to attempt an analysis of the formal relationships between their components.

Following the tentative assumption that the language of Minoan inscriptions on libation vessels is a form of Anatolian, we can suggest that the predicate of IO Za 6 is the word *disika*, whose last syllable *-ka* evokes the Palaic, Luwian and Lycian 1st person preterite verbal ending. This would imply that of the two remaining words, *inataizu* and *jasarame*, one can be the subject and the other the direct object of the verb. Provided that *disika* is indeed the 1st person singular, it is reasonable to suppose that its subject would be a proper name. Since *jasarame* is attested on many inscriptions at different Cretan sites, it can hardly count as a proper name or, consequently, as the subject of the sentence in question. As distinct from this, *inataizu* is unique, which, together with its initial position, makes it a plausible candidate for this role. This seems to imply that *jasarame* should be taken as the direct object of the verb *disika* —provided, again, that the latter is indeed a verbal form. I believe that this can be supported by the evidence of other sentences containing the word *jasarame*.

The phrase *tanai-301-u-ti-nu inataizu disika jasarame* can be compared to ]-*tanuati jasaramana dawa-[-duwato ija*] at KN Za 10, *tanai-301-ti [ ]jati jasarame* at PS Za 2 and ]*ta witejamu ugeti jasarame tanunikina* etc. at PL Zf 1. All these phrases contain a form which, like the *disika* of IO Za 6, can be seen as possessing an Anatolian verbal ending, this time the Palaic, Luwian and Lycian 3rd person singular present ending *-ti*, and in all of them the word possessing this ending is, again like IO Za 6, followed by the word *jasarame* (*jasaramana* at Knossos). This usage, which can hardly be due to mere chance, seems to support our interpretation of *disika*, whose ending *-ka* is not attested on other inscriptions, as an Anatolian verbal form. Now, whatever the meaning of the verb *disi-* may be, the fact that the *jasarame* of IO Za 6 cannot be taken as the sentence's subject strongly suggests that this is also true of the other sentences in which the supposed verbal form is combined with the word *jasarame*. Accordingly, we can suggest the following distribution:

|          | INTRODUCTORY<br>FORMULA  | SUBJECT         | PREDICATE       | D. OBJECT                         |
|----------|--------------------------|-----------------|-----------------|-----------------------------------|
| IO Za 6  | <i>tanai-301-u-ti-nu</i> | <i>inataiḡu</i> | <i>disika</i>   | <i>jasasaramē</i>                 |
| KN Za 10 | —                        | — ]             | <i>tanuḡti</i>  | <i>jasasaramana</i> <sup>28</sup> |
| PS Za 2  | <i>tanai-301-ti</i>      | —               | [ ] <i>yati</i> | <i>jasasaramē</i>                 |
| PL Zf 1  | ]ta                      | <i>witejamu</i> | <i>uḡeti</i>    | <i>jasasaramē</i> <sup>29</sup> . |

Note that in IO Za 6 the introductory formula ends with *-nu*, which was associated by us with the accusative case of the 3rd person enclitic pronoun. If this association is correct, this should mean that IO Za 6 has two accusatives, *-nu* and *jasasaramē*. If the accusative of the enclitic pronoun is used proleptically, that is, in anticipation of another accusative in the body of the sentence<sup>30</sup>, we shall have «I, Inataiḡu, have *disi-* it, *jasasaramē*, for myself (*ti*)». If the accusative of the enclitic pronoun is taken separately from the word *jasasaramē*, this would mean that the verb *disika* governs the double accusative: «I, Inataiḡu, have *disi-* it (as) *jasasaramē* for myself (*ti*)». On either reading, the direct object, *jasasaramē*, can only be taken as a word for the votive object, that is, the libation vessel bearing the inscription. The fact that IO Za 6 is incised on a cup and not on a libation table, which is of course a libation vessel par excellence, seems to make «I, Inataiḡu, have *disi-* it (the cup) as *jasasaramē* (a libation vessel) for myself» a preferable reading. With this conclusion in mind, let us turn to TL Za 1.

<sup>28</sup> The inscription goes on to read *dawa[.]duwaḡo ija[.]*. As Palmer (n. 14), pp. 333-38 suggested, the first extant word of this inscription has an exact parallel in the Hieroglyphic Luwian verb *tanu(wa)-*, «to erect»; the form *tanuḡti* would thus be a correct Luwian 3rd person singular of the present tense of this verb. It is true that identification of the 3rd syllable of this word as AB 08 (= *a*) involves interpreting it as a unique graphic variant of the sign in question; yet, its resemblance to AB 23 (= *mu*), suggested for this syllable in *GORILA*, is even more remote. The alternation *jasasaramē* / *jasasaramana* is paralleled in *ipinama* / *ipinamina*, on which see below; it is unclear whether this alternation is due to nominal flexion (acc. sgl. / acc. pl.?). Cf. n. 58.

<sup>29</sup> The continuation is *tanunikina ninuni [.]i[.]*. PL Zf 1 is the only case attested thus far of the word *a* / *jasasaramē* not written on a libation vessel: it is incised on a silver pin which, in addition, is the only object bearing this word that was not found on the territory of a sanctuary, see Karetsou, Godart, Olivier (n. 4), p. 132.

<sup>30</sup> On the enclitic pronoun used proleptically in Luwian and Lycian see E. Laroche, *Dictionnaire de la langue louvite*, Paris 1959, p. 145. Cf. also Ph. H. J. Houwink ten Cate, *The Luwian Population Groups of Lycia and Cilicia Aspera during the Hellenistic Period*, Leiden 1965, p. 6 and n. 3.

If *atai-301-wa-ja osuqare jasasaramē* is Anatolian, it is hard to avoid the conclusion that this sentence has no verb<sup>31</sup>. This would mean that the first sentence of TL Za 1 is in fact a nominal sentence, reading «To/in *ata- osuqare is jasasaramē*». Now, like IO Za 6, TL Za 1 is not incised on a libation table, which may indicate that, again like IO Za 6, this inscription defines a specific vessel (in this case, the «ladle») in terms of libation vessel as such<sup>32</sup>. Note that this will go well with the fact that in PK Za 4 and IO Zb 10, the two cases in which the word *jasasaramē* is apparently the only word written on a given object, neither of the objects involved is a libation vessel par excellence: PK Za 4, like IO Za 6, is incised on a cup, whereas IO Zb 10 is written on a clay vessel of a rather unusual form<sup>33</sup>. Considering that the same types of vessels could be used by the Minoans for both sacred and profane purposes<sup>34</sup>, it seems reasonable to suggest that the simple act of marking a given object with the word denoting libation vessel could have been enough to set it apart as dedicated to sacred purposes only. If this makes sense, then IO Za 6 and TL Za 1 can be tentatively rendered as follows:

IO Za 6  
*tanaī-301-u-ti-nu inataiṣu disika jasasaramē*  
 Transposition:  
 To/in *tana-*, and/  
 but-thus-for himself-  
 it (acc.)                      Inataiṣu      I have *disi- jasasaramē*

<sup>31</sup> Unless we are prepared to see *osuqare* as comparable to Hittite preterite 3rd person plural; this, however, would not be compatible with the identification of the Minoan preterite 1st person singular ending as *-ka* and probably also not with the identification of the Minoan present 3rd person singular ending as *-ti* (Hittite has *-un/-hun* and *-zi/-i*, respectively, cf. n. 75 below). The same follows from comparison with the Hittite reflexive pronoun, see n. 23.

<sup>32</sup> The plausibility of such an interpretation increases if we compare Minoan *osuqare* to Hittite *isqarub* (or *isgarub*), which denotes a libation vessel of some specific kind, see J. Friedrich, *Hethitisches Wörterbuch* (Heidelberg 1952) s.v. *isgarub* «Opfergefäß» and E. H. Sturtevant, *A Comparative Grammar of the Hittite Language*, Yale Univ. Press 1951, p. 82: «Hittite possesses also one stem in *h* of unknown etymology, *is-qa-ru-uh*, dat. *is-qa-ru-bi*, a kind of vessel». As was argued above, there is reason to treat the Minoan *o*-syllables as representing the phoneme *u*; accordingly, the word in question should probably be read as *usuqare* (cf. n. 10).

<sup>33</sup> For the description of the latter, see Karetsou, Godart, Olivier (n. 4), p. 99.

<sup>34</sup> See M. P. Nilsson, *The Minoan-Mycenaean Religion*<sup>2</sup>, Lund 1950, pp. 127, 143-44. W. K. G. Guthrie in *CAH*<sup>3</sup> II (2), p. 859.

Translation:

And/but thus to/in *tana-* I, Inataizū, have *disi-* it for myself  
(as) *jasasaramē*.

TL Za 1

*atai-301-wa-ja osuqare jasasaramē*

Transposition:

To/in *ata-*, and/  
but-thus-to/in it

(him, here) *osuqare jasasaramē*.

Translation:

And/but thus to/in *ata-*, to/in it (him) *osuqare* (ladle?) is  
*jasasaramē*.

Note that the above interpretation of IO Za 6 and TL Za 1 excludes the possibility that *tanai-*, *atai-* and *-ja* designate the votive object itself. Hence, if they are in the dative, they would designate the deities to whom the votive object is dedicated, and if in the locative, they should be taken as designating the place where it is dedicated. Note also that the proposed reading of IO Za 6 and TL Za 1 is not at variance with our interpretation of the second part of the introductory formula as a chain of particles of the Anatolian type. This allows us to turn to the next group of sentences found on Minoan inscriptions on libation vessels.

*The adi/jadi sentences.* Three inscriptions on libation tables, two from Palaikastro and one from Iouktas, continue the introductory formula in the following way:

PK Za 11 *atai-301-wa-e adikitete* [  
PK Za 12 *atai-301-wa-ja adikiṭe*[*te*  
IO Za 2 *atai-301-wa-ja jadikitu jasasara*[*me* etc.

In addition, PK Za 15, also incised on a Palaikastro libation table, has ] *jadikiteteḍuphure*[ in a broken line, and the same may be true of *-janakiteteḍuphure-*, attested on PK Za 8<sup>35</sup>. Considering that the *a/ja* alternation at the beginning of the word is firmly

<sup>35</sup> In an emendation announced in Karetsou, Godart, Olivier (n. 4), the editors of *GORILA* claim that the *na* of PK Za 8 was due the engraver's error, and that the sign in question should be read as *di* so as to fit the cluster *ja-di-ki-te-te*, attested on other Minoan inscriptions; for a similar argument, see P. Meriggi, «Zur Lesung des Minoischen (A)» in E. Grumach (ed.), *Minoica. Festschrift zum 80. Geburtstag von Johannes Sundwall*, Berlin 1958, p. 235 n. 6.

attested for Minoan, we have good reason for seeing in *a/jadikitete* (*jadikitu* at Iouktas) an additional formula characteristic of the Minoan inscriptions.

Although we do not know how the sequence *adikitete* was continued at PK Za 11 and PK Za 12, the fact that the beginning of IO Za 2 as adduced above is followed by the formula *unakanasi ipinama sirute*, which is attested independently on other Minoan inscriptions (see below), makes it certain that *atai-301-wa-ja jadikitu jasarame* is a self-contained sentence. Comparison with *adidakitipaku* at KN Zc 6, on the one hand, and with *-janakitete-* at PK Za 8, on the other, allows to suggest that the sequence *jadikitu* (and, consequently, *a/jadikitete* as well) should be divided into two units, *jadi-* (*adi-*) and *-kitu* (*-kitete* at Palaikastro)<sup>36</sup>. If this division is correct, the plausible candidate for the role of the predicate in IO Za 2 (and, accordingly, in the incomplete PK Za 11 and PK Za 12) would be the word *a/jadi*, which not only possesses the Anatolian 3rd person singular present/future verbal ending, but is actually identical with the 3rd person present/future of the Anatolian verb *a(ja)-*, «to make», cf. Luwian *ati* and Lycian *adi/edi*, «he makes/will make»<sup>37</sup>. Virtually, its subject can be either *jasarame* or *kitu*: both of them, however, recur in more than one inscription<sup>38</sup>, which makes it hard to believe that any of the *adi/jadi* sentences can contain a proper name. It is unlikely, then, that these are the votive sentences proper. An additional problem is that if *a/jadi* is indeed the predicate its position in the sentence is highly unusual: in all other examples treated thus far the predicate followed the subject which, in turn, followed the introductory formula.

It seems that both the emphatic position of *a/jadi* and the absence of a personal name can be satisfactorily accounted for if we take *a/jadi* as standing for the future rather than for the present tense and the sentence as a whole as a conditional clause of the type «If anyone makes any damage», «The one who makes any damage»,

<sup>36</sup> This is also the transcription given to PK Za 11 and PK Za 12 in Brice's edition, see W. C. Brice, *Inscriptions in the Minoan Linear Script of Class A*, Oxford 1961, I 4a, I 5a.

<sup>37</sup> The Cuneiform Luwian *ati*, Hieroglyphic *ā-ia-ti-i* and Lycian *adi* are opposed in this respect to the Hittite *iiazi*. On Hieroglyphic Luwian forms see A. Morpurgo Davies and J. D. Hawkins, «The Late Hieroglyphic Luwian Corpus: some new lexical recognitions», *Hethitica* 8, 1987, pp. 276-79.

<sup>38</sup> I take *kitu* of the Iouktas inscription as a variant of *kitete*, attested four times at Palaikastro; for a similar interpretation, see Karetsou, Godart, Olivier (n. 4), pp. 130-31.



or something to this effect. A good Anatolian parallel for such a usage is supplied by the Lycian formula *me-ij-adi tike tibe zummê*, «but if someone makes here any damage whatsoever»<sup>39</sup>. The grammatical forms normally occurring in such clauses are relative and indefinite pronouns. Now in all IE languages, including the Anatolian, the relative, the indefinite, and the interrogative pronoun tend to be produced from two mutually related stems, *\*kwe-/ \*kwō-* and *\*kwei-/ \*kwi*. The form *ki-* would be a normal development of the latter stem, which is directly attested or safely postulated for a wide range of languages, including Aryan and Slavic languages, Greek, and Lycian<sup>40</sup>. The pronouns that are regularly formed on the stem in question are *\*kwi-s* for the common gender and *\*kwi-t/d* for the neuter, see Hittite and Palaic *kuis*, *kuit*, Avestan *čiš*, *čit*, Latin *quis*, *quid*. These two facts seem to account satisfactorily for the Minoan *kite-* (*kitu*), allowing one to identify it as nom.-acc. sgl. neuter of the pronoun in question. As for the term *kitete*, it seems reasonable to take the second *-te* as a particle turning the relative pronoun into the indefinite: although no direct Anatolian parallels are attested, both the structure of this form and some analogous formations in other IE languages fairly justify such interpretation<sup>41</sup>.

The above interpretation of *kitete/kitu* as nom.-acc. sgl. neuter of the indefinite pronoun prevents us from taking it as the subject of *a/jadi*, and the interpretation of *jasasaramē* as a word for libation vessel likewise precludes taking this word as the subject of *a/jadi*. This seems to leave our sentence (and, by analogy, the other

<sup>39</sup> TL 59, 2-3, cf. also TL 44 c17; 91, 2-3; 95, 2-3. See also the alternative expression *adi mejê kttbâ tisñce* TL 89, 2-3, cf. 90, 4. All Lycian quotations are given in accordance with E. Kalinka, *Tituli Lyciae lingua Lycia conscripti*, Wien 1901.

<sup>40</sup> See Sanskrit *cit*, Avestan *čiš*, *čit*, Slavic *čī-(to)*, Greek τίς, τι Lycian *ti-(ke)*, all of them resulting from *\*k<sup>w</sup>i-* > *\*ki-* (cf. Thessalian τίς), a typically *satəm* development, see A. Meillet, *Introduction à l'étude comparative des langues indo-européennes*<sup>5</sup>, Paris 1953, pp. 93-95, 328; G. Bonfante and I. J. Gelb, «The Position of 'Hieroglyphic Hittite' among the Indo-European languages», *JAOS* 65, 1943, p. 181; M. Lejeune, *Phonétique historique du mycénien et du grec ancien*, Paris 1972, pp. 47-51; H. Pedersen, *Lykisch und Hittitisch*, Copenhagen 1945, pp. 20-21.

<sup>41</sup> Cf. e.g. the reduplication of *-to* in Slavic, which turns the relative *čī-to* into the indefinite *čī-to-to*, or the reduplication of the entire stem in Latin that turns the relative *quid* into the indefinite *quid-quid*. The reduplicated *\*kite-kite* (cf. Lycian *tise tise*) may perhaps have developed into *kite-te* as a result of syncope, but a parallel with the Hittite *kuitta* «whatever», and Lydian *qidad* is also possible.

*adi-kitete* sentences as well) without grammatical subject. A similar situation can be shown to exist in Lycian, which can form its indefinite prohibitive sentences both with and without the indefinite pronoun as grammatical subject, cf. e.g. such typical Lycian constructions as *s]e [ije] n[e hrppi tâ]ti tice cbi hrpije mei tadi tice* etc., «and (one) shall not put anyone else upon them; if (one) puts anyone upon them», with no grammatical subject in either of its two sentences<sup>42</sup>. Applying this model to Minoan *adi-kitete* sentences, we can suggest the following readings:

PK Za 11, PK Za 12

*atai-301-wa-ja*                      *adi*                                      *kitete*

Transposition:

To/in *ata-*, and/but-  
thus-to/in it (to him,  
here)                                      if (one) makes                                      anything...

Translation:

And/but thus if one makes anything to/in *ata-*, to/in it (to him, here)...

IO Za 2

*atai-301-wa-ja*                      *adi*                      *kitu*                      *jasasarame*

Transposition:

To/in *ata-*, and/  
but-thus-to/in it  
(to him, here)                                      if (one) makes                      any                      *jasasarame*

Translation:

And/but thus if one makes any *jasasarame* to/in *ata-*, to/in it (to him, here)...

Note that the above interpretation of the group *a/jadi-kitete* as the conditional clause «if one makes anything to/in...» actually excludes the possibility that *atai-* and *tanai-* could be the datives of divine names. Since, in addition, the interpretation of *jasasarame* as a word for the votive object excludes the possibility that these words can designate the votive objects themselves, we have to conclude that *ata-* and *tana-* refer to the places where these objects were consecrated and that both their case and that of the 3rd person pronoun *-(i)ja* is the locative rather than the dative. Accordingly, the

<sup>42</sup> TL 57, 7-8. Cf. Neumann's translation of *se ije hrppi tadi tike* at TL 110, 2 as «und ihnen wird er nicht jemanden dazulegen», in G. Neumann, «Lykisch» in Spuler (n. 19), p. 394.

inscriptions beginning with these words would read as «And/but thus in *ata-* here if one makes anything / any *jasasaramé*», «And/but thus in *tana-* I, Inataizu, have *disi-* it as *jasasaramé* for myself», and so on. Note also that the present interpretation of Minoan *adi/jadi* sentences still agrees with the assumption that the language of Minoan inscriptions on libation vessels is a form of Anatolian.

*The ida-sentences.* The word *ida* is attested six times on Minoan inscriptions on libation vessels<sup>43</sup>; yet, only two sentences in which this word appears are undoubtedly complete. One of these concludes IO Za 2, a long and well preserved inscription on a libation table from Iouktas, the beginning of which was discussed above in the context of the *adi/jadi* sentences.

IO Za 2

*atai-301-wa-ja jadi-kitu jasasara[me unakana]si ipinama sirute tanarate-u-ti-nu ida-[*

The sequence *unakana]si ipinama sirute*, found in the middle of this inscription, is, as we have already mentioned, a self-contained formula. This makes it reasonably certain that not only *atai- ... jasasara[me*, which precedes this formula, but also *tanara- ... ida-*, which follows it, are independent sentences. This inference goes well with the fact that the concluding part of the inscription contains the sequence *-u-ti-nu*, formerly identified as a chain of particles introducing a new sentence (cf. n. 21). Considering that this chain lacks the sign A 301, interpreted by us as the conjunction «and» or «but», we can assume that its function is here taken over by *-te-*, which can be compared to Hittite *ta*, «and», Hieroglyphic Luwian *-ta-(?)*, Lycian *-de*, «and», Lydian *-t-*, «and»<sup>44</sup>. As a result, the concluding sentence of IO Za 2 can be recorded as *tanara te u-ti-nu ida*. Since the ending *-da* is identical to the Anatolian preterite 3rd person singular ending *-ta/-da*, we may suggest that *ida* is a verbal form and, accordingly, the predicate. This would make the opening *tanara* into the subject, whereas *-nu*, supposedly the accusative of the 3rd person enclitic pronoun, would stand, as in IO Za 6, for the direct object of this verb.

If IO Za 2 were our only sentence containing the word *ida*, it could be read as a votive sentence proper, whose predicate *ida*

<sup>43</sup> KO Za 1, PK Za 17, PK Za 18, IO Za 2, IO Za 11, SY Za 1.

<sup>44</sup> On this series of particles see R. Gusmani, *Lydisches Wörterbuch*, Heidelberg 1964, s.v. *-t-*.

would have been comparable to *disika* of IO Za 6. However, comparison with KO Za 1, another complete sentence containing this word, shows the difficulty of this interpretation:

KO Za 1

*atai-301-wa-ja turusa dutire ida/a unakanasi ipinama sirute.*

Again, the presence of the formula *unakanasi ipinama sirute* allows us to isolate *atai- ... ida-a* as a self-contained sentence. Following the suggestion that *ida-a* is the preterite 3rd person singular, we can take it as the predicate of this sentence as well. Virtually, the presence of two additional words, *turusa* and *dutire*, can mean that one of them is the subject and the other the direct object of the verb *ida-a*. This, however, would disagree with the usual word order of the Minoan votive sentence, since in all the sentences of this kind dealt with thus far the direct object followed the predicate rather than the contrary. In addition, if KO Za 1 were a votive sentence, we should rather expect that the direct object of the verb would designate the votive object and hence be encountered more than once on inscriptions of this kind. We saw above that *jasasarame* is just such a word. However, not only are both *turusa* and *dutire* unique, but significantly, *ida* is never found combined with *jasasarame* in the same sentence<sup>45</sup>. Since there is no other indication (such as the enclitic pronoun *-nu*) that *atai-301-wa-ja turusa dutire ida-a* includes the accusative, it seems wiser to take *turusa dutire* as the subject (probably, a proper name) and to treat the *ida* of KO Za 1 as an intransitive verb.

It follows, then, that if *ida* is indeed a verbal form, it can act as both transitive and intransitive verb, which would hardly be the case if the sentences containing this verb were votive sentences proper. At the same time, the fact that an *ida*-sentence can be combined, as in IO Za 2, with the conditional clause *a/jadi-kitete*, but is never found combined with the votive sentences containing the word *jasasarame*, can imply that the *ida*-sentences and the votive *jasasarame*-sentences are mutually exclusive, that is, that these two types of sentences, both of which include a proper name, bear messages of a similar kind. All this seems to indicate that Minoan *ida* possesses some special meaning which cannot be assessed

<sup>45</sup> See Karetsou, Godart, Olivier (n. 4), p. 134.

on combinatorial grounds only. Below, I shall try to assess the meaning of this word on the basis of external criteria; meanwhile, we can record the following intermediate interpretation:

|                |                                                             |                      |                     |              |
|----------------|-------------------------------------------------------------|----------------------|---------------------|--------------|
| IO Za 2        | <i>tanara</i>                                               | <i>te</i>            | <i>u-ti-nu</i>      | <i>ida</i>   |
| Transposition: | Tanara                                                      | and                  | thus-for himself-it | <i>i-ed</i>  |
| Translation:   |                                                             |                      |                     | (acc.)       |
|                | Ant thus Tanara <i>i-ed</i> it for himself.                 |                      |                     |              |
| KO Za 1        | <i>atai-301-wa-ja</i>                                       | <i>turusa dutire</i> |                     | <i>ida-a</i> |
| Transposition: | In <i>ata-</i> , and/but-thus-here                          | Turusa Dutire        | <i>i-ed</i>         |              |
| Translation:   | And/but thus Turusa Dutire <i>i-ed</i> in <i>ata-</i> here. |                      |                     |              |

Note that, as with other types of sentences so far discussed, the *ida*-sentences can be consistently accounted for in terms of Anatolian languages.

The formula *unakanasi ipinama sirute*. Although the formula *unakanasi ipinama sirute* and its variants are attested twelve times<sup>46</sup>, in only three cases can we see how it behaves in a large-scale context. All three are inscriptions whose other parts have already been discussed in this chapter:

|         |                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------|
| TL Za 1 | <i>atai-301-wa-ja osuqare jasasarama unakanasi[ ipi]n-<br/>ma siru[te</i>                           |
| KO Za 1 | <i>atai-301-wa-ja turusa dutire ida-a unakanasi ipinama<br/>sirute</i>                              |
| IO Za 2 | <i>atai-301-wa-ja jadi-kitu jasasara[me unakana]si ipina-<br/>ma sirute tanara te u-ti-nu ida-[</i> |

We can see that the formula *unakanasi ipinama sirute* can follow any type of Minoan sentence dealt with thus far: the votive

<sup>46</sup> AP Za 2, KO Za 1, PK Za 8, PK Za 10, PK Za 11, PK Za 12, TL Za 1, VRY Za 1, IO Za 2, IO Za 9, SY Za 2, SY Za 3. For the full account of this formula see Karetsou, Godart, Olivier (n. 4), p. 133. Note that the present reading of the formula in question is based on *GORILA*'s new identification of L 57 as graphically equivalent to Linear B no. 41 (= *si*). However, both G. Pugliese Carratelli (n. 1) and P. Meriggi (n. 35), pp. 242, 245 identified this sign with Linear B no. 24, whose phonetical value is *ne*. When rendered in accordance with their identification, the formula in question would read *unakanane ipinama nerute*.

*jasasaram*-sentence (TL Za 1), the *ida*-sentence (KO Za 1), the conditional clause *a/jadi-kitete* (IO Za 2). Now, if our rendering of the latter as «if one makes any *jasasaram* in *ata* here» is correct, then, the formula *unakanasi ipinama sirute* can only be its apodosis. We can suggest, then, that it relates to the punishment the intruder should suffer, the fine he should pay, or something to this effect<sup>47</sup>. At the same time, the fact that in TL Za 1, KO Za 1 and also in other cases the formula in question is used independently indicates that *unakanasi ipinama sirute* is a self-contained sentence<sup>48</sup>.

Of the three terms of the formula, *unakanasi* is the only one that can be used independently<sup>49</sup>. The most important evidence for the independent use of this word is provided by an inscription on a libation table from Symi:

SY Za 2    *atai-301-wa-ja jasumature*  
                   *unakanasi*                                    A 302 (a commodity sign)  
                   (vacat)  
                   *aja*<sup>50</sup>.

<sup>47</sup> Cf. such Lycian and Lydian parallels as e.g. TL 88, 4-6 «if someone... puts anyone herein, the confederate Lycian treasurer (?) and Tarhu(nt) and the assembled (confederate) Gods shall punish him» (trans. by Houwink ten Cate) or LW 23, 18-22 «nun der, welcher... einen *bidê-*, irgendwelchen, macht, nun dem... Artemis wird... -en (antun, erfüllen?)» (trans. by A. Heubeck). Lydian quotations are given after Gusmani (LW) (n. 44).

<sup>48</sup> Each of the three words constituting the formula can vary: *unakanasi* becomes *unarukanati* at PK Za 11 and *unaruka* ] *jasi* at PK Za 12, *ipinama* is twice presented as *ipinamina* (PK Za 10, cf. PK Za 11), and *sirute* is probably *sirudu* at PK Za 11, Note that on the traditional reading of L 57 (see n. 46) the first word of the formula can be taken as the infinitive (*unakanane*, cf. Hittite infinitive in *-anna* and Lycian infinitives in *-ane/-âne*). Comparison with the unique *unarukanati* at PK Za 11 would then allow to suggest that what is dealt with is probably a complex stem *una-(ru)-kana-*, of which *unakanane* is the infinitive and *unarukanati* the present/future 3rd person singular (cf. Lycian stem *ala-(de)-ba-* which underlies such forms as the infinitive *aladehkkane*, the present/future 3rd person singular *alahadi*, and the dative of the verbal noun, *aladehali*). The only situation that allows for the infinitive and the 3rd person present/future to alternate is when both are used as the imperative; this would go well with the fact that the formula in question can both follow the conditional clause of the type «if one makes anything» and be used independently. On the Anatolian present/future used as the imperative («Heische-futur») see Friedrich (n. 25), p. 136, Neumann (n. 42), p. 396.

<sup>49</sup> Cf. Karetsou, Godart, Olivier (n. 4), p. 133.

<sup>50</sup> The editors of *GORILA* read the last syllable of the first line as AB 122, i.e. as the olive-ideogram. However, I agree with Metaxa-Muhly (n. 16) 130 that the sign in question comes closer to AB 27 (= *re*) as it appears on KO Za 1 (the last syllable of

However the word *jasumature* should be interpreted, the fact that *unakanasi*, the first word of the formula under discussion, not only appears independently in this inscription but also seems to be followed by a commodity sign (see n. 50) allows one to infer that this sign replaces the rest of the formula or at least the word *ipinama/ipinamina*<sup>51</sup>. This may throw light on other inscriptions as, for example, KN Za 19, an inscription on a libation table whose second line consists of the ideogram «talent» (AB 118) or «two» and the sequence *-mina* (= *ipinamina?*), or the second line of PK Za 9, which maybe includes a numeral<sup>52</sup>. The most reasonable way to explain these facts is to suggest that the inscriptions in question detail the fine one has to pay for the damage or misuse inflicted on the votive object or the payment to be made by one who intends to use it for cult purposes<sup>53</sup>, and that the formula *unakanasi ipinama sirute* expresses the same meaning in more general terms. If we conventionally render it as «to pay *ipinama* in such-and-such manner», we can suggest the following readings:

- TL Za 1: «And/but in *ata-* here *osugare* (ladle?) is *jasasaramē*. To pay *ipinama* in such-and-such manner».
- KO Za 1: «And/but thus in *ata-* here Turusa Dutire *i-ed*. To pay *ipinama* in such-and-such manner».
- IO Za 2: «And/but thus in *ata-* here if one makes any *jasasaramē*, to pay *ipinama* in such-and-such manner. And thus Tanara *i-ed* it for himself».
- SY Za 2: «And/but thus in *ata-* here *jasumature* (a proper name?). To pay this commodity».

the word *dutire*, recognized as AB 27 in *GORILA*). At the same time, comparison of the graphic variants of the relevant signs shows that Metaxa-Muhly's contention that the last sign of the second line is a «well-known but poorly executed version of AB 28 (= *i*)» (*ibidem*) can hardly be correct: the sign in question should be read, together with *GORILA*, as the commodity sign A 302 (cf. A 302 as represented at HT 116 b2 and KN Zb 36; reproduced in *GORILA* V, p. xlvi).

<sup>51</sup> Cf. Metaxa-Muhly (n. 16), p. 131.

<sup>52</sup> Cf. Brice's (n. 36) reading of PK Za 9 (= I 6 of Brice's edition).

<sup>53</sup> As in some Lycian inscriptions, see e.g. *TL* 6, 3 «in case this tomb is opened: 5 *ada*», *TL* 16, 2 «in case this tomb is opened for [the purpose of] a burial: 2½ *ada*», *TL* 36, 3-5 «and one has imposed for him 10½ *ada* [to be paid] to the *miñti* in case this tomb is opened and for the lower apartment 3½ *ada*», *TL* 39, 7-8 «and they have imposed for them *tesi* [to be paid] to the *miñti* in case this tomb is opened: 3 *ada*» (trans. by Houwink ten Cate). Cf. also the Greek text ἐὰν δέ τις θάψῃ ὀφιλέτω (or: ὁ θάψας ὀφειλήσει) Κυανειτῶν τῷ δήμῳ (δραχμὰς) κτλ., twice repeated on *TL* 73 (11.3 and 7), or *TL* 65, 52-53.

## 2. EXTERNAL APPROACH TO MINOAN VOTIVE INSCRIPTIONS

To the exclusion of the verb *adi*, I have taken no lexical element as indispensable for the interpretation of the Linear A inscriptions on libation vessels. The reason is obvious: as distinct from the purely morphological features, whose identification is mainly based on relations between words within the sentence, identification of the lexical elements is more easily subjected to arbitrary judgements, superficial analogies, and other biases. This is not to say, however, that it would be an incorrect procedure to propose etymological explanations to the words whose meanings have been assessed on purely combinatorial grounds. It seems, indeed, that we are now in a position to propose such explanations for *a/jasasarame*, *a/jata* and *ida*, the three key-words of the inscriptions on libation vessels.

We saw that the word *jasasarame* (*jasasaramana* at KN Za 10) invariably denotes the libation vessel and that its meaning is not restricted to a vessel of some specific kind. At the same time, the fact that IO Za 2 either simply forbids or at least stipulates the conditions of placing another *jasasarame* «in *ata* here» indicates that the presence of a *jasasarame* puts certain limitations on the introduction of another vessel of this kind into the place where one *jasasarame* is already found. That the vessel marked with the word *jasasarame* possessed some special status is also indicated by the first sentence of TL Za 1, reading «in *ata* here the ladle (?) is *jasasarame*». Now a libation vessel whose presence excludes that of any other object of the same kind can only be the altar, and the fact is that the objects designated by the word *a/jasasarame* are nothing other than portable altars for bloodless offerings<sup>54</sup>.

According to the spelling rules of Linear B, the word *a/jasasarame* could be read as *a/jassarame* or even *a/jassrme*. It is not out of the question that the *a/ja* alternation at the beginning of the word suggests an unstable (prothetic?) vowel<sup>55</sup>. This, together with the

<sup>54</sup> See Nilsson (n. 34), pp. 117-22, Guthrie (n. 34), pp. 858-61, W. Burkert, *Greek Religion* (trans. by J. Raffan), Oxford 1985, pp. 35-36. For the full list of the types of Minoan libation vessels see N. Platon, «Inscribed libation vessel from a Minoan house at Prassà, Heraklion», in Grumach (n. 35), pp. 313-17.

<sup>55</sup> Cf. Karetsou, Godart, Olivier (n. 4), p. 131 n. 62: «Le 08/57[*a/ja*] «prothétique» ne devrait pas faire difficulté (?): on le rencontre, tant en linéaire A qu'en linéaire B alternant avec zéro...».



fact that in late Anatolian the vowel *a* at the beginning of the word can often be shown to have been dropped<sup>56</sup>, allows us to compare the Minoan word with Lydian *sirma-* (*syrma-*) and with Lycian *brîmmâ* and *blîmî*.

The Lydian *sirma-* appears in an inscription incised on a limestone block, found at the temple of Artemis in Sardis. The beginning of the inscription is as follows: «This *syrmas* is dedicated to Qldân and Artimuλ... who(ever) makes any damage to this *sirma-*», etc. (*LW* 23, 1-2, cf. 12, 7). The usual translation of *sirma-* as «temple», established on the basis of this passage, does not seem well-founded to me. On all its other occurrences, the expression «This object (stele, stone, etc.)», which almost invariably opens Lydian inscriptions, relates to the very object on which the inscription was made, and I see no reason why this should not be so in the case of the limestone block in question; considering the object's form and the place where it was found, it could well be an altar.

The Lycian *brîmmâ* (note that the inherited *s* became *b* in Lycian) acts on its two occurrences as the direct object of the verb *a(ja)-*, «to make», see *TL* 149, 13 *sei agâ ijase brîmmâ ebê* «and I have also made here this *brîmmâ*» and *TL* 84, 3-4 *se d-adê brîmmâ ijase atlahi* «and he has also made here a *brîmmâ* for himself»; in this connection, one may think of the altar placed in the tomb for cult purposes. The Lycian *blîmî* is found in combination with the verb *tuwe-*, «to place», «to offer», in the formula *tibei nipe blîmî tuwetu blîmî tuweti tice*, which occurs in *TL* 88, 4 and *TL* 93, 3 (cf. also *TL* 29, 5, 9, 11). Comparison with the Lycian alternation *atli/atrâ*, the dative and the accusative cases of the word «himself», shows that *blîmî/brîmmâ* can also be taken as two different forms of the same word<sup>57</sup>. Accordingly, *TL* 88, 4 should read «nor may one

<sup>56</sup> Cf. e.g. such Lycian transliterations of Greek personal names as *tênegure* for Ἀθηναγώρας or *pulenjda-* for Ἀπολλωνίδης.

<sup>57</sup> It was shown long ago that the Lycian language is far from being consistent in rendering the *r/l* distinction: we can see this from such doublets as Lycian *Pinale* / Greek Πινάρα or from the alternations *atrâ* (acc.) / *atli* (dat.), see Kalinka (n. 39), p. 4, cf. Neumann (n. 42), p. 377, Houwink ten Cate (n. 30), pp. 89-90. Note that in the declension *\*atra- / \*atla- l* invariably emerges in the dative (*atli*, *passim*; *etli* *TL* 117, 3) and *r* in the accusative case (*atrâ* *TL* 44 b43; *atru* *TL* 25 a4). We can see now that this peculiar declension is also paralleled by the declension *blîmî/brîmmâ*. It can be suggested, therefore, that at least in some cases the Lycian *r/l* alternation depended on the «harmony of sounds» within the word: *r* emerged when the word ended in *a* or *u* (Πινάρα, *atrâ*, *atru*, *brîmmâ*), and *l* emerged when the word ended in *i* or *e* (*Pinale*,

place offerings on the *blm̄m-* here; if one places some offerings on the *blm̄m-...*», a translation that certainly allows for taking *brm̄m-/blm̄m-* as meaning «altar»<sup>58</sup>.

We saw that the word *ata-* (*jata-* at AP Za 1) invariably denotes the place where *jasasaramē* is found. Yet, the same arguments that have led to the conclusion that *jasasaramē* means «altar» do not allow us to take *ata-* as relating to the sanctuary as a whole. Indeed, the fact that one can forbid placing another altar «in *ata-* here» strongly suggests that the latter should rather be taken as standing for a private *temenos* dedicated within the precincts of the great sanctuary. Etymologically, I would associate this word with the Lydian *ētam-* (translated now as «Bestimmung», but E. Grumach's rendering of this word as *temenos* seems also to fit the context)<sup>59</sup> and maybe also with the Lycian *-tâ*, the second component of *ntatâ*, «depository» (Pedersen), a Lycian word for the chamber-tomb; as Pedersen showed, it derives from IE *\*dhe-*, «to put»<sup>60</sup>. As in the case of *jasasaramē*, the comparison with Lycian is only possible if we assume that the initial *a/ja* represents a prothetic vowel. It seems that this can be supported by the fact that the word *tana-*, which takes the place of the more usual *ata-* in PS Za 2 and IO Za 6, can well be accounted for as an extension in *n* of the root *\*dhe-* and thus as etymologically related to *a/jata-*. If Heubeck's analysis of Hieroglyphic Luwian *tanu-*, «to erect», as an extension in *n* of *ta-*, «to put», is valid<sup>61</sup>, we may suggest that, as distinct from *a/jata-*, which seems to relate to a piece of sacred land (a precinct?), *tana-* should be taken as relating to a built sanctuary (a chamber? a chapel?).

*atli, blm̄mi*). Cf. also the compound word *blm̄mipijata* of the Letoo trilingual inscription (l. 25), combining the dative *blm̄mi-* with the verbal noun *-pijata*, «gift», cf. Laroche in *Fouilles de Xanthos* 6, Paris 1979, p. 107 and n. 32.

<sup>58</sup> As was mentioned above (n. 28), there is a possibility that the word *jasasaramana*, which supplants the usual *jasasaramē* at KN ZA 10, stands for the neuter acc. pl. This suggestion would gain in probability if we take into account that the word *dawa*, which immediately follows the *jasasaramana*, exactly corresponds to the IE word for «two», cf. Ved. *d(u)vā*, Avest. *d(u)va*, Slav. *dŭva*, Gr. *δύο*, Hitt. *dā-*, etc. If, together with Palmer (n. 28), we take the first extant word *tanuati* as meaning «he erects», it would be tempting to give the text *[tanuati jasasaramana dawa zaduwato ija]*, attested on this inscription, the following transposition: «...erects-altars-two-zaduwato (a proper name?)-here...».

<sup>59</sup> For the discussion see A. Heubeck, *Lydiaka*, Erlangen 1959, pp. 65-68.

<sup>60</sup> Pedersen (n. 40), pp. 30-31.

<sup>61</sup> See Heubeck (n. 59), pp. 52-56 and n. 28 above.

Finally, we saw that the word *ida* can act as both a transitive and an intransitive verb and that it is the latter usage that makes this verb peculiar in the context of the votive inscriptions. I believe that we can conjecture the verb's meaning if we compare it with Hieroglyphic Luwian *ijasa-*, Lycian *ijetê* and Lydian *\*iit*. The verb *ijasa-*, «to buy», has been identified by J. D. Hawkins and A. Morpurgo Davies, in whose opinion this is a *-sa-* iterative of an *ija-* root<sup>62</sup>. The meaning of the Lycian preterite 3rd person singular *ijetê* is made reasonably clear from its occurrence at *TL* 48. Here we have two inscriptions on the same tomb, characterized by E. Kalinka as follows: «Duos hos titulos non unius eiusdemque esse temporis luce clarius est, atque prior antiquior esse videtur»<sup>63</sup>. The inscriptions are completely identical in structure, but while the first has the usual formula *ebênnê kupâ mê ti prînnawatê* + personal name («So-and-so has built this tomb for himself»), the second replaces the verb *prînnawatê* with *ijetê*: *ebênnê kupâ mê ti ijetê* + another personal name. «So-and-so has purchased this tomb for himself» seems to be the only translation that can make sense in this context<sup>64</sup>.

Like *ida* of IO Za 2, Lycian *ijetê* functions as a transitive verb. Compare, however, Lydian *\*iit*, a verb isolated by Lydian scholars as a result of analysis of the form *iitλ* into *iit-*, the 3rd person present/future verbal form, and *-λ*, the dative case of the 3rd person enclitic pronoun<sup>65</sup>. The phrases in which this combination occurs, *mlimnś ist śfarλ iitλ* and *iitλ mlimnś ist śfarλ* (*LW* 22, 5 and 10) are completely identical to each other. Considering that such a combination of an enclitic with a verb is extremely rare in Lydian<sup>66</sup>, we can suggest that the verb *\*iit* usually governs the dative case in this language. Now A. Heubeck explicitly compares this verb with the Lycian *\*ijeti*, «er eignet (sich) an», «erwirbt», dealt with above<sup>67</sup>.

<sup>62</sup> J. D. Hawkins and A. Morpurgo Davies, «Buying and Selling in Hieroglyphic Luwian» in *Serta Indogermanica. Festschrift für Günter Neumann*, Innsbruck 1982, pp. 91-105.

<sup>63</sup> Kalinka (n. 39) *ad locum*. Cf. also *TL* 78, 2, 4; 40 c6.

<sup>64</sup> Cf. P. Meriggi, «Der Indogermanismus des Lykischen» in H. Arntz (ed.), *Germanen und Indogermanen. Festschrift für Hermann Hirt II*, Heidelberg 1936, p. 239. That Lycian tombs were being sold, bought and rented follows not only from the Lycian and Greek quotations adduced in n. 53, but also from the clause *ἐὰν δέ τις ἀδικήσῃ ἢ ἀγοράσῃ τὸ μνήμα*, which is part of the Greek text of *TL* 56.

<sup>65</sup> See Gusmani (n. 44), *s.v.* *-i-*; cf. also Heubeck (n. 59) 76.

<sup>66</sup> Gusmani (n. 44), *s.v.* *-λ(-)*.

<sup>67</sup> Heubeck (n. 59), p. 76.

Since *m̄limn̄s* is a proper name and since *ist šfar̄l* means «in Sardis», we can suggest that the Lydian phrase means «M. is an owner in Sardis»<sup>68</sup>. This evidence seems to suggest interpretation of the Minoan *atai- ... ida* at KO Za 2 as «he has become a (property)-owner in *ata-* here». Note that the association of the Minoan *ida* with the Anatolian verbal stem «to buy» goes well with the observation, made on combinatorial grounds, that the *ida*-sentences and the votive *jasasarame*-sentences are mutually exclusive (p. 62). The relationship between the two can be compared to that between the building-formula and the buying-formula incised under different circumstances on the same Lycian tomb.

It may be remarked in this connection that the archaeological context of Minoan inscriptions on libation vessels seems to speak in favour of such or a similar interpretation. It is generally agreed that the libation tables, or the tables of offerings, as well as the other kinds of vessels found in Minoan sanctuaries, are in fact altars for bloodless offerings (see n. 54 above). Now any altar, even if it is as small as a ladle, is by definition the focus of a cult. Hence, there is good reason to ask what might be the purpose of placing hundreds of small altars within the precincts of public sanctuaries all of which certainly had central altars of their own<sup>69</sup>. Strangely enough, the problem posed by this presumably unique feature of the Minoan cult has usually passed unnoticed. Yet, it can be safely presumed that each altar presupposes either the cult of a particular god, or a particular worshipper (or body of worshippers)<sup>70</sup>. Now if each Mi-

<sup>68</sup> A similar usage can be observed in the Greek expression τῶν ἐκτημένων ἐν τῇ χώρᾳ, attested on a 2nd century B.C. inscription from Miletus (*SIG* 6<sub>33.73</sub>). Since the latter also combines intransitive use of the verb «to possess» with the dative case bearing the locative meaning, we can suggest that what is dealt with is in fact an «ownership-formula», which demands no object at all. Note that the absolute use of the verb κτάομαι is only attested on two inscriptions of the Hellenistic period, one of which is quoted here; *LSJ s.v.* κτάομαι, translate it as «to be a property-owner».

<sup>69</sup> According to Karetsou, Godart, Olivier (n. 4), p. 102, more than two hundred and fifty objects of this kind have been found on the territory of the sanctuary at Iouktas. No such practice seems to have existed in Greece, unless we assume that the composite clay vessels, found in great numbers at Eleusis, are comparable to Minoan *kernoi* and that the latter, in turn, performed the same function as Minoan tables of offerings. For a discussion see Nilsson (n. 34), pp. 135-43, 449-53, Platon (n. 54), pp. 314, 316-17.

<sup>70</sup> The two situations can coincide when the cult in question is the cult of the dead. As a matter of fact, both the bloodless character of Minoan altars and some significant parallels between the inscriptions on these altars and the inscriptions on Lycian and Lydian

noan altar presupposed a particular god, we must assume that hundreds of minor gods were simultaneously worshipped in one and the same sanctuary, which could hardly be the case. If each Minoan altar presupposed a particular worshipper or body of worshippers (such as the single family), this could well involve the right of private tenure, granted by the sanctuary authorities on certain conditions for the purpose of a private cult<sup>71</sup>. In these circumstances it would only be natural to expect that such owners would sometimes ensure their right of tenure by explicit stipulation - actually, in an inscription asserting their right of ownership. As a matter of fact, we have seen that, rather than with religious matters proper, the so-called Minoan votive inscriptions deal with the protection of the votive objects or with detailing the conditions on which these objects can be used by those who are not their owners. Significantly enough, although inscribed libation vessels occur in both public sanctuaries and private houses and palaces, neither the prohibitive clause *adi-kitete* nor the *ida-sen-* sentences have ever been found on the inscriptions of the latter group<sup>72</sup>. This may mean that the Minoans felt no need for protecting altars placed in private houses in the same way as those within the territory of public sanctuary. At the same time, the fact that the overwhelming majority of Minoan libation vessels have no inscriptions at all shows that the practice of inscribing such vessels was only optional and that they could perform their function whether inscribed or not<sup>73</sup>.

tombs would be much easier to explain in the context of the cult of the dead. Yet, although altars of this kind were also placed in Minoan tombs, see Nilsson (n. 34), pp. 122-24, Guthrie (n. 34), pp. 858-59, 871-72, the sanctuaries where the Minoan altars were located were certainly not cemeteries. Hence, if the Minoan cult was the cult of the dead, this must have been a cult of the dead that involved no tombs, a suggestion that at present poses more problems than it solves.

<sup>71</sup> The evidence of Lycian inscriptions may offer some support for this suggestion. It is true, of course, that the Lycian inscriptions essentially differ from the Minoan ones in that all of them are inscriptions on tombs. However, the Greek text of the great Xanthos stele (TL 44), which was erected in the sacred precinct of the Twelve Gods, unequivocally implies that it was not the only monument of this kind within that sanctuary, cf. D. Asheri, *Fra Ellenismo e Iranismo. Studi sulla società e cultura di Xanthos nella età Achemenide*, Bologna 1983, p. 87. That the same may also be true of other Lycian tombs follows from the formula *êni qlahi ebijehi*, «the Mother of this precinct», which often appears on Lycian sepulchral inscriptions; still, the sacred character of the place did not prevent the Lycians from selling, buying, and renting their tombs, a special body of magistrates, *miñti*, being in charge of all the transactions of this kind.

<sup>72</sup> AP Za 1, AP Za 2, KN Za 10, KN Za 17, KN Za 18, PR Za 1.

<sup>73</sup> Cf. Karetsou, Godart, Olivier (n. 4), pp. 102-104.

Taking *a/jasasarame* as meaning «altar», *a/jata-* and *tana-* as meaning «precinct» and «chamber»(?), respectively, and taking *ida* as meaning «he has become the owner», we can produce the following tentative translations for the Minoan inscriptions dealt with in this article:

- KO Za 1 «And/but thus in the precinct here Turusa Dutire has become the owner. To pay *ipinama* in such-and-such manner».
- PK Za 11 «And/but thus in the precinct here if someone makes anything... he should pay...».
- PK Za 12 «And/but thus in the precinct here if someone makes anything... to pay...».
- PS Za 2 «And/but in the chamber(?)...-s the altar for himself».
- TL Za 1 «And/but thus in the precinct here the ladle is the altar. To pay *ipinama* in such-and-such manner».
- IO Za 2 «And/but thus in the precinct here if someone makes any altar, to pay *ipinama* in such-and-such manner. And thus Tanara owns it (= has become its owner) for himself».
- IO Za 6 «And/but thus in the chamber(?) I, Inataizū, have *disi- it* (*sc.* the cup) for myself as the altar».
- SY Za 2 «And/but thus in the precinct here Jasumature (a proper name?). To pay this commodity...».
- PK Za 4 «Altar».
- IO Zb 10 «Altar».

### 3. THE LANGUAGE OF MINOAN VOTIVE INSCRIPTIONS

In the above interpretation of Minoan inscriptions on libation vessels I used a considerable number of Anatolian morphological elements without attempting, at the same time, to specify the concrete language to which these elements could belong. It goes without saying, however, that no text can be written in an abstract «Indo-European», «Semitic», or «Anatolian» language, and that the specification of the language of the given text to the exclusion of any other possibility as regards its identity is the essential test of the validity of a given interpretation. In what follows, I assemble the features which I see as the *sine qua non* of the above interpretation and correlate them with equivalent features in every Anatolian lan-

guage we are acquainted with. If the picture emerging as a result of this procedure is a consistent one, that is, if the total of Linear A morphological features points in the direction of an attested Anatolian language or is indicative of a coherent idiom still unknown, only then shall we be in a position to formulate our conclusions as to the identity of the language of the Minoan inscriptions.

The features I see as indispensable for the present interpretation are as follows <sup>74</sup>:

(1) *-ti/-di* as the 3rd person present/future verbal ending, see *adi* «he/she makes/will make» (PK Za 11, PK Za 12, PK Za 15, IO Za 2, KN Zc 6), *tanuati* «he/she erects»(?) (KN Za 10), ...*jati* (PS Za 2), *unarukanati* «he/she shall pay»(?) (PK Za 11), *zakisenuti* (CR(?) Zf 1), *uqeti* (PL Zf 1);

(2) *-ka/-ga* as the 1st person singular preterite verbal ending, see *disika* «I have dedicated»(?) (IO Za 6), *deka*(?) (ZA Zb 3);

(3) *-ta/-da* as the 3rd person singular preterite verbal ending, see *ida* «he purchased», «he has become the owner» (*passim*), *pajata*(?) «he gave»(?) (KN Zf 13);

(4) *adi* (or *jadi*) as the 3rd person present/future of the verb *a(ja)-*, «to make», see PK Za 11, PK Za 12, PK Za 15, IO Za 2, KN Zc 6;

(5) *-i* as the dative/locative case ending, see *atai-* «in the precinct» (*passim*), *tanai-* «in the chamber»(?) (PS Za 2, IO Za 6), *janati-* (IO Za 8; cf. n. 25);

(6) *kite-* (or *kitu*) as nom.-acc. neuter of the relative and as the stem of the indefinite pronoun, see *kitu* (IO Za 2), *kite-te* (PK Za 8, PK Za 11, PK Za 12, PK Za 15);

(7) *(i)ja* as the dative/locative case of the 3rd person enclitic pronoun, see *-301-wa-ja* (*passim*), *ija* KN Za 10, CR(?) Zf 1, PR Za 1(?).

(8) *-nu* as the accusative case of the 3rd person enclitic pronoun, see *-301-u-ti-nu* IO Za 6, *u-ti-nu* IO Za 2, *ti-nu* IO Za 11;

(9) *-ti-* as the reflexive pronoun, see *-301-ti* PS Za 2, *-301-u-ti-nu* IO Za 6, *u-ti-nu* IO Za 2, *ti-nu* IO Za 11;

<sup>74</sup> The readings *di* (*adi*), *ka* (*disika*) *da* (*ida*), *tu* (*kitu*), *i* (*ida*, *ija*) can be supported by such Linear A / Linear B doublets as *dideru/didero*, *karu/karo*, *kukudara/kukadaro*, *akutu/akoto*, *paito/paito*, see nn. 2 and 3. The reading *ti* (*tanuati* etc., *-ti-*) can be supported by the evidence of the Cypriot syllabary, see Ventris and Chadwick (n. 11), pp. 387-88. Finally, the readings *a/ja* (*adi*, *-ja*) and *u/wa* (*-u-*, *-wa-*) can be supported on the internal grounds (see p. 44 above).

- (10) -A 301 as the introductory conjunction «-and» or «-but», see -301-*wa-ja* (*passim*), -301-*ti* PS Za 2, -301-*u-ti-nu* IO Za 6, -301- ZA Zb 3.2; KN Zf 13;
- (11) -*wa-* (or -*u-*) as an introductory particle, see -301-*wa-ja* (*passim*), -301-*u-ti-nu* IO Za 6, *u-ti-nu* IO Za 2;
- (12) -*wa-* as an introductory particle not restricted to the quoted speech (see n. 24);
- (13) the fixed order of the introductory particles and pronouns (see nos. 7, 8, 9, 10, 11).

The range of the morphological features covered by this list seems to be wide and diverse enough to serve as a basis for the conclusion as to the place of the language of Linear A in the Anatolian family of languages. Comparison of the language of Linear A with other Anatolian languages, the results of which are represented in the Table, can be summed up as follows.

Though the language of Minoan inscriptions on libation vessels shares with *Hittite* such important morphological features as the 3rd person preterite ending, the dative/locative case ending, the accusative in *n* of the 3rd person enclitic pronoun, the introductory conjunction «-and/-but», and the introductory particle -*wa-* (nos. 3, 5, 8, 10, 11), tho two languages differ in the 1st person preterite verbal ending, in the form of the 3rd person present/future of the verb «to make», in the dative/locative case of the 3rd person enclitic pronoun, in the stem of the relative/indefinite and the reflexive pronoun and in the use of the particle -*wa-* (nos. 2, 4, 6, 7, 9, 12); in addition, there is lack of correspondence in the 3rd person present/future verbal ending<sup>75</sup> and in the respective positions of the reflexive and the 3rd person enclitic pronoun within the introductory chain of particles (nos. 1 and 13)<sup>76</sup>. One can see that the extent to which the two languages disagree with each other actually excludes the possibility that the language of the Minoan inscriptions can be a form of Hittite.

<sup>75</sup> Insofar as Minoan inscriptions on libation vessels are considerably earlier than the first Hittite documents yet attested, and since the Hittite 3rd person singular present/future ending -(z)zi certainly developed from the earlier -*ti*, the disagreement between Minoan and Hittite on this specific point cannot serve as proof against identification of the language of these inscriptions as Hittite.

<sup>76</sup> Although the Hittite reflexive pronoun -*za-* can occasionally be placed, like Minoan and Luwian -*ti-*, before the 3rd person enclitic pronoun, the reverse order seems to be the norm in Hittite, see Friedrich (n. 25), p. 148, Carruba (n. 19), p. 39.



The language of Minoan inscriptions on libation vessels shares with *Palaic* the 3rd person present/future and the 1st person preterite verbal endings, the dative/locative case ending, the accusative in *n* of the 3rd person enclitic pronoun, the stem of the reflexive pronoun, the introductory conjunction «-and/-but», and the particle *-wa-* (*-war-* in Palaic) (nos. 1, 2, 5, 8, 9, 10, 11); in addition, Palaic 3rd person preterite in *-t* comes close to the Minoan *-\*ta/-da* (no. 3). The two languages differ from each other in the stem of the relative/indefinite pronoun and in the use of the particle *-wa-* (nos. 6, 7, 12); the Anatolian verb *a(ja)-*, «to make», is not attested in Palaic, and there is no clear evidence as to the respective positions of the reflexive and the 3rd person pronouns in the introductory chain of particles (nos. 4 and 13). It can be concluded, therefore, that, although the language of Linear A is closer to Palaic than it is to Hittite, it nevertheless cannot be identified as a form of Palaic.

The features shared by the language of Linear A and *Luwian* are the 3rd person present/future, the 1st and the 3rd person preterite verbal endings, the form of the 3rd person present/future of the verb «to make», the dative/locative case in *i*, the accusative in *n* of the 3rd person enclitic pronoun, the reflexive pronoun, the introductory conjunction «-and/-but», the particle *-wa-* and the respective positions of the reflexive and the 3rd person pronoun within the chain of particles (nos. 1, 2, 3, 4, 5, 8, 9, 10, 11, 13)<sup>77</sup>; in addition, Hieroglyphic Luwian agrees with the language of Linear A in the use of the particle *-wa-* as a particle introducing new sentences rather than the particle of quoted speech (no. 12, cf. n. 24). It can be seen that the language of Linear A is closer to Luwian than to any other Bronze Age Anatolian language; nevertheless, their divergence at the points enumerated above precludes identification of this language with Luwian<sup>78</sup>.

Although the morphological features that the language of Linear A shares with other Bronze Age Anatolian languages are sufficient to identify it as a language of the Anatolian group, there are two features that set this language apart from any other Anatolian

<sup>77</sup> On the order of the enclitic particles in Luwian see Laroche (n. 30), pp. 144-45.

<sup>78</sup> At the same time, it is worth noting that Luwian is the only Bronze Age Anatolian language that has a dative ending *-ija*, identical to the dative case of the Minoan 3rd person pronoun, see n. 20 above.

language of the Bronze Age, including Luwian, to which it seems to be especially close. These distinctive features of the language of Linear A are *ki-* as the stem of the relative/indefinite pronoun and *ija* as the dative case of the 3rd person enclitic pronoun (nos. 7 and 8)<sup>79</sup>. Let us now suppose for a moment that both *ki-* and *(i)ja* should be eliminated from our list as due to erroneous identification. Does this bring the language of Linear A any closer to any of the Bronze Age Anatolian languages? The answer is definitely «no». Indeed, the morphological differences between Minoan, on the one hand, and Palaic and especially Hittite, on the other, would still be significant enough to prevent identification of Minoan with either of the two languages in question (see the respective lists). As to Luwian, it is true that the elimination of *ki-* and *ija* would make this language morphologically identical to Minoan. Yet, the phonological evidence, in showing that the Minoan system of vowels included the phoneme *e*, would still preclude identification of Minoan with Luwian, because the characteristic feature of Luwian phonology, setting this language apart from other languages of the Anatolian family, is the absence of the phoneme *e*. Since, in addition, the Linear A texts are on the whole much earlier than any Cuneiform or, moreover, Hieroglyphic Luwian evidence, there is no way to account for Minoan *e* as a later development of Luwian *a*.

To sum up, the language of Minoan inscriptions on libation vessels is an IE language of the Anatolian family whose phonetics goes with Hittite and Palaic and whose morphology goes with Luwian. No language possessing such characteristics is attested for Bronze Age Anatolia. Yet, the Bronze Age languages are not the only Anatolian languages we are acquainted with: at least two languages of the Classical Age, Lydian and Lycian, have proved to belong to the Anatolian group as well. When comparing these two with the language of Linear A, we must keep in mind that the procedure followed in their case cannot be the same as in the case of the Bronze Age languages. Dealing with Lydian and Lycian, we must take into account phonetic developments that must have taken place during the millenium dividing these two languages

<sup>79</sup> Of these two, *ki-* is of especial importance, because it is actually out of the question that Hittite, Palaic and Luwian *kui-* could be reduced to it as a result of any phonetic development whatever. Although both forms derive from IE *\*k<sup>w</sup>i-* (see n. 40), Minoan *ki-* presupposes a loss of the labial component of the original labiovelar, a component which, centuries later, was still represented in Hittite, Palaic and Luwian.

from the Bronze Age Anatolian, including that of Linear A. These developments could well have modified the inherited Anatolian forms in many and various ways, so that the forms that appear to be identical often cannot be recognized as such and, vice versa, those that look different often prove to present two stages in the development of one and the same form.

Since the language of Minoan inscriptions on libation vessels has proved to differ from any other Bronze Age Anatolian language by two clearly defined features, namely, the stem of the relative/indefinite pronoun and the dative of the 3rd person enclitic pronoun, it seems reasonable to begin a comparison with Lydian and Lycian with the two features in question. Comparison with *Lydian* shows that none of the features distinguishing the language of Linear A from other Anatolian languages is found here: there is no evidence for regarding the Lydian relative/indefinite pronoun *qid* as having derived from the stem *ki-*, and the dative of Lydian 3rd person enclitic pronoun *-λ* has nothing in common with the Minoan *-(i)ja*. Considering that there are also other significant points on which Lydian differs from Minoan (see nos. 3 and 5), there seems sufficient reason to conclude that the language of the Minoan votive inscriptions cannot count as a remote ancestor of Lydian.

Comparison with *Lycian* shows, for the first time, a high degree of correspondence between the distinctive features of Minoan and those of another language: the stem *ti-* of the Lycian relative and indefinite pronoun is a normal development of the stem *ki-* (see n. 40) and the dative/locative *ije* of the 3rd person enclitic pronoun exactly corresponds to the Minoan *ija*<sup>80</sup>. The agreement between Minoan and Lycian on these two points necessitates reexamination of the entire ensemble of the Linear A morphological features as against corresponding features in Lycian:

- (1) both Minoan and Lycian have *-ti/-di* as the 3rd person present/future verbal ending;
- (2) both Minoan and Lycian have *-ka/-ga* as the 1st person preterite verbal ending;
- (3) the Lycian 3rd person preterite verbal ending *-te/-dê* can be accounted for as a normal development of the Minoan *-\*ta/-da*<sup>80</sup>;

<sup>80</sup> Insofar as Lycian *e* corresponds to Luwian *a* (cf. Luwian *tati*, «father», as against Lycian *tedi*), see further Pedersen (n. 40), pp. 19, 33, 54-55, Houwink ten Cate (n. 30), pp. 197-98, Neumann (n. 42), p. 375.

- (4) both Minoan and Lycian have *adi* as the 3rd person present/future of the verb «to make»<sup>81</sup>;
- (5) both Minoan and Lycian have *-i* as the dative case ending;
- (6) the Lycian stem of the relative/indefinite pronoun *ti* can be accounted for as a normal development of Minoan *ki*- (see nn. 40 and 79);
- (7) the Lycian *ije*, the dative case of the 3rd person pronoun, can be accounted for as a normal development of the Minoan *ija* (see n. 80);
- (8) both Minoan and Lycian have the accusative in *n* of the 3rd person enclitic pronoun;
- (9) both Minoan and Lycian have *ti* as the reflexive pronoun;
- (10) both Minoan and Lycian have the introductory conjunctions «-and/but»<sup>82</sup>;
- (11) the Lycian particle *-we*, adjoined to the conjunctions *se*, «and», and *me*, «but», and the particle *uwe*, adjoined to the same conjunctions, can be accounted for as normal developments of the Minoan particle *-wa*-<sup>83</sup>;
- (12) if no. 11 is correct, the Lycian *-we* is used exactly in the same way as Minoan and Hieroglyphic Luwian *-wa*-, that is, as a particle introducing new sentences rather than a particle of quoted speech (see nn. 24 and 83);

<sup>81</sup> It is possible that Houwink ten Cate's (n. 30) analysis of Lycian *dadê* (TL 84, 3) into the particle *d(e)* and *-adê*, the 3rd person preterite of the verb *a(ja)*-, can also apply to Minoan *dada* at IO Za 11, 1.

<sup>82</sup> See Lycian *se*, «and», and *me*, «but». Cf. Houwink ten Cate (n. 30) 73: «From a syntactical viewpoint *me* can be compared with Hittite *-a/-ja* and Luwian *-ha*»; cf. also Carruba (n. 19), p. 76. Minoan -A 301 comes closer to Lycian *-me* in that it is also introduced at the beginning of the first semantic unit of the sentence, cf. the formula *ebênnê kupâ mê ne* (or: *me ti prînawatê* etc., transposed as «This tomb (acc.), but-it (acc.) (or: but-for himself) has built», etc., usually found at the beginning of Lycian inscriptions.

<sup>83</sup> See *sewe* TL 44 a16; 44 b50; 45, 6; 102, 3; 131, 5; Letoo l. 34; *mewe* TL 91, 3; *me uwe* TL 29, 16(?); 118, 2; *se uwe* TL 118, 2; *se uwe ti* TL 139, 3; cf. also *ti uwe* TL 128, 2 and *bribe uwe* TL 106, 2. The particle *uwe* has been identified as a Lycian equivalent of the Anatolian *-wa*- in Carruba (n. 19), pp. 96-100. As to *-we*, the only thing that prevented identification of this particle with Luwian *-wa*- seems to be the fact that, as distinct from the Luwian particle, the Lycian *-we* does not introduce quoted speech, see Houwink ten Cate (n. 30), p. 75 n. 11; however, to claim this is to ignore the fact that the particle *-wa*- does not introduce quoted speech in Hieroglyphic Luwian either (see n. 24). Its function in Lycian is, therefore, the same as its function in Minoan and Hieroglyphic Luwian.

(13) although the chains of particles are used less consistently in Lycian than in the Bronze Age Anatolian languages, they can be seen as vestiges of the ancient chains in more than one respect, cf. especially Lycian *se uwe ti* «and thus for himself» as against Minoan *301-u-ti* «and/but-thus-for himself», Lycian *se/me ne* «and/but it/him» as against Minoan *-301- ... -nu* «and/but- ... -it/him», or Lycian *se/me ije* «and/but to/in it/him» as against Minoan *-301--ja* «and/but ... -to/in it/him»<sup>84</sup>.

An additional feature that seems to be characteristic of Minoan and Lycian only is that both can form their indefinite propositions both with and without the grammatical subject (see n. 42 above).

Thus, while Hittite disagrees with Minoan on six points, Palaic at least on three, and Luwian on two points, there is no disagreement between Lycian and Minoan that cannot be accounted for in terms of historical linguistics. In addition, the phonological feature that precludes identification of the language of Linear A with Luwian, namely, the phoneme *e*, offers no difficulty as far as Lycian is concerned. Indeed, although there are cases in which Lycian *e* can be shown to derive from Luwian *a*, this development cannot account for all the occurrences of *e* in Lycian because, as was shown by Pedersen, there are cases in which this language preserves the ancient IE phoneme *e*<sup>85</sup>.

It must be admitted, therefore, that there is a high degree of correspondence between the phonological and morphological features of Minoan and those of the Lycian language. Considering that some of the features in question are precisely the ones that preclude identification of the language of the inscriptions on libation vessels with any other Anatolian language, there seems reason to conclude that the above interpretation of the Linear A inscriptions can only be defended if we assume that the language of these inscriptions is either the direct ancestor of Lycian or a closely related language. This is not to say, of course, that this was necessarily the only language spoken in Bronze Age Crete or that all the Linear A documents are written in this language. Yet, considering that the Linear A inscriptions on libation vessels can be placed at the zenith of Minoan civilization in Middle Minoan IIIb and that these inscriptions occur in both public sanctuaries and private houses all

<sup>84</sup> Another characteristics that Minoan and Lycian have in common is that both place the introductory particles after the first semantic unit of the first sentence, see n. 22.

<sup>85</sup> See Pedersen (n. 40), pp. 19, 33, 54-55.

over the island, there is every reason to see the language of these inscriptions as the dominating language of Minoan civilization.

## CONCLUSIONS

The present interpretation is far from being the first attempt at associating the language of Linear A with Lycian. As early as 1956 Paolo Meriggi drew attention to the resemblance between Minoan *wadunimi* (HT 6 b1, 85 b4-5) and Lycian *βadunimi* (TL 44 a39, 40)<sup>86</sup>; he also supported the suggestion of G. Pugliese Carratelli that KN Zf 13, incised on a gold signet-ring, contains a word which is comparable to Lycian *Arñnadi*, «from Arinna»<sup>87</sup>. What is more important, in an article published in 1969 J. C. Billigmeier drew attention to the fact that those Linear B proper names that cannot be regarded as Greek (the rate of such names is especially high in the Linear B of the Knossos tablets) can be analysed into elements that are closely paralleled in Lycian onomastics<sup>88</sup>. Comparison of Billigmeier's data with those provided by Linear A sources shows that many formants isolated in Linear B are also relevant to the language of Linear A<sup>89</sup>. The elements in question are as follows<sup>90</sup>:

- <sup>86</sup> Meriggi (n. 1), p. 6. Although the new reading of Lycian β partially disqualifies Meriggi's analogy, his observation that the name in question has a typical Anatolian ending *-mi* remains valid, and the more so as there are additional names in *-mi* in the Hagia Triada corpus, see *jaremi* HT 87, 3; *udimi* HT 117, a4 (cf. *udeza* HT 122 a1, 122 b3); *mairi* (HT 89, 2). Now in the Anatolian context *-mi* is of special importance, because this is the formation suffix of the Luwian passive participle, used to produce proper names from verbal stems; naturally, *-mi* is as relevant to Lycian as it is to Luwian, see Laroche (n. 30), p. 142, Houwink ten Cate (n. 30), p. 84, Neumann (n. 42), p. 389.
- <sup>87</sup> Meriggi (n. 35), p. 240 n. 17: «...so will ich jetzt bekennen, daß ich bei Lesung *Arētnedi*, Elementi 17, die Versuchung bekämpfen mußte, daran zu erinnern, daß man im Lykischen *Arñnadi* (identisch wäre *\*Arñnedi* mit geschriebenem Umlaut) als 'Ablativ' vom Namen der Hauptstadt Xanthos findet». Note that the Linear A version of the new no. 24 (L 61 in traditional numeration) is graphically identical with the Lycian character for *ñ*.
- <sup>88</sup> J. C. Billigmeier, «An Inquiry into the Non-Greek Names of the Linear B Tablets from Knossos and their Relationship to Languages of Asia Minor», *Minos* 10, 1969, pp. 177-83.
- <sup>89</sup> Although Billigmeier (quite legitimately, in my opinion) extends his conclusions concerning Linear B non-Greek names to the language of Linear A, he actually operates with only one Linear A name, *datara/o* (HT 116 a1, 6 a1, cf. also *datara* HT 88, 5), which he compares with Lycian *\*Datara* (*ibid.* 181). A list of Linear A / Linear B correspondences, which includes all the important roots dealt with by Billigmeier, can be found in S. Davis, *The Decipherment of the Minoan Linear A and Pictographic Scripts*, Johannesburg 1967, p. 14.
- <sup>90</sup> In quoting the Linear B Knossos names I follow Billigmeier's lists; Lycian and other Anatolian names are given in accordance with L. Zgusta, *Kleinasiatische Personennamen*,

ARA: Linear A *aranare* HT 1, 4, cf. 47 b1; Linear B *aradajo*, *aranaro*, *arakajo*, *arako*, *arasijo*; Lycian *Araka*, Αραπειας (Zgusta nos. 81, 82-2), cf. Pisidian-Lycaonian Αραμοας, Isaurian Αραρα, Carian Αραρους (Zgusta nos. 82-1, 83-1, 83-2);

KUKA/U: Linear A *kukudara* HT 117 a7; Linear B *kukadaro*, *kukano*, *kukaso*, *kukarare*, *kukaro*; Lycian Κουγας, *Kukuni*, *Epñkuka* (Zgusta nos. 717, 724, 344); cf. East Phrygian Κουκα, Isaurian Κουκως, Pisidian Κουκουρας (Zgusta nos. 721-1, 721-2, 725-1), and so on;

DARA/E/O: Linear A *arudara* HT 28 a5; *jamidare* HT 122 a4; *kukudara* HT 117 a7; Linear B *daramuro*, *dararo*, *kukadaro*, *tupa<sub>3</sub>darō*, *apa<sub>3</sub>darō*, *qasidarō*; Lycian Πιξεδαρος, *Pikedere*, cf. Carian Πιξώδαρος (Zgusta nos. 1263-2, 1263-3, 1263-4); cf. Cappadocian *Kuwadar* (Laroche no. 663);

SEME: Linear A *turujaseme* or *rujaseme* HT 128 a1; Linear B *pijaseme*, *semeturo*; Lycian Σεμμα, Σεμίας, *Semuta*, *Temuse-muta*, *Ssñma*, *Ddapssñma* (Zgusta nos. 1391, 1397, 1401, 1447, 1533, 262);

NARE/O: Linear A *aranare* HT 1, 4, cf. 47 b1; Linear B *wadunaro*, *aranaro*, *piminaro*; Lycian Βισιναρις, Ερινναρμα, Ναρις, Ναροια (Zgusta nos. 172-1, 354-2, 1015-1, 1015-2);

NATU/O: Linear A *kupa<sub>3</sub>natu* HT 47 a1-2; 119, 3; Linear B *wadunato*, *wijanatu*, *kapa<sub>3</sub>nato*; Lycian Νατας, Ναταιος (Zgusta nos. 1017-1, 1017-2)<sup>91</sup>.

Prague 1964; all the Linear A quotations are mine. I found no conclusive Linear A parallels to all the roots shared by the Linear B non-Greek names and Lycian, but it is possible that the root *EME/I* is paralleled in Minoan *jamidare* HT 122 a4; *witejamu* PL Zf 1, or *imisara* HT 27 a3, *MARA* in *maru* HT 117 a3, *SAMA* in *samaro* HT 88, 5-6, *WIDA* in *widina* HT 28 b5, *WIJA* in *kupa<sub>3</sub>weja* HT 24 a1 and *pasaweja* HT 24 a4, *SATA* in *sata* HT 117a. In addition, whether or not Minoan *wadunimi* is comparable to Lycian *badunimi* (see n. 86), the element *WADU* (cf. also *wadini* HT Wc 3007, 3008) of the Minoan word still corresponds to such Linear B Knossos names as *wadunaro*, *wadukasaro*, *wadunato*, cf. Cappadocian *Innarawada* and *Madawada*, Laroche (n. 91), nos. 168, 457.

<sup>91</sup> In his standard work *Les noms des Hittites*, Paris 1966, E. Laroche classifies proper names attested for Bronze Age and Early Iron Age Anatolia into primary formations, Hattian, Cappadocian, Hurrian, and Hittite-Luwian names proper. The latter category (pp. 317-33) constitutes a coherent group of names characterized by the same suffixes of derivation. If we compare these names with Linear A onomastics of Hagia Triada, we shall see that all the important Hittite-Luwian suffixes can be provided with Minoan parallels. Thus, *-na* can be compared to *dakuna* (HT 103, 4, cf. *daka* HT Wa 1001, 1002, 1004, 1005; *dakusene* HT 103, 4-5; 103, 2-3; *dakuseneti* HT 104, 1-2, and the Cappadocian *Dakuna*, Laroche no. 1217); *-nu* to *kupa<sub>3</sub>nu* (HT 1, 3; 49 a6-7; 88, 3; 117

The important thing about this list is that the Minoan-Lycian parallels are exclusively based on the materials of the Hagia Triada tablets, which belong to the last stage of Minoan civilization in Late Minoan Ib. This seems to entail not only that the inscriptions on libation vessels and the tablets of Hagia Triada were written in the same language but also that this language, Lycian or a closely related one, was the language of Minoan civilization for a long period of time. Unexpected support for this can be found in Herodotus.

In Book 1 of his *History* Herodotus writes about the Lycians: «The Lycians are in good truth anciently from Crete; which island, in former days, was wholly peopled with barbarians. A quarrel arising there between the two sons of Europa, Sarpedon and Minos, as to which of them should be king, Minos, whose party prevailed, drove Sarpedon and his followers into banishment. The exiles sailed to Asia, and landed on the Milyan territory. Milyas was the ancient name of the country now inhabited by the Lycians: the Milyae of the present days were, in those times, called Solymi. So long as Sarpedon reigned, his followers kept the name which they brought with them from Crete, and were called Termilae, as the Lycians still are by those who live in their neighbourhood. But after Lycus, the son of Pandion, banished from Athens by his brother Aegeus, had found a refuge with Sarpedon in the country of these Termilae, they came, in course of time, to be called from him Lycians». Herodotus returns to a short version of this story in Book 7: «These people [the Lycians] came from Crete, and were once called Termilae; they got the name which they now bear from Lycus, the son of Pandion, an Athenian»<sup>92</sup>. As follows from the Lycian inscriptions,

a3; 122 a 6-7; cf. *kupa<sub>3</sub>weja* HT 24 a1, *kupa<sub>3</sub>natu* HT 47 a1-2; 119, 3) and *daminu* (HT 117 a8, cf. *dame* HT 86 a4; 106, 3; 120, 1-2, cf. 95 a1-2, 95 b2); *-ni* to *tiduni* (HT 49 a4) and *dusuni* (HT 108, 2). On the suffix *-mi* see n. 86 above. Naturally, the Hittite-Luwian suffixes of derivation are also relevant to Lycian in virtue of its being an Anatolian language. In addition, the Linear A *qetiradu* (HT 58, 1; cf. *qeti* HT 7 a1) evokes the names in *-radu* which, totally obscure as they are, constitute an inseparable part of Anatolian onomastics, cf. *Tarhunderadu* and *Piyamaradu* adduced in Laroche (n. 30) 10 and n. 12. Moreover, comparison of *rujatadi* of a Hagia Triada cretula (HT Wc 3008 b) with *ruja* at KN(?) Wc 26 a, also written on a cretula, allows to isolate the elements *ruja* and *tadi*, of which the first is comparable to the name of the Hieroglyphic Luwian god *Ru(nt)*, widely represented in late Anatolian onomastics, and the second may well stand for the Luwian *tadi*, «father» (*tedi* in Lycian); its combination with a divine name is paralleled in the Lycian Ερμενδαδης, analysed by Houwink ten Cate (n. 30) 145 as *Arma(n)-tati*.

<sup>92</sup> Hdt. 1.173; 7.92 (trans. by G. Rawlinson).



«Termilae» was indeed the name (actually, the only name) by which the Lycians called themselves; it is possible, then, that Herodotus' account of their migration from Crete originates from a genuine Lycian tradition<sup>93</sup>.

According to the hypothesis put forward by Leonard Palmer, Bronze Age Crete was inhabited by Luwians and the language they spoke was a «Luwoid». As we saw above, Palmer's Luwian reading of KN Za 10 was only made possible owing to his taking the word *ija* as equivalent to the Lycian *ije*, the dative case of the 3rd person enclitic pronoun. Considering that Lycian has been shown, first of all in the studies of E. Laroche, to be especially close to Luwian, and considering that the same is true of the language of Linear A, the latter can justifiably be defined as «West Luwian», to use the term coined by Houwink ten Cate for the Lycian language<sup>94</sup>. That is to say, if the proposed identification of the language of Linear A as a form of Lycian is correct, it would substantiate Palmer's hypothesis in its general outline.

In 1896, Paul Kretschmer published his *Einleitung in die Geschichte der griechischen Sprache*, where he drew attention to the fact that certain types of Greek place-names point in the direction of a pre-Hellenic linguistic substratum; Kretschmer identified this substratum as non-Indo-European, and for many years this view was the accepted one. Yet, with the progress of Anatolian studies, when the IE identity of Hittite, Palaic, Luwian, Lycian, Lydian was

<sup>93</sup> As Asheri (n. 71), p. 87, points out, myths about Crete constituted an integral part of Lycian tradition; thus, Menecrates of Xanthos presumably treated in his *Lyciaca* such Cretan subjects as Daedalus' flight to Crete and the death of Icarus; in addition, the only ancient tradition concerning Daedalus' death is a Lycian one preserved by Alexandros Polyhistor.

<sup>94</sup> Houwink ten Cate (p. 30), p. 72. The conclusive identification of Lycian as a language of the Anatolian group was reached in Holger Pedersen's great work *Lykisch und Hittitisch* 1945; according to Pedersen, the Lycian language presented a unique idiom which, while related to both Hittite and Luwian, could not be reduced to either of them: «Das Lykische ist augenscheinlich mit keiner der in Keilschrift oder Hieroglyphen überlieferten Sprachen identisch» (p. 54). The close affinity of Lycian and Luwian having been proved in subsequent years, the reductivist approach, treating Lycian as a direct derivative of Luwian, has prevailed. The proposed identification of the language of Linear A as a form of Lycian, showing as it does that the features usually seen as Lycian innovations (e.g. the phoneme *e* and *ije* as the dative case of the 3rd person pronoun) had already been present in the Bronze Age, would substantiate Pedersen's position as to the independent character of Lycian.

proved beyond reasonable doubt and the presence of non-Indo-European speakers in Western Anatolia was thus sharply reduced, the orthodoxy of the non-Indo-European substratum came to be challenged over and over again<sup>95</sup>. If correct, the proposed identification of the language of Linear A as an IE language, entailing as it does that the inhabitants of Bronze Age Crete did not differ in this respect from the inhabitants of Asia Minor, would make the hypothesis of a non-Indo-European population immediately preceding the Greeks in the Aegean still more questionable.

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<sup>95</sup> Notably, by, V. Georgiev, see e.g. his answers to the «Mid-Century Report» distributed by M. Ventris in 1949 (*The Languages of the Minoan and Mycenaean Civilization*, pp. 26-30) or his contribution to the Sheffield Colloquium on Aegean Prehistory in R. A. Crossland and A. Birchall, *Bronze Age Migrations in the Aegean*, London 1973, pp. 243-54. But it was again Leonard Palmer who most clearly presented the issue. In analysing Kretschmer's original argument, Palmer pointed out that the conclusion as to the non-Indo-European pre-Hellenic substratum was mainly reached as a result of Kretschmer's comparison of the suffix *-ss-* of Greek place-names with the analogous suffix in Lycian, which was then thought to be a non-Indo-European language. «But», Palmer wrote, «new sources of information have compelled a different answer to thesis 4 [«Lycian is certainly a non-Indo-European language»]: Lycian is an IE language belonging to the Anatolian group. For those who accept Kretschmer's analysis and comparisons (and modern scholars are virtually unanimous in doing so) it follows that another group of IE speakers took possession of Greece before the arrival of the Greeks, just as Celts preceded the Anglo-Saxons in the British Isles», *The Greek Language*, London 1980, pp. 9-10. This conclusion comes close to the modified position of Kretschmer himself as expressed in his «Die protoindogermanische Schicht», *Glotta* 14, 1925, pp. 300-319.

|                                         | MINOAN    | HITTITE     | PALAIIC     | C. LUWIAN | H. LUWIAN | LYDIAN | LYCIAN   |
|-----------------------------------------|-----------|-------------|-------------|-----------|-----------|--------|----------|
| 1 3rd person sgl. pres./fut.            | -ti/di    | -(z)zi      | -ti         | -(t)ti    | -ti       | -t/-d  | -ti/-di  |
| 2 1st person sgl. preterite             | -ka/-ga   | -un, -hun   | -ha         | -(h)ha    | -ha       | -v     | -xa/-ga  |
| 3 3rd person sgl. preterite             | *-ta/-da  | -t(a)       | -t          | -(t)ta    | -ta       | -(t)l  | -te/-dê  |
| 4 3rd person sgl. pres./fut. 'to make'  | adi/jadi  | iiazi       |             | ati       | aiati     | int    | adi/edi  |
| 5 dative/locative case                  | -i        | -i          | -i          | -i        | -i        | -λ     | -i       |
| 6 relative/indefinite pronoun (neuter)  | kite/kitu | kuit        | kuit        | -kui      | -hwi      | -qid   | ti-      |
| 7 dat./loc. 3rd person enclitic pronoun | -ija      | -si         | -si         | -tu       | -tu       | -λ     | ije      |
| 8 acc. 3rd person enclitic pronoun      | -nu       | -a(n)       | -a(n)       | -a(n)     | -a(n)     | -n, -v | -n(e)    |
| 9 reflexive pronoun                     | -ti-      | -za-        | -ti-        | -ti-      | -ti-      |        | ti       |
| 10 conjunction - and' / -'but'          | -A 301    | -a(-ja)/-ma | -a(-ja)/-ma | -ha/-pa   | -ha/-pa   | -k/-m- | se/me    |
| 11 particle -wa-                        | -wa-      | -wa(t)      | -waf-       | -wa-      | -wa-      |        | -we, uwe |
| 12 wa as an introductory particle       | +         | —           | —           | —         | +         |        | +        |
| 13 fixed order of particles             | +         | + / —       |             | +         | +         | +      | +        |

