



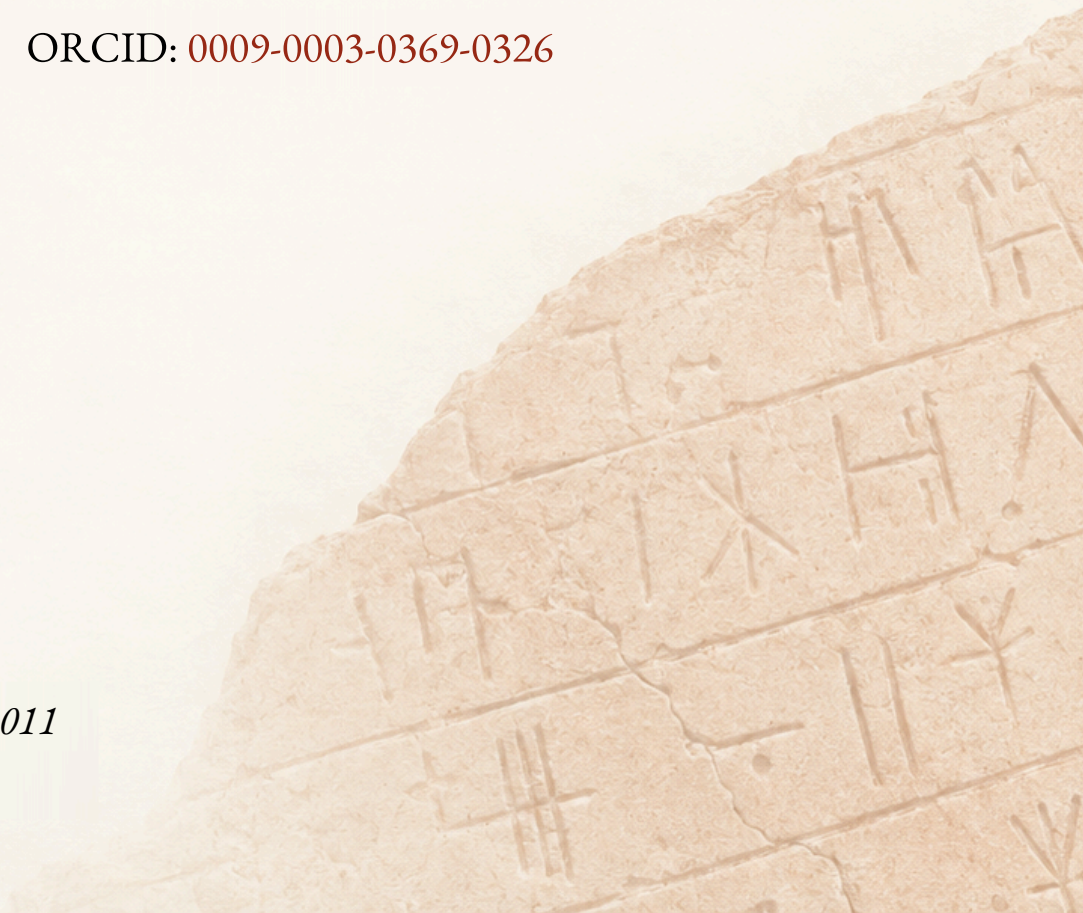
THE IDEOPHONETIC SYSTEM OF LINEAR A



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Introduction to the Republication

The Ideophonic System of Linear A was first published online in 2011 and is republished here after a site migration. I have chosen to keep it because it represents an important stage in my research. Although my subsequent work has developed its methods and examined many of its proposals in greater detail, this article already contains several of the observations from which those later analyses grew. I have therefore retained its original approach and the course of its argument. Corrections are limited to language and typographical errors.

When I first began studying Linear A, I believed that applying the phonetic values of Linear B would be sufficient to make its words intelligible. Years of examining the inscriptions gradually revealed a more complex situation. Before attempting to identify the language, I needed to understand how the writing worked: how the scribes organized their accounts, how terms were distinguished, and how individual signs could function differently according to their position and context.

The article follows that progression. It begins with the structural patterns of the accounting texts and proceeds to the graphic composition of their terms, including ligatures and combinations of phonetic and logographic elements. It then presents the Greek interpretations that emerged from this work. These proposals belong to the stage of my research documented here and should be assessed through the evidence and comparisons offered for each of them. In particular, my later work separates the structural analysis of the records from any linguistic identification, which is treated as a subsequent test.

Throughout this long undertaking, John Chadwick's advice and encouragement were invaluable. He taught me to compare occurrences, to attend to details that might initially seem insignificant, and to distinguish what the documents could establish from what still required investigation. He followed my work as far as the structural patterns and the grids. He died before the Greek hypothesis presented in this article took shape, and its responsibility is mine alone. His letters and our conversations nevertheless helped shape the way I approached the inscriptions, and my gratitude to him remains profound.

Some of this journey is also recounted in my book, *The Incredible Mystery of Linear A*. I preserve the present article as a record of that journey: of discoveries, mistakes, reconsiderations, and questions that continued to guide my research.

Enrica Patria

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The Ideophonic System of Linear A

The structural patterns of the Minoan records.

To individuate the structural patterns of the Linear A records, we can begin with the simplest tablets. HT21 is an example:

pi-ta-ka-se .	𐀓 .	GRA	161
		roOLE	11
		eOLE	3+Lm8
		*67 ¹	7+Lm8
		OLIV	1+Lm1

It contains a record made up of 1) an initial term (pi-ta-ka-se), 2) a punctuation mark, 3) a transaction sign (𐀓), 4) another punctuation mark, 5) five symbols that stand for so many commodities (GRA, roOLE, eOLE, *67 and OLIV), and 6) five figures each of which respectively follows one of the preceding commodities.

Giving the value of x to the initial term, the value of z to the transaction sign, the value of y₁, y₂, y₃, etc. to the symbols that stand for the commodities and the value of k₁, k₂, k₃, etc. to the figures, it is possible to normalize the tablet in the following way:

x . z .	y ₁	k ₁
	y ₂	k ₂
	y ₃	k ₃
	y ₄	k ₄
	y ₅	k ₅

from which we can extrapolate the following structural formula: x z y_j k_j (j=1..5) which can be defined the structural formula of HT21. It means that the record on this tablet is made up of a term x which, with the presence of a z term, refers to a j number -which in this case is the equivalent of five- of y commodities each of which is followed by a related k figure.

But, do other tablets exist that have records with this same structure on them? To respond, we can consider HT18:

pa-se	qeGRA	20
	kiOLE	2
	*67	3
sa-ra	GRA	10
	FICUS	10

from which we can observe a) that it has not one but two terms x (pa-se and sa-ra₂), and b) that each of these terms is followed by a different number of y commodities with the related k figure. So, making the comparison with HT21, we can observe that:

- 1) while HT21 has the transaction sign 𐀓, on HT18 there is no transaction sign;
- 2) while HT21 contains only *one* record of five commodities, HT18 contains *two* records, respectively of three and two commodities;

¹ When I began this study, the L-numbering system was in use. I have retained it to emphasize the independence of the Linear A writing system from that of Linear B. However, to facilitate reading, I provisionally represent the signs using their corresponding phonetic values in Linear B. Where L-numbers are necessary, they are preceded by an asterisk and listed in Appendix 1. In some instances, I have reproduced the original signs directly to enhance the visual clarity of the text. I should also clarify that some signs, such as, for instance, 𐀔 and 𐀕 appear to be modified by the addition of an internal dash or dot; I have therefore treated these variants separately. The fonts used are partly my own and partly those of D. W. Borgdorff.

3) all these records, both that on HT21 and those on HT18, have the same structure, i.e. an $x(z) y_j k_j$ ($j=1..n$) structure, since they all are made up of a term x followed by several y commodities, each of which is followed by the respective k figure. What differentiates them is a) the number of the items that constitutes the lists, i.e. the j number of the y commodities, which varies from two to three and five, and b) the z term, i.e. the transaction sign, which is in parenthesis because, by adding a further indication and having consequently a complementary role, it is not present in all the records.

But HT18 is not the only tablet on which the scribe recorded two lists. HT2, 14, 40, 91, 121, 129, KH7b and ZA6b also contain two $x(z) y_j k_j$ ($j=1..n$) records on them.

HT2 contains two records of perfumed oils.

HT14 contains two records of different commodities such as wheat, perfumed oils and olives. In the first line there is the transaction sign Φ .

HT40 (lines 1-2): two records of wheat. Transaction sign Φ .

HT91: two records, the first has nine items, only two items remain of the second one. In the first line there is the transaction sign Φ .

HT121: two records, the first of which has the x term $ki-ri-ta_2$ and has only one item, while the second is made up of the x term $sa-ra_2$ and has five items.

HT129: two records of wheat and other commodities. The x terms are $ki-ri-ta_2$ and $tu-*79-ri-na$.

KH7b, lines 2-3, contains probably two records, the first of which refers only to barley, the second to barley and to other commodities.

Za6b, lines 1-3: probably two records, the first of which refers to wheat and to two types of wine. Only one item remains of the second one. The transaction sign is Ψ .

But this is not all. Since, in fact, the size of the tablets is different from one another and since a larger tablet can contain more brief records, the following tablets HT24a, 30, 92, 108, 123a, KH11, ZA1a, TY3 are all compiled according to the same pattern since they all contain a variable number of $x(z) y_j k_j$ ($j=1..n$) records on them.

HT24a contains three records, which are referred to LANA, which is modified both with a sign directly premised and with a sign directly postponed. There is no transaction sign.

HT30 begins with a sign (Ψ) directly followed by a figure. After this a record begins which is made up of the x term $sa-ra_2$ followed by various y commodities (barley, figs, wine, etc.). A commodity is indicated by means of a group of signs ($sa-ra-ra$). The record has no transaction sign and it is followed by a deficit of the same commodities.

HT92 contains only one record of GRA and *67 preceded by the transaction sign Φ .

HT108 contains (line 1) a record that refers to one man and to 70 unities of GRA+Lm7.

HT 123a: four records of Φ and Δ . This latter commodity is followed in each item by the deficit. At the end there is the general total of Φ and the general total and the deficit of Δ . In the first line there is the transaction sign Ψ .

KH11: three records of various commodities, among which wine and moreover barley. At the end of the first and the third list there is barley modified with a sign directly premised (cf. infra).

ZA1a: only one record of two commodities preceded by the transaction sign Ψ .

TY3: seven records, four on side a and three are visible on side b. All the records are separated by means of a horizontal segment. In the first record there is the third item which is modified by a sign directly premised. The third record has two terms x .

But, at this point a question becomes obvious: are there other patterns to which the records on Linear A tablets can be referred?

HT35 represents another pattern. The normalization of this tablet is the following one:

ti-ti-ku . Φ . i-ku-ta	HORD	1
	*96+PU	Lm19
	riOLE	Lm19
	*90	Lm19
	taOLE	[
	] *44	5
	*40+PU	Lm18
	VIN	Lm 23

It is made up of 1) an initial term (ti-ti-ku), 2) a punctuation mark, 3) a transaction sign (𐎧), 4) another punctuation mark, 5) another x term (i-ku-ta), 6) eight symbols that stand for so many commodities and 7) eight symbols (one of which is missed) that stand for so many figures. The normalisation of this tablet, according to the above x-y-k terminology, is the following one:

x . z . x ₁	y ₁	k ₁
	y ₂	k ₂
	y ₃	k ₃
	y ₄	k ₄
	y ₅	k ₅
	y ₆	k ₆
	y ₇	k ₇
	y ₈	k ₈

From this we can extrapolate the structural formula: x (z) x₁ y_j k_j (j=1..n), which is the equivalent of the first one with the difference that, before the y commodities, there are two x terms (x and x₁) and not only one. Several tablets have one record compiled according to this pattern on them.

HT43 has a record of wheat with the transaction sign 𐎧.

HT99a: a record, without a transaction sign, of various commodities among which barley and wheat are recorded together.

HT114: a record, without transaction sign, of several agricultural products.

ZA11b: although the tablet is badly damaged, a record of wheat, preceded by two terms x, with the transaction sign 𐎧 is recognizable in the first line.

KH14: lines 1-2: a record which refers to various units of barley. An item refers to two dogs.

All the preceding tablets have only one record on them. But there are also tablets that have two or more records of this pattern on them. HT28a, 90, 116a, 120, 128 all have several x (z) x₁ y_j k_j (j=1..n) records on them, and they all present the following peculiarity: the x₁ term is different in each record while the x term is always the same and the scribe does not repeat it every time but, by putting it in the heading, he indicates that it refers to all the lists that follow in the tablet. An example will be clarifying. HT 116a must be normalized as follows:

<u>da</u> -ta-ro. 𐎧 . ku-pa-ja	GRA	16
pu-ra ₂	GRA	40
	diOLE	5
SE+NE	GRA	16
	kiOLE	1
	miOLE	5
	OLIV	3
pi-*69-te	GRA	5
	OLE+[]	5
	miOLE	1
	tuOLIV	2
si-ki-*61	GRA	12
	*67	12
*23_-nu-ma	GRA	20
	*67	3

From this we can see that a) each of the six records is made up of an x₁ term (ku-pa-ja, pu-ra₂, SE+NE etc.) followed by a different number of commodities and b) all the record are preceded by another term x and by the transaction sign 𐎧, which are at the beginning of the tablet, making up its heading. So, rewriting the tablet in a more careful way it becomes:

<u>da</u> -ta-ro. 𐎧. ku-pa-ja	GRA	16
<u>da</u> -ta-ro. 𐎧. pu-ra ₂	GRA	40

<u>da</u> -ta-ro. 𐀢.	pura ₂	OLE+DI	5
<u>da</u> -ta-ro. 𐀢.	SE+NE	GRA	16
<u>da</u> -ta-ro. 𐀢.	SE+NE	OLE+KI	1
etc.			

Other tablets are compiled in this same way:

HT28a has five records of various commodities.

HT90: two records of various commodities. The first record has three items, the second four. The transaction sign is 𐀢. It is separated by a punctuation mark from the term that follows.

HT120: four records of wheat. The first term x, which refers to all the records is da-qe-ra . The quantities are very high, although the unit is not the highest one and GRA is modified with metrograms in a way which is very similar to the Mycenaean one. Only the second record has the transaction sign 𐀢.

HT128a contains several records of wheat. At the beginning of the tablet there is the transaction sign 𐀢 (the same as HT35 and HT91).

So, summing up, the second pattern is very similar to the first one; the difference consists in the fact that while the tablets that belong to the first one contain records made up of only one x term which refers to different quantities of y commodities, the tablets that belong to this second group contain records that are made up of two (or more) x terms that refer to different units of y items. Tablets which contain records having more x terms before the commodities are, for instance, KH5 and KH10 (lines 3-4). They respectively have two and one records with the characteristic that there are two x terms before the first x₁ term. There is no transaction sign and while the lists on KH5 refer to two commodities, KH10 refers only to wheat.

Nevertheless, there is a tablet, HT8a, which, compared to the preceding ones, has an inverted type of record on it. On this tablet, in fact, from the term *01 onwards, there is not a record made up of an x term followed by several y commodities, but, on the contrary, there is the y commodity *01(= 𐀢) which is followed by several x terms. The normalization of this record is the following:

*01	ka-ra-ti	1+Lm9
	PA	3+Lm9
	te-*88	2
	qa-*63-i	Lm8
	si-ki-ra	Lm1
	ki-re-ta-na	Lm9

which becomes:

y	x ₁	k ₁
	x ₂	k ₂
	x ₃	k ₃
	x ₄	k ₄
	x ₅	k ₅
	x ₆	k ₆

the structural formula of which is: $y \ x_j \ k_j \ (j=1..6)$

Records that are compiled according to this third pattern are:

HT8b, from line 3 onwards, contains another list of 𐀢. On HT9b (from line 2 towards) there is a list of ka-*66. On HT103 (from line 2 onwards) there is again a record of 𐀢. On ZA14 there is a record of 𐀢* (For the term that follows it, see HT93a,2).

This pattern is relatively rare because another very common pattern, the fourth, is an extension of it. A tablet, HT9a, explains what I mean. It is:

sa-*188 . 𐀢. VIN pa-de . 5+Lm8

*83-tu	10
di-na-u	4
qe-pu	2
*07-di-ra	2+Lm9
ta-i-*65	2+Lm9
a-ru	4+Lm1
ku-ro	31+Lm8

according to the above x-y-k terminology it becomes:

x . z . y	x ₁	k ₁
	x ₂	k ₂
	x ₃	k ₃
	x ₄	k ₄
	x ₅	k ₅
	x ₆	k ₆
	x ₇	k ₇
	x ₈	k ₈

from which it is possible to obtain the following structural formula $x \ z \ y \ x_j \ k_j \ (j=1..8)$, which means that on this tablet we have a record made up of a y commodity which deals with an x term and a z transaction sign before it and is followed by other seven terms x with the related k figures and by the total of these figures.

So, the third and the fourth patterns are both inverted respect to the first and the second ones. Here the scribe records amount of several different commodities which deal with one, two, rarely more x terms and there he records amounts of only one commodity which deals with several different x terms. Examples of tablets which have records of the fourth pattern on them are HT7a, 13, 26a, 85a, 86a and b, 95a, 115a, MA1a and b, ZA5a, ZA15a, etc.

HT7a: a record of HOMO + Ψ . The list follows on side b. (For HOMO+ Ψ see also HT 11a,4 and 93a,5.)

HT13 and 19 both refer to various units of wine. On both the tablets there is the transaction sign Ξ . At the end of the tablet the total is indicated.

HT26a: the commodity, probably an aroma, is in an initial position. It is followed by the first x term, the transaction sign Ξ and by the other x terms with the respective figures. On side b there is a record of the same aroma.

HT85a: another record of men. The transaction sign is $\Delta\Delta$. At the end the total is indicated.

HT86a: a list of wheat. Side b contains a list of the same commodity but it is very damaged.

HT95a and (probably) b: a record of wheat, without transaction sign.

HT115a: the list is similar to that on HT86 and 95. It refers to wheat. Transaction sign Ψ .

MA1a and b: two brief lists of *102.

ZA5a: lines 1-3: a list of wine + SU.

ZA8: a record which refers to figs.

As far as this fourth pattern is concerned, we must make the following observations:

- the y commodity always occurs in the heading of the tablet but it can be both before and after the transaction sign (if it is present) and, rarely, after the first term x_1 (see ZA8);
- if the tablet contains more than one record, as happens for instance in ZA15a, the scribe does exactly as he does in the second pattern and he, without repeating it, puts in the heading of the tablet the term that refer to all the lists on it. ZA15a, for instance, contains two lists that refer respectively to two commodities (saVIN and meVIN). The normalization of this tablet is the following one:

*102-ku-na	saVIN	qe-ne-*101-e	57
		i-ti-ni-sa	10
	meVIN	mi-*23-se	3
		i-nu-ma-re	6
		ne-pi-ki	2
		ja.sa-mu	5

sa-mi-da-e 4
 *206-si-ma-se 5

From which we can see 1) that the two kinds of wine are respectively followed by two and six x terms 2) that both these lists are preceded by another x term (*101-ku-na), which refers to each of them and 3) that this term is in the heading of the tablet and it is not repeated by the scribe before each of the two lists. Rewriting the tablet in a more careful way it becomes:

*102-ku-na	saVIN	qe-ne-*101-e	57
*102-ku-na	saVIN	i-ti-ni-sa	10
*102-ku-na	meVIN	mi-*23-se	3
*102-ku-na	meVIN	i-nu-ma-re	6
*102-ku-na	meVIN	ne-pi-ki	2
	etc		

All the tablets which we have dealt with up to now are always made up of a) y terms, i.e. terms that mean commodities which are almost always represented by ideograms, rarely by phonetic groups b) x terms, i.e. terms that have to do with the commodities c) z terms, i.e. transaction signs which have an accessory role and are not present in all the records, and d) figures, which can be both whole and fractional. There are, instead, some few tablets on which the commodity is not indicated.

The normalization of HT10a explains what I mean. This tablet is:

ku-ni-su	sa-ma	4
	u-*37-ro	4
PA	da-re	16+Lm9
	*88	6
	u-*37-ro	10[
	*66-ru	2+Lm9
	da-we-da	8
	me-*23	3

Which becomes:

x . x ₁	k ₁
x ₂	k ₂
x x ₁	k ₁
x ₂	k ₂
x ₃	k ₃
x ₄	k ₄
x ₅	k ₅
x ₆	k ₆

from which it is possible 1) to observe that on this tablet there are two records, each of which has the following structural formula $x \ x_j \ k_j \ (j=1..n)$ and 2) to observe that it is very similar to the structural formula of the fourth group with the difference that there is no symbol that stands for the commodity. Only few tablets belong to this pattern and incidentally I must say that Chadwick wrote to me about them that “in view of the absence of any indication of commodity they may be the continuation of a document which listed the contributions actually received”.

The above mentioned are the five patterns according to which the Minoan records were compiled. Their respective structural formulae are the following ones:

- 1) $x \ (z) \ y_j \ k_j \ (j=1..n)$ which means that a term x, with the eventual presence of a z transaction sign, deals with a j number of y commodities, each of which is followed by a related k figure;
- 2) $x \ (z) \ x_1 \ y_j \ k_j \ (j=1..n)$ which means that an x term, with the eventual presence of a z transaction sign, refers to one or more records each of which is made up of another x_1 term (which in the case of several

records changes becoming x_1, x_2, x_3, x_4 etc.) followed by a j number of y commodities each of which is followed in turn by a related k figure;

3) $y x_j k_j$ ($j=1..n$) which means that a y commodity deals with a j number of x terms each of which is followed by a k figure. At the moment transaction signs are not attested in this pattern;

4) $x y (z) x_j k_j$ ($j=1..n$) which means that a y commodity, preceded by a term x and eventually by a z transaction sign, deals with a j number of other x terms each of which is followed by a k figure ;

5) $x (z) x_j k_j$ ($j=1..n$) which means that a term x deals with a j number of other terms x , each of which is followed by a k figure.

Nevertheless, by looking carefully, the above structural formulae can be reduced to only two fundamental ones, the first and the third, since it is clear that the others ones are only an extension of them. In the first pattern we have in fact only one term that deals with one or more commodities while in the third, on the contrary, we have only one commodity that deals with one or more terms. What differentiates them from the records of the second and the fourth group consists in the fact that in compiling these the scribe uses more x terms to specify the nature of the transaction that concerns the y commodities.

These are at the moment the fundamental patterns among the tablets. The Minoan scribe respects them in compiling his records. The differences among the various tablets consist in the number of the records they contain and, in the patterns, according to which these records are compiled. But a question is obvious. Are these patterns always respected throughout the tablets? Yes, they are. They are constantly respected throughout the tablets and at the moment there are no exceptions but only a few variations to them:

1) some commodities present, in the course of the list, the addition of another term directly premised (and consequently closely related) to them (TY3a,1-2).

2) some records of the second pattern have not two but several x terms in the heading before the commodity (HT96 a and b). This does not modify the general pattern. It simply means that the scribe explained the transaction by using more terms x in the heading of the tablet (see *infra*).

3) records belonging to different patterns can be written on the same tablet. This point is fundamental because we must distinguish between lists and tablets. A tablet is only the way in which a scribe makes the records visible. So, it can contain more brief records and these records can belong to different patterns. HT132 is a clear example of this. The only two lines that remain of this tablet contain three records, the first and the second of which belong to the first type and the third to the third. The three records are the following ones:

1) a-se.	*14	5
2) qa-re-to.	*83	27
3) *01.	*66	<u>1</u> [

they, according the x - y - k terminology, become:

1)	$x y_1 k_1$
2)	$x y_1 k_1$
3)	$y x_1 k_1$

From which one can observe that the first record has the x term a-se followed by five units of the commodity *14 ($\bar{\text{I}}$),

The second record has the x term qa-re-to followed by twenty-seven units of *83 (𐤀). And the third record has the commodity $\text{𐤀}=\text{*01}$) which deals with the x term *66 (𐤀) followed by an unclear figure.

Other tablets have mixed records on them: HT32, 93a, 96a, 97a, and so on.

HT32 contains three records; the first occupies the lines 1 and 2 and belongs to the first type and has the t.s. 𐤀 and the x term sa-ra₂. The others two are respectively on the third and fourth line and are both of the third type. The one on the third line has SU (see VAS with SU inside it) as y commodity and has 𐤀 and 𐤀 as x terms. The y commodity of the record in the fourth line is a perfumed oil (𐤀) while the x terms are again 𐤀 and 𐤀 .

HT93a, this tablet contains more than ten records, five of which (1,2, 10,11, and12) belong to the fourth pattern and the other are all of the first type. The final part is damaged. The first, the third, and the fourth

records refer to wheat, the second refers to figs and the fifth to figs and to ψ . The y commodity of the sixth record is lost.

HT96a: The first record concerns figs, it is of the fourth type and it has the t.s. ψ ; both the second, which refers to wheat and the third which refers to the commodity Δ , belong to the third type. The greatest difficulty in this tablet is in the fact that the scribe writes the tens in the same way as the full stop (see the first figure in the fourth line). This makes confusion among the records which can be recognized only by means of the comparison with others containing the same terms.

HT97a: two records, the first of which belongs to the first type and has the t.s. $\Delta\Delta$; the second begins in the third line, belongs to the third type and it has *29 ($\oplus$) as y commodity.

All these are, at the moment, the variations which are possible in the Linear A records. They cannot be considered exceptions and I must repeat that the above structural patterns are at the moment mathematically respected throughout the tablets. So true is this that, once we have compiled two lists respectively for the x terms and the y commodities and once, we have ascertained that the respective congruencies are always respected, we can, on the basis of the survived terms, reconstruct the approximate patterns of the records on a tablet even if it is badly damaged or, having no heading and beginning with a term directly followed by a figure, it is the continuation of some other tablet. If, in fact, x terms survive we must assume that a commodity was in the missed heading and if y commodities survive, we must assume that they surely dealt with one or more x terms in the missing heading.

Recapitulating, once I have again underlined that a Minoan tablet can contain one or more records and that these records can belong to different patterns, we can also make a structural division of the tablets. On the basis of the records they contain, we have:

- 1) tablets that contain one or more records with an x (z) $y_j k_j$ ($j=1..n$) structure;
- 2) tablets that contain one or more records with an x (z) $x_1 y_j k_j$ ($j=1..n$) structure;
- 3) tablets that contain records with a y (z) $x_j k_j$ ($j=1..n$) structure;
- 4) tablets that contain one or more records with an x (z) $y x_j k_j$ ($j=1..n$) structure;
- 5) tablets that contain one or more records with an x $x_j k_j$ ($j=1..n$) structure;
- 6) tablets that contain mixed records belonging to more than one of the above patterns.
- 7) tablets that, having no heading and containing only terms directly followed by numerals, are the continuation of other documents.

The comparison with the Mycenaean records

Once the structural patterns of the Linear A have been recognized, it becomes almost obvious to ask ourselves what happens in Linear B, if patterns such as those which are present in Linear A are also in this writing. I owe many things to professor Chadwick who was convinced that Linear A was moreover a cryptographic problem and he always encouraged me to proceed with the research on the structural patterns of the Linear A records. As far as the comparisons between the Linear A and Linear B records are concerned, I have followed his advice *"I feel that at this stage you can properly employ the parallel of the Linear B tablets in order to explain the patterns you detect in Linear A. Here we have first, more explicit headings, sometimes containing verbs, and secondly, we have been able to work out much more of the accounting procedures, so that we can often assign tablets very accurately to a type. Although we must never assume that the Linear A tablets will conform exactly the same pattern, it would be useful at this stage to make a comparison"*.

So, to see which, among the structural patterns of Linear A, are present in Linear B, we can begin considering a tablet such as the following one:

Fs 23:
$$\begin{array}{ccccccc} \text{Ja-pe-re-so .} & \text{HORD} & \text{T 2} & \text{NI} & \text{V 3} & \text{VIN} & \text{V 2} \\ & \text{FAR} & \text{V 1} & \text{OLE} & \text{V 1} & & \end{array}$$

This tablet, since it contains only one term followed by five commodities with the related figures, contains a record of the Linear A first type. The Mycenaean scribe listed it precisely as his Minoan colleague would have done. The tablet is in fact very similar to HT 21 with the difference that there the lines are not separated by means of a horizontal segment and here there is no transaction sign.

There are also other examples in Linear B such as the following ones:

GA (2) 418

Su-ri-mi-jo / po-ni-ki-jo M 3
ko-ri-ja-do-no T 5

It has a record of the first type on it, i. e. a record made up of only one term x followed by different amounts of commodities which, in this case, are indicated by means of phonetic groups.

L 520 is another example of the first pattern. It contains three records of LANA and *164 divided by the horizontal stroke. In the first line a term (pe-re-ke) is directly premised to *164, precisely as it also happens in the Linear A records.

But the second patterns is also attested in Mycenaean tablets. In this regard we can consider the following examples:

Db 1327 + *alia*

ki-mu-ku / su-ki-rita OVIS^m 120 OVIS^f 80

CO 903

Wa-to / a-ko-ra-ja OVIS^m 60 OVIS^f 270 CAP^m 49
CAP^f 130 SUS 17 SUS^f 41 BOS^m 2 BOS^f 4

DI (1) 946 + *fr.*

ke-u-sa / po-ti-ni-ja-we-jo OVIS^f 70 LANA 7
si-ja-du-we, o ki OVIS^m 70 o LANA 7

Lc (1) 525:

se-to-i-ja. / wa-na-ka-te-ra TELA³.+TE 40 LANA 100
tu-na-no TELA¹. 3 LANA

We can make the following observations about these tablets: the first is an evident example of the second pattern. The tablet contains in fact only one record which is made up of two x terms followed by two items with the related numerals. The second is another example of the same pattern with the difference that the list contains more items than the preceding one and it continues in the second line. Both, although there were commodities and here animals, have the same structure as HT35. The third example is still of the second type; it contains two records of OVIS and LANA and the first x term, which refers to both the lists, is not repeated by the scribe but it is written bigger than the other ones before the horizontal line. The same happens in the fourth tablet. In these regards we can underline the affinity between the Minoan and the Mycenaean scribe. Although we have a large number of Mycenaean tablets and consequently more patterns than in Linear A, in the last two tablets the Linear B scribe does precisely what his Minoan colleague also does. He, in fact, does not repeat the initial term but puts it at the beginning of the tablet to indicate that it refers to both the records on it. This affinity is so remarkable that it leads us to make an experiment. We can for instance rewrite DI(1) 946 + fr. without the line division, according to the Linear A second pattern of normalization. It becomes:

Ke-u-sa po-ti-ni-a-we-jo OVIS^f 70
LANA 7
si-ja-du-we o ki OVIS^m 70
o LANA 7

And we can also rewrite other tablets according to this same way. Co 903, for instance becomes:

Wa-to a-ko ra-ja OVIS^m 60
OVIS^f 270
CAP^m 49
CAP^f 130
SUS 17

SUS^f 41
 BOS^m 2
 BOS^f 4

We can do the same with many other tablets, since a lot of Mycenaean tablets belong to the second type but also the other Minoan patterns are attested among the Mycenaean ones. As far as the third pattern is concerned, for instance, we can consider a tablet such as E (2) 668. Its transcription is:

ru-ki-ti-jo GRA 246 T 7
 tu-ri-si-jo GRA 261 ra-ti-jo GRA 30 T 5

which, according to the x-y-k terminology, becomes:

x₁ y k₁
 x₂ y k₂ x₃ y k₃

from which it is possible to extrapolate the structural formula: x_j y k_j (j=1..n), which is perfectly equivalent to the third structural formula of Linear A, with the difference that while the scribe of Linear A puts the commodity at the beginning of the tablet not repeating it, the scribe of Linear B is more accurate repeating it three times. According to the Minoan normalization, this tablet would become:

GRA ru-ki-ti-jo 246 T 7
 tu-ri-si-jo 261
 ra-ti-jo 30 T 5

The same kind of normalization is also possible for a lot of other tablets, such as for instance E749+5532+fr.

.1 qa-ra-jo GRA 25
.2 ru-ki-ti-jo GRA 23[
.3 ti-ri-ti-jo GRA [
.4 [su]-ri-mi-jo GRA [] 1 T 2 'V 3'
.5 qa-mi-jo, GRA 12 T 5
.6 u-ta-ni-jo, GRA [
. 7 pu-si-jo, GRA 6 [

which, according to the Linear A normalization criteria, becomes:

GRA qa-ra-jo 25
 ru-ki-ti-jo 23
 ti-ri-ti-jo [
 [su]-ri-mi-jo]1 T 2 'V 3'
 etc.

But we also have tablets belonging to the fourth group. Ld (1) 587 +*alia* is an example. It is:

Tosa, po-ki-ro-nu-ka TELA² 24 re-u-ko-nu-ka TELA² 372
 Ko-ro-ta TELA² 14 56-ra-ku-ja TELA* 42 po-ri-wa TELA² 1

According to the linear A normalization it becomes:

Tosa TELA² po-ki-ro-nu-ka 24
 re-u-ko-nu-ka 372
 ko-ro-ta 14
 *56-ra-ku-ja 42
 po-ri-wa 1

Several tablets of the DK series contain mixed records on them. DK (2) 1064, for instance, contains a record of the first type in the first line and a record which belongs to the second type in the second line..

So, replying to the initial question if the Linear A patterns are also present in Linear B, we must give a very clear answer. Among the Mycenaean patterns, it is possible to find the structural formulae according to which the Minoan records were compiled but they are not very obvious to recognize because the division in lines imposes a different disposition of the words on the tablets. The Mycenaean scribe has to respect a precision which is unusual for his Minoan colleague. If he does not repeat the common terms that refer to more than one list, he draws attention to them by putting them in the heading and by writing them bigger than the others. But, if it is necessary, he does not hesitate to repeat the same terms also in each line of the tablet. Compared to the Minoan scribe he seems to be more accurate, meticulous, in other words more bureaucratic. He attentively plans his work and, by subdividing them in lines, he also attentively plans all the spaces of the tablets in a way which in my opinion is also visually more organic and coherent. A tablet such as GE603, if we attentively observe it, contains seven records of the first type each of which is disposed on a single line. It does not only represent a perfect example in the spatial possession of the available material but, in my opinion, is also very agreeable to see.

But this is not all since, if we return to the normalization of the Mycenaean tablets according to the Minoan patterns, it is clear that we can also do the opposite, i. e. to rewrite a Minoan tablet according to the Mycenaean way. I do not know if it is a polite thing in the regards of the scribe but I must confess that often, when I am studying a Minoan tablet, I rewrite it in the Mycenaean way. This is a very instructive thing since the line disposition allows me to see the position of the terms better and investigate their “positional energy”. So, by adopting the line subdivision, a tablet such as HT85a becomes:

a-du	AA	. da-we-da	AA	12
a-du	AA	. *01-ni	AA	12
a-du	AA	. u-do	*23	6
a-du	AA	. da-si	*85	24
a-du	AA	. ku	*101-ni	5
a-du	AA	. te-ke		3
a-du	AA	. da-re		4
ku-ro	[]			66

HT95a becomes:

da-du-ma-ta	da-me	10
da-du-ma-ta	mi-nu-te	10
da-du-ma-ta	sa-ru	20
da-du-ma-ta	ku-ni-su	10
da-du-ma-ta	di-de-ru	10
da-du-ma-ta	qe-ra ₂ -u	7

HT6a becomes:

ka-pa da-ta-ra .‡. NI15, pi-ta-ja 24, RU+JA Lm23,² ma-*101 10, *04-*58*di-*61 2, ka-pa-qe 5+Lm8
da-qe-ra . qe-pi-ta 22+Lm8, NI 15+Lm9

It is possible to continue this exercise with Minoan tablets, whatever type they belong to. Anyone familiar with Mycenaean recording practices who applies the structural formulae identified in the Minoan records can undertake it. Chadwick encouraged me to pursue this approach and also taught me how to prepare a cryptographic table on this basis. However, this was many years ago, when I believed that each of the identified patterns corresponded to the following interpretation:

Pattern 1: one name is associated with different quantities of different commodities;

Pattern 2: two or more names are associated with different quantities of different commodities;

Pattern 3: different quantities of one commodity are associated with different names;

Pattern 4: a single commodity, preceded by one or occasionally more names in the heading, is associated with several different names, each accompanied by the corresponding quantity.

Pattern 5: two names are followed by a numeral.

At the time, I was far from imagining how many more years would be needed to read and translate the Minoan documents.

The potential energy of the terms

Once the lists have been normalized and once they have been compared with the Mycenaean ones, a question becomes obvious: what advantages do we obtain from it?

Mainly three advantages:

- 1) the right reading of the records;
- 2) the right reading of the terms that make up the records;
- 3) the identification of the *potential energy* of the above terms.

1) The records, being economic accounts, contain many terms which occur more than once. Since the positions in which these terms occur are only two (heading or list), and, since these positions must be congruent between them and respectively reciprocal, it is possible to enunciate the following mathematical principle: given two congruent and reciprocal positions of the heading and of the items, each term that occurs in them, according to the place it occupies, must respect the above congruence and reciprocity principles and consequently it –apart from proved exceptions- must be congruent with the terms which occur in congruent position and reciprocal with the terms which occur in reciprocal position. This is useful not only to normalize correctly the records, but also to prove the correctness of the normalization. It is not enough, in fact, that a single term which has been identified as an x term must remain an x term every time it occurs but it is also necessary that *all* the terms with which it occurs in congruent position must remain x terms. Only if all the congruencies and all the reciprocities are respected, can we be certain that the tablets have been correctly normalized. In this way the records will be homogenous and comparable among them. Particular attention must therefore be paid to the segmentation of terms composed of several signs, especially when they occur at the beginning of a record. An incorrect segmentation may create apparent words that are not supported by comparison with other occurrences. More importantly, it may obscure the structure of several records and hinder their comparison. In the cases discussed below, the GORILA edition does not consistently reflect the separators marked by the scribes and adopts segmentations that comparative analysis calls into question. Relying on these readings without checking them against the inscriptions and parallel occurrences may therefore lead to incorrect identification of the terms and compromise subsequent attempts at linguistic interpretation.

Some examples:

HT8a: the word *01-ka-ra-ti (lines 1-2) must be divided into *01 (𐀀) which is the heading of the record and ka-ra-ti which is the first item of the list. This reading is confirmed a) by the comparison of all the lists in which the sign *01 occurs, b) by the comparison of the lists in which the other terms appear, and c) by the observation that this reading makes the interpretation of the record easier: it belongs to the third type and it is comparable with other similar ones such as HT8b (from the line 3 onwards); 9b (line 1); 103 (from line 3 onwards). To persist in considering *01-ka-ra-ti as if it were a single word means not only to create an inexistent word but also to make incomprehensible not one but *several* records, making their comparison impossible.

HT8b, line 3 contains a record of the third type. The initial term must be divided into *01 (𐀀), which constitutes the heading, and *87 (𐀓) which is the first item of the list. (For 𐀓 see HT15a,4; 56a,1; 103,3.)

HT16: the initial term has to be divided into KA (𐀀) and ku-pa. The reading is based on the fact that a) ku-pa also occurs alone (HT110a,2; ZA11a,5 and b,3), b) by the comparison with the other terms as they appear in all the respective records, c) by the comparison of the occurrences of the sign 𐀀.

HT97a: the initial term in the third line has to be read KA (𐀀) and nu-ti. It begins a record of the third type, as it is possible to obtain confirmation by the logographic use of KA in other tablets such as HT11b, HT16, etc.

HT32: SU (𐀀) is the initial term in the third line. RE (𐀓) is the first item of the list, the second is DI (𐀓). This reading is confirmed by the analogy with the record that follows in the fourth line, and by all the occurrences of the signs 𐀓 and 𐀓.

PH2,1: the first two signs are the ligature $\overline{\text{𐤀𐤁}}$ written with the signs one after the other ($\text{𐤀} \text{𐤁}$). The tablet belongs to the fourth type and it contains two records. The first concerns the commodity OLE+A ($\overline{\text{𐤀𐤁}}$), the second begins in the fourth line and concerns only OLE ($\overline{\text{𐤀}}$).

ZA14: ME is the initial term of the record. Ki-di is the first item of the list. It occurs also on HT93a,2-3, where it is followed by the logogram of the figs (𐤀𐤁).

So, lacking indications from the scribe, only the comparison of the texts allows us to verify the correctness of the normalization. Very rarely the scribe divides the records by putting them on different lines.

Sometimes he uses a horizontal stroke or a space but, for the most part, the accounts are recorded one after the other without spaces, lines or other dividing indications. Consequently, only the comparison of the texts and the potential energy of the terms allow us to make no mistakes.

2) The second point is an obvious consequence of the first one since it is clear that we can read the words of the records, only after we have correctly identified them. Regarding this, it is necessary to make some remarks about the type of punctuation is used by the scribe. The full stop, which often is written as a little vertical stroke is the most important above all. But it is not always present. Sometimes the scribe leaves a space in order to divide the words and sometimes the full stop is not easily recognizable or because the tablet is damaged or because it is confused with the tens or the units which several scribes write as points or as little strokes. Some signs appear with a point next to them. I have conducted researches into the sign Ψ with a point near it (Ψ . and Ψ), but, although I have not reached any final conclusion regarding this, it is certain that there are in Linear A signs which are modified by adding a point or a little stroke to them. There is a difference between 𐤀 and 𐤁 , between 𐤂 and 𐤃 , and between Ψ and the same sign with a little central stroke inside it (see, for instance, ARKH2,1 and 2). I think it is not correct to deal with them without noting these differences and I consider each of them as a single sign also because I cannot forget what Chadwick wrote to me regarding the sign which in Linear B stands for TELA. A sign which varies by the number of strokes in the fringe at bottom. At first the scholars and Chadwick himself did not give much importance to this but, subsequently, he wrote to me “we now think that the number of strokes in the fringe at the bottom is significant!”.

But, returning to the scribe, in addition to the point and the spaces, he writes some signs smaller than the other ones. This can be seen in the group i-ka ($\text{𐤀} \text{𐤁}$) where the second sign is smaller than the first one (see HT91,1 and 102, 4) and in the initial group on HT28a and b,1 where the word a-ne-ja-ka is written with the final syllable ka (𐤀) smaller than the other ones. Also 𐤁 is smaller on KH7a 1 and 4 and once, on HT15,1, the scribe writes a whole group (du-*65-a) smaller than the ideogram (𐤀) to which it refers. The preceding ones are only some examples but these peculiarities are evident when examining the photographs and comparing the different editions of the documents. In this respect I must say that the publication of the Linear A texts by Raison and Pope is very accurate and respectful of the originals.

Nevertheless, the so-called ligatures are certainly the most interesting among the ways of writing the scribe adopted. They are the ideographic union of two, rarely three, signs.

The Linear A signs can be divided into four fundamental groups:

- 1) pictograms i.e. signs which depict the notion which they refer to: 𐤀 =HOMO; 𐤁 , 𐤂 , 𐤃 =VAS; 𐤄 =PELLIS etc;
- 2) ideograms i.e. signs which are exclusively (or almost exclusively) used to indicate ideographically the notion which they refer to: 𐤅 =GRA, 𐤆 =HORD, 𐤇 =VINUM, 𐤈 =*67, 𐤉 =OLE, 𐤊 =OLIV etc.

Transaction signs and metrograms belong to this group;

- 3) logograms i.e. signs which are used independently to represent a word in abbreviated form by recording only its initial syllable.: 𐤋 , 𐤌 , 𐤍 , 𐤎 , 𐤏 , 𐤐 , 𐤑 , 𐤒 , 𐤓 , 𐤔 , 𐤕 , 𐤖 , 𐤗 , 𐤘 , 𐤙 , 𐤚 etc. They are the largest part of the Minoan signs and almost all have two values, since they are used both as logograms and as syllabic phonograms in the formation of words, although there are some of them, such as 𐤛 and 𐤜 , which can be used in three ways, as metrograms, ideograms and phonograms;

- 4) phonograms i.e. signs which are used with a syllabic phonetic value. These are the same signs that also function as logograms, although a few have so far been attested only in phonetic use. At present, these include only 𐤛 , 𐤜 , 𐤝 , 𐤞 , 𐤟 , 𐤠 and a few others. The absence of attested logographic uses may, however, be accidental. The majority of Linear A signs thus appear to function both as logograms and as syllabic phonograms, as also occurs in Linear B (see the lists of signs and sign groups in GORILA and in the second edition of *Documents in Mycenaean Greek*, revised by John Chadwick).

Consequently, the ligatures can be made up in one of the following ways:

- 1) pictogram + pictogram: , ,  = HOMO+HASTA, etc;
- 2) pictogram + ideogram:  = VAS+*67,  = VAS+metrogram,  = VAS+OLIV, etc.;
- 3) pictogram + logogram:  = HOMO+KA;  = VAS+RU;  = VAS+SU etc.
- 4) ideogram + ideogram:  = GRA+metrogram;  = HORD+metrogram, etc.;
- 5) ideogram + logogram (and vice versa):  = VINUM+SA,  = GRA+QE,  = OLE+DI,  = OLE+TA,  = OLE+RA,  = OLE+KI ecc. ecc.;
- 6) logogram + logogram:  = A+TI,  = KA+E,  = MA+RU;  = A+KA,  = RU+JA,  = SE+RE etc.

The pictograms are very few. They are for the most part limited to the notion of HOMO, VAS, PELLIS.

There are few others which depict a flower, an animal, and also a vessel in the bull-shape ().

Sometimes the pictographic origin is underlined by the scribe (see the double axe on IOZa3) or the head of cat on IOZa2d, or the sign  on PHZa3. Rarely do ligatures made up of three signs occur, see, for instance, , , , , , , , ,  and so on. There are several ligatures which also occur written in plane, i.e. with the signs written one after the other, see:  and ,  and ,  and , etc.

3) the third point concerns all the terms (both made up of one and several signs), each of which has its own potential (i.e. positional) energy, which can be deduced a) by the comparison of all the occurrences in which it occurs and b) by the comparison of the occurrences of all the terms with which it appears in congruent or reciprocal position. This potential energy allows us to understand the role each term has and, consequently, to give an answer to three unavoidable questions.

-The first is the following one: in addition to the transaction signs we already recognize, are there additional terms with a similar value? Yes, there are terms such as  (ARKH2,4; ZA14,1; ZA5a,1; KH88,1) whose potential energy is exactly the same as the transaction signs. This is also true for  (HT7b,1; 87,1; 117b,1), for  (HT44,1; 96b,1; KH10,3 ecc.) and for . And, on the basis of the analogy with similar records, also  (PA1) and  (SYZg1) have the same potential energy as the transaction signs. A term inherent to the transaction must be considered also . By examining its potential energy one can ascertain that it a) can be used both ideographically and phonetically; b) if it is used ideographically it occurs alone, ligatured or placed after the term to which it refers; c) since it alternates with terms which indicate transaction, is itself a term which deals with the transaction.

-The second question is the following one: do terms exist the role of which is certainly recognizable?

Commodities and terms congruent with them certainly have this property but there are four tablets which are very indicative in this subject. They are HT27a, 89, 94a and 100. They all belong to the mixed type (sixth pattern) and, although HT100 is damaged at the beginning, they all have the same structure since an $x \ x_j \ k_j$ ($j=1..n$) record is followed by the total and by another record of agricultural products such as barley, figs and wine (on HT100 there are also perfumed oils). What is easily recognizable is that all the terms of the first record deal with the notion of HOMO, since this pictogram is present among them and since they are a sum total. Among these terms there are some such as RE () , TA () , ta-ra (), KI () , which, being present also elsewhere, allow us to understand the value of other congruent terms. Returning, for instance to HT32, we have in the third line a record which has SU as the heading and RE and DI as items of the list. In the fourth line OLE+*61 is the heading and RE and DI as items of the list. Knowing that RE refers to HOMO, we must be sure that also DI refers to the same notion. In the same way, on the basis of the analogy with the perfumed oil recorded in the fourth line, one must be certain that also the term SU refers to a commodity, what is confirmed by the comparison of the occurrences of this sign, which appears also inscribed in a vessel .

It is possible to make a lot of similar examples, applying the method which Chadwick himself taught to me: "The basic technique is to index the texts so as to be able to study a group/word in all its contexts, and thus to deduce its approximate meaning. This leads to the identification of other words, and so to the solution of any word used frequently. There is usually a residue of rare words which remain intractable". In fact, on the basis of the above examples, we can assume that the following terms: RE () , TA () , *66 () , DI () , *87 () , *87+KU, *35 () *35+*87, PA () , KI () , KU () refer to the notion of HOMO. And in the same way we can assume that the terms: KA () , PU () , *01 () , SU () , *81b () , *90 () refer to commodities. They all are terms that, once identified, allow, on the basis of the above congruence principle, to identify other similar signs and terms.

- The third question is therefore: after nearly sixty years of unsuccessful attempts, is it not time to adopt a more constructive approach, recognizing Linear A as a writing system in its own right rather than treating it as if it were a copy of Linear B?

Let us consider, for instance, the case of the sign TI (Λ) and let us consider the respective records on KN1a and KN1b; which, on the basis of the potential energy of TI, must be read:

KN1a ja-ku TI ⌘ 240

KN1b ja-du-ra TI ⌘ 105

Reading which is confirmed by the fact that both ja-ku and, perhaps, [ja]du-ra are present also elsewhere (cf. MA2b,2 and MA2a,1). So, once one has ascertained that the sign TI is a word by itself, two important consequences arise: a) the words ja-ku-ti and ja-du-ra-ti do not exist in the Minoan vocabulary and to look for them is only a waste of time b) the records, once they have been read in the correct way, finally acquire a sense. The potential energy of TI proves that it is a term which deals with the transaction. Giving it the approximate value of “payment” (or something like that), we have: ja-ku, payment of 240 units of the commodity ⌘, and ja-du-ra, payment of 105 units of the same commodity.

Other groups, such as, [ja]-ma-uTI (MA2c,2), ko-sa-iTI (HT117a,7-8), da-*61-kuTI (HT117a,8-9) ecc. must be read in the same way, seeing as they also made up of *two* morphological elements, which are different to each other.

But TI (Λ) is not the only sign which keeps a high ideographic input. The compared study of the respective occurrences proves that there are others which have the same characteristics. The more used among them are: KA (⊕), I (Ψ), A (⌈), and DA (⌋).

Examining the sign KA, its potential energy shows a) that it can be placed both before and after the term to which it refers and b) that its approximate meaning must be “offering” or something similar. To make some examples, it is placed after in a-si-ja KA (HT28a,1; b,1) which must not be read as only one term but as a-si-ja + offering. It is placed before in KA po-ru (HT115a,5), which must be read as offering + poru which, considering the very diffused variation Linear A “ru”/ Linear B “ro”, can be the equivalent of the Mycenaean po-ro with the result that the term means “carriers of offerings” and it is the *scriptio plena* of ⌘.

The sign Ψ (I) is used both phonetically and ideographically. If it is used with ideographic value, it can be a transaction sign or a logogram which is placed before the term to which it refers. The potential energy leads us to a meaning such as “sacred”. So, there is no point in looking for a word such as Ψ⊕ (=IKA HT91,1; 102,4) it is a ligature, as also the fact that the second sign is smaller than the first one proves, and its meaning is “sacred offering”, and Ψ⌘ means “sacred man” i.e. man with sacred duties (HT7a,1-2; on 93a,5 it is inverted) and Ψ⌋ means sacred DA.

⌈ is the sign of the double axe and it indicates the upper most hierarchy since its potential energy leads us to believe that there is a regal significance behind it. It is placed before the term to which it refers as it happens, for instance, in ⌈⌋⌘ (a term which occurs frequently in documents), which consequently assumes the meaning of “royal DU”.

DA (⌋) can be placed both before and (very rarely) after the term to which it refers. But its potential energy indicates that it has a different meaning in both cases. If it is placed before as in DAKu-na, it has the same role that it takes in DAMa-te. If it is placed after as in qa-tiDA it changes its meaning and indicates something having to do with the transaction.

So, by considering Linear A to be an individual graphic system, different interpretations develop from the confused ones that we obtain when we apply the Linear B graphic system to read it. Of course, these interpretations must be proved by the decipherment of the texts but they already indicate a writing system very consistent with the time and the places in which it was used.

If we persist in reading Linear A as it was Linear B, we obtain only the following result: the words that make up the texts will remain indistinct and not comparable among them. To convince ourselves of this we must take into consideration words such as, for instance, ka-na-ni-ti (KHWc2005). There is no point in trying to translate it since it does not exist as a word by itself. The scribe had no knowledge of the word ka-na-ni-ti. He had instead knowledge of three words: kana (HT23,1), FICUS and TI and *these* he wrote: kana- figs- payment!

What “decipherment” means

It consists in recognizing the peculiar morphological and grammatical features of the language, after one has recognized the graphic ones. Unfortunately, Chadwick died before I completed the part concerning the potential energy of the terms but, already after the comparison between the Linear A and Linear B accounts, he recommended that I should begin to prepare grids for the translation of the value of the signs. The last time I saw him, he was very tired and, as always, very worried about the publication of the Corpus

of the Inscriptions from Knossos. After giving me his usual advice (to pay attention to all the details, to compare, where possible, the publications and to write in English, etc, etc.) he continued to explain to me how to prepare a grid. He spoke again to me about his experience during the Second World War, when he was “a humble member of a British team which was trying to read Italian naval signals...” and, as far as the Linear A writing system is concerned, he recommended to prepare more grids developing them on the basis of their progressive difficulties.

Following his advice, I first prepared five, and then I summarized them into two grids which I joined together in a single grid (which is the one which is reported in this work).

In the first of the above two grids, I placed the signs the value of which we can obtain by:

- 1) the words which occur in both the languages;
- 2) the signs which alternate among themselves in both the writing systems;
- 3) the signs which alternate among themselves in Linear A.

In the second grid I placed:

- 1) the Linear A signs which respond to the Linear B signs with different vowel sounds;
- 2) the signs whose values can be obtained from the improvement in the study of Linear A.

The first point of the first grid is obvious enough. The following groups are present in both the languages: a-ti-ka (ZAWc 2), da-i-pi-ta (ZA8,5; etc.), ka-pa (HT6a,1; etc.), i-ja-te (PHZb,4), ki-da-ro (HT117a,9 etc.), pa-de (HT9a,2 etc.), se-to-i-ja (PRZa1b), su-ki-ri-ta (PHWa32), u-su (HT117a,2), i-ta-ja (HT28a,6), ma-di (HT85b,5; etc.); ku-mi-na (ZA10a,4, etc.). More problematic are pa-i-to, which probably occurs only on HT97a,3, and a-ra-ko (KO?Zf2), which is too damaged to allow us any certainty. Since these words are the same in both the languages, obviously, one is led to assume that the signs that make them up have the same value in both the writing systems. But a question arises: why are they so few? In two languages spoken in the same area (Crete) and by two closely related peoples, one would expect a higher number of them.

I asked Chadwick about this, and he suggested an experiment. We chose the Linear A alternation ku-pa₃-nu/ku-pa₃-na-tu and the Linear B alternation ka-pa₃-no/ka-pa₃-na-to, and we rewrote the forms in the two scripts. This made the correspondence difficult to recognize: when the vowel changes, the sign also changes, so the corresponding forms differ graphically. I therefore concluded that more terms might be shared by the two languages than we can recognize, because vowel differences may obscure these correspondences.

The second and the third point of the first grid are in turn obvious enough. If we have signs which alternate among themselves in two different writing systems, we are led to believe that they have the same value. So, it is proved that in both Linear A and Linear B “a” alternates with “ja”², that “qa” alternates with “qe”, “re” with “ri”, “ra” with “re”, “te” with “ti” etc. To these we can add the signs that alternate among themselves in Linear A, which are: u/o, u/wa, ka/ke, ki/ke, ma/mi, me/ma, nu/na, ni/na, ta/te, te/to etc., some of which alternate in turn with signs of the preceding point (for instance te/ti) and consequently, on the basis of the transitive property, we are led to think that their respective values are the same. But there is one thing which must be underlined regarding this: none of the preceding variations gives a precise indication about the vowel sounds of the signs since, by attentively observing, we can see that the Linear B indications are above all related to the consonantal part of the signs.

The first point of the second grid is the only one that gives some indications about the vowel part of the Linear A signs but, if it is misinterpreted, it could be deceptive. We can see that Linear B responds to the Linear A following words di-de-ru, ka-sa-ru, a-ti-ru, qa-qa-ru, a-ka-ru, ka-ru and ma-ru etc. with di-de-ro, ka-sa-ro, a-ti-ro, qa-qa-ro, a-ka-ro, ka-ro and ma-ro and the same happens with Linear A a-ta-re, pa-ja-re, te-ja-re, a-ra-na-re to which Linear B responds with a-ta-ro, pa-ja-ro, te-ja-ro, a-ra-na-ro. This, on one hand, confirms the consonantal value “r” for the signs $\curvearrowright$ (=ru) and Ψ (=re) but, on the other hand, opens a series of interesting questions such as: how extended is this phenomenon? Does it happen also at the beginning and in the middle of the words? Is it also present in other signs? Is it possible to think of a value “rwo” or “rjo” for the sign $\curvearrowright$? We will be able to give answers to all these questions only after the language has been deciphered.

² Since the value of the signs must be confirmed by the translation of the documents and since this part has only the aim to prepare this translation, the respective references of both the languages have been omitted in order to not make the text too heavy.

At the moment it is only possible to note the following Linear A/Linear B alternances, ka-ra-ti/ ka-ra-to, ro-ke/ro-ko, ku-ku-da-ra/ ku-ka-da-ro, ku-ma/ka-ma, ku-ru-ku/ku-ru-ka, ka-ku/ka-ko, ka-ju/ka-jo, a-ti-ju/a-ti-ja, ke-ki-ru/ke-ku-ro, a-ki-ro/a-ku-ro/a-ke-ro, a-ka-ru/a-ka-wo/a-ka-re-wo, qe-ti/qe-ti-ja, di-ja/di-wi-ja, a-su-ja/a-si-wi-ja, a-ru/a-ri-wo, sa-ma-ro/sa-ma-ri-jo, ma-ru/ma-ri-wo besides than Linear A ki-rita/ki-ri-te-wi-ja and Linear B ma-ri-ta/ma-ri-ti-wi-jo etc., a-maja/a-me-ja, u-na-ka/a-na-ka, a-ra-u-da/a-re-u-da, sa-ma-ro/sa-ma-ri-jo, etc.

The second point of the second grid is the most innovative one, since it is based on Linear A itself, on the progress one can obtain in its understanding. It is possible to begin with the terms which have been interpreted as terms that have to do with the transaction, in order to try to read them and to give a value to the signs that make them up. We can, for instance, begin with:

from the first variation $\triangle / \downarrow$ we can argue a consonantal value “t” for the sign $\triangle$, also confirmed by the variation $\uparrow \triangle / \uparrow \downarrow$.

$\odot \downarrow \uparrow$ is very similar in the consonantal part of the first two signs to Mycenaean qe-te-jo, so, since also their respective potential energy is the same, one can think of a value “jo” for the sign $\uparrow$.

The sign ∇ remains, but, before we deal with it, a misunderstanding must be cleared up. It is not true that the Linear B sign whose value is “wo” does not exist in Linear A. The sign ∇ correspond perfectly to it and the sign ∇ is, on the basis of its potential energy, a variant of it with the value of o₂.

So, summing up, I propose the following values: $\triangle$ = tjo, $\uparrow$ = jo, ∇ and ∇ = wo. These values are obviously only hypothetical and they will be accepted when they are confirmed by means of a homogeneous, congruent and plausible translation of their occurrences in the words.

So, summing up the grid based on the above points is the following one:

A	E	I	O	U	A ₂
JA	JE		JO	JU	JO ₂
WA	WE	WI	WO		WO ₂
DA	DE	DI		DU	DJA DE ₂
KA	KE	KI	KO	KU	
MA	ME	MI		MU	MNA
NA	NE	NI		NU	
PA		PI	PO	PU	PA ₃ PU ₂ PU ₃
QA	QE	QI			
RA	RE	RI	RO	RU	RA ₂
SA	SE	SI	SO	SU	SI ₂
TA	TE	TI	TO	TU	TJA TJO
ZA	ZE				

It is possible to make the following remarks:

- 1) up to now the sign ∇ (“e”) is attested at Haghia Triada almost always with ideographic value. It occurs alone or in ligature, but only once, on HT34,2-3, with other signs.
- 2) The sign ∇ (“u”) alternates with the sign ∇ (“o”), (cf. a-mi-da-u/a-mi-da-o).
- 3) The sign ∇ (“ri”) is more than once attested without the central stroke (∇). In this case it is the equivalent of the Linear B sign for “we” .

- 4) The sign 𐀀 is the same as the sign which stands for “wo” in Linear B. The comparison of the respective occurrences, in which the sign 𐀀 appears leads to believe that this sign is a variant of the preceding one with the value of “wo₂” or, perhaps, “oi”.
- 5) Four signs are very similar. They are : 𐀁 , 𐀂 , 𐀃 , 𐀄 . Once and for all, can we please free ourselves of the following misunderstanding? It is 𐀂 and not 𐀁 on KH88,1 and on CRZf1¹¹. There is no doubt in this because, seeing the respective photographs, we can easily ascertain this. The third sign (𐀃) alternates with 𐀄 in the groups $\text{𐀁 𐀄 𐀂} / \text{𐀁 𐀃 𐀂}$. Since $\text{𐀄} = \text{“de”}$, $\text{𐀃} = \text{“de}_2\text{”}$.
- 6) The sign 𐀅 appears also with the internal strokes placed crosswise. This does not modify its value in tablets such as HT11a, ZA4a,8 etc.
- 7) The sign 𐀆 appears both with and without a central stroke inside it (see, for instance ARKH2, 1 and 2). In the first case it has the value of “si”, in the second the value of “ne”. When it is used as ideogram, it probably has the same value as in Linear B (NE), but in the other cases, the scribe is not very precise and often the sign occurs in damaged contexts, so one must compare the respective occurrences paying much attention to ascertain if it stands for “ne” or “si”. Nevertheless, the equivalent of the Linear B sign “si” is attested once on ZA26a,1.
- 8) The sign 𐀇 stands for mi-na or, better, “mna”. This is for the following reasons a) on the basis of the alternances : u-mi-na-si (HT28b,1-2 etc.) / u- 𐀇 -si (HT15,1 etc.) and pi- 𐀇 -te (HT116a,4) /]pi-mi-na-te (APZa2,2), b) because it is similar to the Linear B ideogram for moon (μήνη) .
- 9) It is possible to test a value “qe₂” or, better, “qi” for the sign 𐀈 , because of the alternance sa-qe-ri (HT11a,4) / sa- 𐀈 -ri (ZA11b,1 and because the fact that the sign for qi is similar in Linear B.
- 10) There is the sign *174 which is very similar to the sign that stands for jo in Linear B. Since it is very rare (a-to-jo-to- 𐀉 KH11,4), I have recorded it as jo₂.

On the basis of the above grid, it is possible to try a hypothesis about the language. Chadwick wrote to me that it would have been necessary to experiment on more than one language, because only through experimentations could we hope to find the exact one. But, by reading correctly the records and by respecting the potential energy of the terms, there is only one language which becomes so evident that it is impossible not to see it.

I am speaking of Greek, which is the language I am beginning to test firstly on the basis of the following translations:

1) Items:

IDAm-te (ARZf1 ecc.) = sacred (I) $\Delta\tilde{\alpha}$ μήτηρ³;

DAku-na (HT103,4) =DA γυνή = $\Delta\tilde{\alpha}$ young bride;

DAku-se-jo (HT103,4-5) = $\Delta\tilde{\alpha}$ χύσεως<χύσεως i.e. of the production of metals or of richness;

DAqe-ra (HT6a,6 etc.) = $\Delta\tilde{\alpha}$ θήρας, i.e. of hunting;

DAKA (HTWa 1001-1005) = offering (KA) to $\Delta\tilde{\alpha}$;

a-si-jaKA (HT28a,1; b,1) = offering (KA) to 'Ασία (a divinity, daughter of Oceanus and Tetys);

IKA (HT91,1 etc.) = sacred (I) offering (KA);

KApo-ru (115a,5) = KA φόροι i.e carriers of offerings, also in the ideographic form HOMO+KA (𐀀);

ADU (passim) =royal (A) donation, DU= δῶς;

IDU (HT104,2-3) = sacred (I) donation (δῶς);

2) Single words:

u-mi-na-si (HT28b,1-2 etc.) =ὑμνησις, celebrations;

qa-qa-ru (HT93a,4-5 etc.) = βέβηλος, uninitiated;

pu-de (KH88,2) =σπονδή, libation;

ku-pa₃-nu (HT1,3, etc.) =κάβαρνος, priest, (see Hsch: κάβαρνοι. οἱ τῆς Δήμητρος ἱερεῖς);

ma-ri-tya (HT90,3) =μεριτεῖα, division.

pa-ra-jo (115a,4;b,1) = παλαιός, old;

Apa-ra-jo (HT96a,1-2; b,1) = royal (A) old (παλαιός).

³ In PH15b]ma-te-re occurs, which, on the basis of the variation re/ri, could be the dative of μήτηρ.

3) Proper names:

Ka-ra-ti (HT8a,2) = Κραῖθις, man;
Ka-qa (PK1,1) = Κάβης, man;
-A-ja-ku (KNZf13) = Αἰακός, man (Il 21,189 etc.);
Qe-si-te (MAZe11) = Θερσίτης, man;
Da-jo-ku (HT117a,8) = Δηίохος, man;
Ra-o-di-ki (PH2,1-2) = Λαοδίκη, woman (IL.6.252 ecc.);
A-ra-tu (ZA7a,1-2) = Ἀρητος, man;
Tu-ju-ma (HT117a,3-4) = Θώμας (Θάμας), man;
Ja-ra-ju (HT109,4; 122b,3) = Ἀρήιος, man (see also Ἀλήιος);
A-ri-pa (PE2) = Ἀρίσβας, man (IL.17,345);
A-na-nu (HT159) = Ἀνανος, man;
Ta-ri-na (HT10b,1-2) = Τηλίνης, man;
Mu-ru (HT3,4) = Μόλος (Il.10,269), man;
Da-tu (HT123a,6) = Δάιτος, man.

3) Brief inscriptions:

PKZb21 ki--ta-ni-te = ki-ta NI TE = Σκύτας (man), contribution (TE=τέλος)⁴ of figs (NI=FICUS).

HTZb159 a-na-nu ne-ja-se[= Ἀνανος (man) νήησε = Ananos filled (from νηέω, to fill. For ne-ja-se see also PEZb3).

5) Tablets:

KN1 a) ja-ku TI *44 240
 b) ja-du-ra TI *44 105

which means:

- a) Ἀργος payment (TI) of 240 units of the commodity *44 (ἄ)
- b) Ἡδύλη payment of 105 units of the same commodity.

Note

*44 stands for a commodity which appears frequently and is always followed by high figures. It could be the equivalent of ἔλνυμος, millet or ἑρέβιντος (Il 13,589) = chick-pea. On MAWc<5> it appears in ligature with GRA;

MA1

The tablet records that an offering to the goddess Δώς and another to the goddess MA have taken place.

side a) X I DU-wi . *102 . qe-de-mi-nu
side b) A MA . *102 . qe-de-mi-nu

The tablet has no figures and, on the side a, it begins with the sign X which in Linear B indicates that the scribe has checked it. So, the meaning of this tablet is the following one:

side a) it has been checked (X) that the offering (*102) for the sacred (I) Δώς (DU-wi) has been obtained with profit. (qe-de-mi-nu = κερδημένος);

side b) for the royal (A) mother (MA) the same offering (*102) has been obtained with profit.

Note.

Δώς (root in of) means gift and it is a name of Δημήτηρ (Hom122);

⁴ Τέλος = tax, from τελέω = to pay or, also, from the root *tel of τέλλω (regarding this, see Chantraine, Dictionnaire Etymologique de la langue grecque, Paris 1968, p. 1103).

*102 an offering, but, although the symbol is very similar, it seems to have a different meaning than Θ; qe-de-mi-nu = κερδημένος p.p.m. of κερδαινῶ, to obtain with profit. One would be expected a dental exitus of the labiovelar but also elsewhere, and in the same Linear B, a velar exitus is not rare. For “mi” instead of “me”, see the Linear A variation i/e (for instance ki-ri-ta₂/ ki-re-ta₂ and other similar ones.)

PA1 The tablet is similar to HT43 , but the commodity is different:

a-ku YU pa-tjo 35
 ”Αργος must sow (pa-tjo= σπαρτέον) 35 units of FAR (YU).

Note. ”Αργος, according the Linear B rules, represents a man whose name could also be ”Αλκων or Αἴγων;

the third sign stands for a commodity which, as it is possible to ascertain on the photo, is FAR (or, more difficulty, FAR+I, i. e FAR for sacred aims);

HT43 ma-neDU . pa-tjo . I IGRA 5[
 Μάνης, for the donation (DU=δῶς), must produce (pa-tjo =σπαρτέον) for sacred aim (I) 5[
 units of sacred wheat (IGRA).

Note

Between the second I (=𐀓) and GRA there is no punctuation mark. It is the sign which is damaged on the right side. The notion of IGRA= sacred wheat is also present on other tablets (see, for instance, HT93a 4-5; 120,4; etc);

HT41 Line 4) mi-da FIC pa-ja 2+Lm23²

Μίδας (man): 2+Lm23² units of figs for βαία

Note.

Βαία, an epithet of Δημήτηρ, could also be Φαία, woman’s name.

HT35 Ti-ti-ku *41 i-ku-ta HORD 1, *96+RU Lm19, ri OLE Lm19, *90 Lm19, taOLE [],
 E 5, *40+PU Lm18, roVIN Lm23.

Translation: for the religious contribution (*41) of the sacrifice (ti-ti-ku=θυτικόν), they who come to implore (i-ku-ta =ίκόντες): 1 unit of barley, Lm19 of a unit of *96+RU , Lm19 of a unit of riOLE, Lm19 of a unit of *90 etc.

Note.

Θυτικός is an adjective which occurs also on ZAZb3, with the same meaning. In this case it refers to the transaction sign *41, which appears also in others religious contexts.

i-ku-ta =ίκόντες daΐκω, to come to implore. However also sacred χύται (m.p), foundry workers, a kind of men here reserved to religious purposes, is possible.

PH2 The tablet contains two records of two types of oil. The first record refers to oil +A (i.e aOLE) and the second to oil. There is no doubt that OLE+A is the ligature 𐀓𐀀 written in plane.

aOLE tu-me . ra-o-di-ki 60
 pi-ru-qi-ju 60
 OLE sa-pa₃ 60

The translation is:

Oil of royal kind (A) for the homage (tu-me = τιμή): Λαοδίκη (woman’s name) 60 units, Φιλοίτιος (man’s name Od.20) 60 units;
 oil: Σέβης (man’s name) 60 units.

Note

Pi-ru-qi-ju, the third sign is *88.

HT2	A ka-ru	<i>u</i> OLE	20[
		]aOLE	17
		eOLE	3[
	Ki-re-ta-na	<i>u</i> OLE	54[
		aOLE	47

Translation: quantity available (ka-ru=καίρος) for the Palace (A) : 20[units of *u*Oil, 17 of]aOil and 3[of eOil. Belonging to Κυρίτα (another name of Δημήτηρ): 54[units of *u*Oil and 47 of aOil.

Note.

Ka-ru is a transaction term which indicated an agreed, available quantity. Here the term is preceded by the sign A which stands for royal. This means that the quantity has been agreed or it is available for the Palace. Ki-re-ta-na is ki-re-ta + “na” a suffix which, also elsewhere, means “to belong to”.

Ki-ri-ta= Κυρίτα, name of Δημήτηρ. The variation i/u is very frequent in Linear A (see as follows).

HT96b Apa-ra-jo qa-tjo ra-re I GRA 40+Lm8, roOLE 4, FIC 2+Lm18.

The royal (A) old (παλαιός) must give (qa-tjo) to the RE (attendant) of 'Pā (a divinity) for sacred aim (I) 40+Lm8 units of wheat, 4 units of roOil and 2+Lm18 units of figs.

Note

Apa-ra-jo, old in the sense of venerable; I prefer this interpretation instead of 'Ασφάλιος (a divinity name). The term occurs also as pa-ra-jo, without the initial A. The absence of a divine determinative in this form makes its identification with a divinity less convincing.

HT92 TE. ADU . GRA 680 *67 12

Tax (TE). Donation (δῶς) for the Palace (A) : 680 units of wheat and 12 of *67.

Note

The records show that there is a difference between TE and ADU, because the first stands for tax, imposed contribution, DU means donation (δῶς), which, since it is very often united to A, means donation for the palace.

KH88 *23-nu-ma wo₂-tjo FICUS 10
pu-de 8

*23-nu-ma must pay (οἰστέον) 10 units of figs and 8 libations (pu-de=σπονδή = libations, generally of wine

The Minoan language

The previous documents show that the Minoans spoke Greek. This truth can be further tested by considering:

- 1) the “graphical” rules that allow the correct reading of the words;
- 2) the translation of the texts;
- 3) the “grammatical” rules which allow to translate the texts and to recognize the kind of Greek the Minoan people spoke;
- 4) the Minoan social organization; if what emerges from the texts agrees with the knowledge we have of this people.

1) *The “graphical” rules that allow the correct reading of the words.*

In my 1988 article in *Minos*, I stated that I was convinced that Linear A was an agglutinative language. Although Chadwick gently tried to dissuade me, I remained convinced of this for several years. I was, of course, wrong. In fact, I made an error that many others make. At the time, I confused the writing system

with the language. It is the writing system that is agglutinative, since Linear A words are formed by adding ideographic elements to phonetic ones, as is also generally the case in Mesopotamian ideo-phonetic systems. My error was to mistake these ideographic elements for agglutinative suffixes rather than recognize them as logograms.

Terms such as A, I, KA, DU, TE, TI and DA, together with MA, RE, SA, TA, SE, MI, KI, NE, SU and DI, are among the most frequently used and can function as both phonograms and logograms. Regarding their logographic use, two aspects must be considered: a) their meaning and b) the way in which they combine with other signs, i.e. word formation.

a) The meaning:

A means “royal” and, since its symbol represents the double ax, which is in turn the symbol of the palace, it very probably comes, as it is already known, from ἀξίνη (see Hsch: ἀξίνη · δίστομος πέλεκυς). It always precedes the term to which it refers and the meaning “royal” is in the sense of “belonging to the palace” and, consequently, of “highest quality”.

I means “sacred” and has this meaning also when it is used as transaction sign. It is the logographic abbreviation of the Greek word ἱερός. (See also ἱρος.)

KA means “offering”, it often appears in religious contexts such as a-si-jaKA (HT28a,1;b,1) = offering to Ἀσία, a divinity, and IKA(HT91,1) = sacred offering. In my opinion, it stands for the word ka-na (HT23,1)= κάννα, κάνεον. Therefore ka-po-ru (HT115a,5) and  (passim) are the equivalents of the Greek word κανηφόρος.

DU is the equivalent of the Greek word δῶς = donation and it is almost always associated with the palace (see the very used word ADU = royal (A) donation). Rarely it is associated with people's names as in the case of ma-ne DU(HT43,1)= Μάνης donation, i.e. donation of Μάνης (man's name), or to noun as in the case of DUda-ma (HT6b,4)= δῶς δάσμα, i. e. part (δάσμα) of a donation (δῶς), which indicates a subtotal of the record.

TE means tax, imposed contribution. It is different from KA= offering and from δῶς = donation. It is commonly used as transaction sign in list of agricultural commodities and stands for τέλος = tax, from τελέω = to pay, from the root *tel of τέλλω (regarding this, see Chantraine, Dictionnaire Etymologique de la langue grecque, Paris 1968, p. 1103).

TI means payment, (Greek τίνω) and occurs both referred to commodities and to men.

DA = Δᾱ refers to the great goddess. It is surprising the number of words in which DA appears:

- DAsi-tjo (HT85a,3-4 etc.) = DA σιτίον = DA wheat;
- DAqe-ra (HT6a,6 etc.) = DA θήρα= DA of hunting;
- DAku-na (HT103,4) = DA γυνή = DA young bride;
- DAku-se-jo (HT103,4-5 etc.) = DA χύσεως (<χύσεϊως) = DA of the fusion of the metals;
- DA-na-si (HT126a,1) = DA νῆσις = DA weaving;
- DAta-ra (HT6a,1) = DA θηλή = DA prosperity;
- DAwe-da (HT10a,4etc)= DA ὕδης = DA of the descendants (Hsch), of the family;
- DAminu (HT117a,8) = DA σμῆνος = DA beehive;
- DAu-pu₃ (HT120,3-4) = DA ὄπιον, opium or, less probably, DAοφίων = of snakes;
- IDA (PKZa18 etc.) = sacred DA;
- IDA ma-te (ARF1) = sacred DA μήτηρ.

But regarding the words composed with DA, it is evident that they are for the most part names of groups of people devoted to the great mother DA, i.e. confraternities, which are largely attested in Minoan texts. DA is surely referred to the goddess only when it is preceded by I, i. e. by the sign which means sacred (see IDA=sacred DA or IDA ma-te= sacred DA μήτηρ). Rarely DA occurs after the term to which it refers and, in this case, it is the equivalent of the Greek word δαίς and means part, portion (see HT12 or KH5). MA, also, refers to the great goddess. It stands for μήτηρ and it occurs in forms such as AMA = royal μήτηρ or AMAja = belonging to the royal μήτηρ or also MAka-ri-te = offerings in thanks (χάριτες) to MA.

RE has a meaning such as attendant, supervisor, guardian or something similar. It perhaps has to do with λεῦσσω (cf. λεσῶνις, supervisor in Egypt).

SA is in correlation with RE, but although it designs people with special duties, his meaning remains uncertain. (Hsch: σαίς-κοῦρος).

TA stands for θής (Od.4.644 and Hsch: θής. δούλος, μισθοτός).

SE is in correlation with TA but it seems to have to do with religious contexts. It is possible that it the abbreviation of σημαντήρ, owner or σημαντωρ, head, guide.

MI appears in religious contexts and has probably to do with μεδέω, to protect, to heal.

KI refers to a class of men and, in my opinion, stands for κίρων= castrated. In this sense it refers both to pigs (HT118) and men (see Hsch: κίρων. ἄδύνατος πρὸς συνουσίαν).

NE is difficult to understand since it is easily confused with SI. It is used as trade mark referring to a kind of vessels. When it is ligatured, it means young (νεός).

SU, also, indicates vessels. On MA10a it occurs inscribed in a vessel. The comparison of all its occurrences confirms that it indicates vessels.

DI refers to a class of men, as it is possible to ascertain on the basis of the comparisons of its occurrences. He always follows the term to which refers (MA DI= the *di* man of MA, which on HT69.2 is written MA . DI). But, if it occurs at the beginning of the word, in religious context, it refers to a divinity, probably DI-we, the same as in Linear B.

Three words are regularly used in the Minoan documents. They are ku-ro, ki-ro and sara₂.

Ku-ro. As it is well known, it is the word that means total. It is the equivalent of the Greek word κῦρος = check, confirmation, from the verb κυρώω =to verify, to confirm. So, it must be translated “verified total” or, simply, “verified”. Po-to ku-ro means φόρτος =goods which have been verified, that is loaded goods which have been confirmed.

Ki-ro stands for deficit. Minoan people had three words to indicate a deficit. They are ki-ro=χῆρος, devoid, not having, which is the most used one; ki-ra-ja =χρεία lack, lack of, need; and ki-ra which is χρή⁵= it is necessary.

Sa-ra₂ appears on more than a tablet. I have been looking for its meaning for a long time but actually seeing as σάλλω is the Dorian form of θάλλω which means to flourish, to prosper and seeing as θαλία means abundance, prosperity, I am convinced that sa-ra₂ means surplus, reserve, stocks.

b)The formation of the words.

This second, very important, aspect concerns the ways in which the above terms join with the phonetic ones to form the words. I will clarify this by means of an example. For many years I looked for the meaning of the word I-nu-ma-re (ZA4a,5-6, etc.). On the basis of its potential energy, I was certain that it was not a proper name but, on the contrary, it indicated a kind of men. So, when I found the Greek equivalent ἐνομήρης= tied, linked, hostage, I felt as though I had touched the sky with my finger. But I remained for a long time unconvinced of this interpretation even after my initial joy. In reality it has taken me many years to understand that also in the case of i-nu-ma-re, the reading is fundamental. In fact, this word must be read Inu-maRE, i.e. RE (attendant) of the sacred (I) nu-ma (νομή =pasture or, also, distribution). This reading is confirmed a) by other terms having RE in final position b) by other terms in which one or more of the preceding logograms appear, whose meaning become comprehensible and congruent with other similar groups, if we give up reading them as if they were phonetic sign and we recognize correctly their value as logograms.

Examples of the group “a” are:

na-daRE (HT117a,5)= RE of Νέδα, a nymph;

ne-daRE (HT17,3) = RE of Νέδα (the same as above);

te-jaRE (HT117a,5) = RE of Θεᾶς, a divinity;

pa-ja RE (HT8b,5 etc) = RE of Βαία (a name of Δημήτηρ);

DA RE (passim) = RE of ΔΑ;

MA RE (HT55a,1) = RE of ΜΑ

Ara-na RE (HT1,4) = RE of the royal (A) Πήνη (a nymph).

⁵ The anaptyctic vowels in Linear A are often expressed by means of an “i” (see afterwards).

But there is a tablet, HT117a, which is very clear regarding this. It contains a list of ten debtors of offerings to a festival in honor of the goddess MA. The last three of these debtors are preceded by the word mi-ru-ta (μερίτης= included) and are all compounds in RE. The normalization of this tablet, up to the total which is placed at the beginning of the sixth line, is the following one:

MAka-ri-te . ki-ro	u-mi-na-si	u-su	1
		mi-tu	1
		ku-ra-mu	1
		ma-ru	1
		ku-pa ₃ -nu	1
		tu-ju-ma	1
		u-di-mi	1
		mi-ru-ta	raRE 1
			te-jaRE 1
			na-daRE 1

with the following translation:

Hymns of praise (u-mi-na-si = ὕμνησις⁶), offerings in thanks (χάριτες) to MA; are all debtors (ki-ro) of one offering: Ἴσος, (u-su II 11,101 etc.), Μίτυς (mi-tu), Κάλιαμος (ku-ra-mu), Μάρων (ma-ru Od. 9.197), the κάβαρνος i.e. the priest of Δημήτηρ (ku-pa₃-nu), Θώυμας (tu-ju-ma), Idmis (u-di-mi, the female of Ἰδμῶν); they are also included (mi-ru-ta = μερίτης, nom.pl.) the RE of RA⁷, the RE of Te-ja (θεῖας), and the RE of Na-da (Νέδα, a nymph).

Note

Many words belong to the group “b” and I think that it is clearer to deal with them in the respective contexts in order to underline the congruence of their reading. However to give an idea of them, I will list some few examples of them. But, since, it often happens that, a word, as in the case of Inu-maRE, is made up of more logographic⁸ elements, I have divided them in the following way:

1) words which contain one logographic sign, such as:

Ata-re (ZA 8,1), royal (A) τηρός (guardian), a religious office;

DAta-re (HT88,6), τηρός of DA;

TJAta-re (PK1,2), τηρός of θεά, a divinity;

KAre-ro (HTWc 3003), offerings from re-ro a class of men (see the place name Λέρος);

KApo-ru (115a,5), carriers (φόροι) of offerings (KA);

KAKupa (Wc3016a), KA κύμβη (κύπη), offering of bowls;

DUda-ma (HT6b,4), donation (δῶς) part (δᾶσμα);

ma-neDU (HT43,1), Μάνης (man's name) donation (δῶς);

pa-roSU (HT20,1), vessels SU containing βᾶρος;

qa-tiDA (HT12,1), lacking (χᾶτις) part (δαίς from δαίομαι);

a-si-aKA (HT28a,1;b,1), offerings to Ἀσία, a divinity;

MAka-ri-te (87,1; 117a,1) offerings in thanks (χάριτες) to MA;

du-meDI (HT19,3), DI (a class of persons) of Δύμη (a place name);

Aka-ru (HT2,1) καίρος (available) for the palace (A);

Asa-ra₂ (HT89,1), stocks of the Palace (A);

Ina-wa (PH6,1), sacred (I) ναῦς (na-wa);

⁶ It could have also to do with the plural dative of Ὑμῶν or Ὑσμῶναι, but it is improbable.

⁷ The term refers here to the function of a man, who is the RE, the attendant of the goddess Ῥῆ, (a short form of Ῥέα), but since the proper names are made up in the same way, the Greek man's name Ῥάρος (see HT96b,2) could have this etymology. This happens also with other terms such as DARE (passim), i. e. attendant (RE) of the great goddess DA, and the man's name Δάρης (also in IL 5,9).

2) words which contain two logographic signs:

ASEja (HT115a,4), belonging to the royal (A) SE;
AMAJa (KH14,1), belonging to the royal (A) MA;
Inu-maRE (ZA4a,5,6 etc), attendant (RE) of the sacred (I) pasture (νομή);
Ara-naRE (HT1a,4), attendant (RE) of the royal (A) Ρήνη (a nymph);
ma-kaITA (PK1,8), sacred (I) θής of the battle (μάχα)⁹;
ma-kaISE, (ZA8,4), sacred (I) SE of the battle (μάχα);
u-taISE (KH7b,2), sacred (I) SE of όρτή, celebration (u-ta = όρτή);
]u-taINE KH16,2), sacred NE (young) of]όρτή;
Iti-niSA (ZA15a,3), SA to the sacred (I) beach (θής-θινός ,see Hsch:θίν. ό άίγιαλός);
Idu-jo-NE (HT13,5-6), NE of the sacred (I) δοίός, duo (perhaps Demeter and Kore);
Iku-juTI (ZA6b,1), payment (TI) of the sacred κοϊόν, pledge (from κοέω, Hsch);
Atu-ri-siTI (KNZb,5), payment (TI) to the royal tu-ri-si, doors (see θυρίς);
Apu₂-naDU (HT14,3) = δώς (donation) as royal (A) ποινή (fine);

3) words which are fully made up of logographic signs:

KADI (ZA4a,8;15b,1) offerings of DI;
MARE (HT55a,1), attendant (RE) of the divinity MA;
ASE (HT93a,3etc.), royal (A) SE;
MIQI / QIMI (KHwC 2064, 2069 and KH74 and Wc2054-55);
DARE (7a,4 etc), attendant (RE) of DA;
KAKI (HT37,1,5), Offerings (KA) of KI, a class of men;
NEKA (HTWa1014-1018 etc) and KANE (HTWa1027), offerings (KA) of NE;
ITI (HT25b,2-3), sacred (I) payment (TI);
AMA (MA1b), royal (A) MA, a name of Δημήτηρ;
IDA passim, sacred (I) DA;
MADI (85b,5 etc.), DI (a class of men) of the divinity MA;
MAIMI (HT89,2), sacred (I) MI of MA;
IDUTI (HT104,2-3), payment of the sacred (I) donation (δώς);

On this basis we can begin to enunciate the following Linear A graphic rules:

- the signs, A, I, KA, DU, TE, TI, DA, MA, RE, SA, TA, SE, MI, KI, NE, SU, DI, other than having a phonetic value, have also a logographic value. The position they have inside the word and, obviously, the comparison of the occurrences, allows us to recognize if they have a logographic or a phonetic value and also allows us to read correctly the words;
- the Minoan words can be consequently made up 1) only of phonetic signs 2) of both phonetic and logographic signs 3) only of logographic signs.
- the phonetic signs stand for open syllables, for isolated vowels, for diphthongs (𐀀 =ai), for syllables with a double consonant (𐀁 =mna), for syllables such as rja (𐀒), tjo (𐀓), tja (𐀔) etc., and for monosyllabic word such as 𐀕 = θής, 𐀖 = Δᾱ, 𐀗 = δώς etc;
- the lengths of the syllable sounds are not indicated and there are variations in the writing of vowels such as those which are also present in Linear B: a/e, i/e, a/u etc. The variation i/u, however, is the most attested one: si-ru/σῦλον, ki-ri-ta₂/Κυρίτα, u-su/ἴσος, tu-nu/θῖνος, pi-re-na/πυρήνα, mi-ru-ta/μερίτης, a-ru-da-ra/Ἀριδήλα, Asu-pu-wa/Ασιπύη, ti-ti-ku/θυτικός, pi-ta-ja/φυτεία, etc.
- the second element of the diphthongs in “i” is generally omitted;
- “u” can be written we, wa, wo and wi and, when it is the second element of a diphthong, can be omitted;
- as far as the consonantal sounds are concerned the rules are the same as in Linear B with the following difference:

⁹ It is almost certain that μάχα stands for Μάχα, the divinity of the battle. See Hsch μαχητής (Il. 5.801 etc) · στρατηγός, military leader.

- the anaptyctic vowel is often expressed by means of the sound “i” (mi-na=μνα, u-mi-na-si=ύμνησις, ki-ra-ja=χρεία, mi-nu-te=μνοίτης etc.);

- there are few signs which have more than one value. Generally, but not always, the scribe indicates the difference by adding a little stroke or a point to them (see, for instance ζ and ζ = “ri” and = “we”). The sign which stands for “i” has both an ideographic and phonetic value. When it has a phonetic value and occurs in final position, it generally has the value of “no” (see da-no on HT12,6 = δάνος, debt; a-re-da-no (HT29,5) = Ἡριδάνος, a man’s name, etc).

But there is a thing to underline as far as the words fully made up of logographic elements are concerned. They are not an exception in the linear systems, because they exist in the most part of the ideophonetic systems and are present also in Linear B. Many years ago I was very surprised and asked Chadwick for an explanation to the fact that he read two words of Linear B, ku-ma as *ku* LANA (Of37,38,40 etc) and ku-ma-pa as *ku* LANA PA (Of 26,28,31 etc), i.e. as two ligatures made up respectively of two and three signs. The answer was a serious explanation about the value the signs assume according to their positions in the contexts they occur. Although at that moment I did not give much importance to this, I am now convinced that it was precisely that explanation which led me to give the utmost importance to the identification of the ideographic aspects in Linear A. Words fully made up of logographic signs should be expected in the Linear A writing system which is more ideographic than the Linear B one, as the mere numerical calculation of the ideograms proves without any doubt.

2) The translation of the texts

HT1

The tablet has not the indication of a commodity. For this reason, it is the continuation of a preceding tablet on which the commodity was recorded. It begins with a term (qe-ra₂-u) directly followed by the word meaning deficit. The normalization is the following one:

qe-ra ₂ -u	. ki-ro	197
dja-su		70[
]di-rjo-ke		52
ku-pa ₃ -nu		109
Ara-naRE		105

Translation:

Τηρεύς (qe-ra₂-u) owes (ki-ro= deficit) 197 units of a commodity recorded on a preceding tablet. Since ki-ro follows only qe-ra₂-u , we must deduce that Ἴάσος (dja-su),]di-rjo-ke, the priest (ku-pa₃-nu =κάβαρνος) and the attendant (RE) of the royal (A) Πήνη (a nymph) have respectively given 70[, 52, 109 and 105 units of the same commodity.

Note

Τηρεύς < Τηρηύς (cf. also Τελεύς).

Ki-ro, χῆρος= devoid (from χηρόω).

Dja-su= Ἴάσος, man’s name (cf. Il 15, 332 etc).

]di-rjo-ke, the word is in my opinion complete. It could be the equivalent of Drioξ, (see Δρύοψ, IL.20, 455etc.).

Ku-pa₃-nu, κάβαρνος, a priest of Δημήτηρ (cf.Hsch, κάβαρνοι· ἱερεῖς Δήμητρος).

HT2

A ka-ru	uOLE	20[
	]aOLE	17
	eOLE	3[
Ki-re-ta-na	uOLE	54[
	aOLE	47

Translation: quantity available (ka-ru=καίρός) for the Palace (A) : 20[units of uOil, 17 of]aOil and 3[of eOil. Belonging to Κυρίτα (another name of Δημήτηρ): 54[units of uOil and 47 of aOil.

Note.

Ka-ru is a transaction term which indicated an agreed, available quantity. Here the term is preceded by the sign A which stands for royal. This means that the quantity has been agreed or it is available for the Palace. Ki-re-ta-na is ki-re-ta + “na” a suffix which, also elsewhere, means “to belong to”. Ki-ri-ta= Κυρίτα, name of Δημήτηρ. The variation i/u is very frequent in Linear A (see as follows).

HT3

Only a few words are recognizable:

line 2:]qe-ra₂-ia[= Τηλέας or Θηραῖα, if the term is complete;

line 3: DI stands for a class of men with specific duties such as RE or KI or SA etc. In the seventh line, it also occurs together with MA in the form MADI, a confraternity = the *dimen* of MA= μάτηρ (the doric form of μήτηρ, a name of Δημήτηρ);

line 4: mu-ru, a man's name: Μόλος (Il 10, 269) or Μορύς (Il 13, 792 etc).

HT6

The tablet is inscribed on both sides but there is no correlation between them. The side a contains two records of the second type. This becomes clear if we normalize it according to the Linear B method:

Ka-pa DAta-ra .TE. FIC 15, pi-ta-ja 24, RU+JA Lm23², ma-dja 10, [. .]di-jo 2, ka-pa QE 5+Lm8
DAqe-ra . QE pi-ta 22+Lm8, FIC 15+ Lm9

Translation:

They have been collected (ka-pa):

as tribute (TE) from DA of plenty (DAta-ra =DA θηλή, a religious confraternity) 15 units of figs (FICUS), 24 trees (pi-ta-ja =φυτεία), Lm23² of a unit of pomegranate (RU+JA =ρόα), 10 barley buns (ma-dja =μαῖζα), 2 of [. .]di-jo, 5 and Lm8 units of ka-paQE;

from DA of hunting (DAqe-ra =DA θέρα, another confraternity): 22 and Lm8 units of QE in flatbreads (pi-ta=φυστή) and 15 and Lm9 units of figs.

Note

The initial term ka-pa refers to both the records.

Pi-ta-ja =φυτεία, with the variation i/u.

RU+JA , also ‘ροιά’, ‘ροή’.

DAqe-ra =DA θήρα i.e. of the hunting, probably a confraternity of hunters.

QEpi-ta = QE, a commodity, pi-ta= φυστή, buns of QE.

The side b is the continuation of some other record since it contains, in line 4, the word DUda-ma= DU δάσμα, i.e. portion, part (δάσμα) of the donation (DU =δῶς), a partial total which is followed by a figure which is too high compared to the total of the figures of the items that precede it.

Another record begins in the fifth line. The first word seems to be]da- ki, which, in my opinion, could be the equivalent of KI of DA, i.e. *kimen* of DA. This word is followed by sa-ma and pa₃-ni-na, two other types of men.

HT7a and b

The tablet belongs to the fourth type. The side b is the continuation of the side a. HOMO+I, i. e. men with (for)sacred duties, is the y term. The translation is the following one:

Lack (qe-ti=χαῖτις) of men with sacred duties (HOMO+I): 3 must be given from ru-ia, 4 from du-ja, 1 has already been given (TI) from ta-na, one must be given from DARE i.e. the attendant (RE) of DA , Θέστωρ has given one but he still must give (o₂-tu-jo=οἰστίον) another one, DA ru-[?] must give 2.

Note

For the variation qe-ti/ qa-ti, see HT12.

Ru-ja is a corporation with the name of the pomegranate (‘ροιά’). Du-ja also is a corporation.

The last sign of the last word in side b is perhaps a variant of the sign “to” (𐀓).
Οἰστῖον from οἰστύον, with the alternance i/u (Greek οἰστέον).

HT8a

The first term, *ieDI*, is followed by ten units of the perfumed *ki* Oil. It is the continuation of a preceding record. Then a new record begins which belongs to the third type and has PA₃ (𐀡) as commodity. Seven x terms refer to it. The last of these x terms is on the first line of side b.

The translation is:

Commodity PA₃ (a kind of corn): Κρᾱθις (ka-ra-ti) 1 and Lm9 units; PA (an association of men) 3 and Lm9 units; Θέστις (te-qi) 2 units; ka-63-no Lm8 of a unit; si-ki-ra Lm1 of a unit; ki-re-ta-na Lm 9 of a unit; su-pu₂ [.] 1 unit.

Note

Since on HT 93a,1 the sign 𐀡 occurs in ligature with GRA and since its phonetic value is pa₃, I think that it stands for a kind of corn and means σπέρμα (plant seed, Hom,2.307).

Te-qi, also Τελχίς.

Ki-re-ta-na, belonging (-na) to Κυρίτα (a name of Demeter), here, as elsewhere, a class of women devoted to this divinity.

HT8b

Lines 3-6, another record of the commodity PA₃ (𐀡).

Of the commodity PA₃: *87 (a kind of men) 2 units; qa-*63-no Lm1 plus Lm20 of a unit, they have been already collected (ka-pa) Lm9 of an unit; the RE of Βαία 1+Lm 2 units; *35+*87 (a kind of men) Lm9+Lm9 of a unit.

Note

Pa-ia-RE = RE (attendant) of Βαία, a name of Demeter. Pa-ja-ro in Linear B is a proper name.

*35+*87, a ligature, probably sailors since the first sign represents a ship.

HT9a

The tablet belongs to the fourth type and refers to a distribution. It has the transaction sign TE and wine is the commodity. The total is indicated.

Translation:

Tax (TE) of wine from sa-22b: παῖδες, a confraternity (pa-de), 5+Lm8 units; ὦτος, (o₂-tu), 10 units; to the temple (na-u=ναῶ) of DI (di-na-u), 4 units; Θέστις (qe-pu), 2 units; *07-di-ra 2 and Lm9 units; ta-no-*65 2 and Lm9 units; a-ru 4 and Lm1 units. The verified total (κύρος) is: 31 and Lm8 units of wine.

Note

Qe-pu= Θέστις with the variation u/i.

*07-di-ra cf. *101-di-ra (HTWc3011, 3012a).

HT9b

It is very similar to HT9a, the commodity (wine) and the x terms are the same, but the initial terms are KA and *66. KA means offering and *66 stands for a class of men. So the translation of the initial part means that all the recorded wine quantities are an offering (KA) of the men *66 and not a TE tax as in the side a. By analogy with *66 also sa-22b might be a class of men.

HT10a

The tablet contains two records without commodity (fifth type). It is very probable that it is the continuation of a preceding tablet in which the commodity was recorded.

First record: Κνωσός (Ku-ni-su, a place name indicating a group of people) must give 4 units of an unknown commodity for the omen (sa-ma = σῆμα) and 4 units to u-do-*23.

Second record: PA (a group of people) must pay 16 and Lm9 units of the same commodity to the RE of DA; 6 units to *88 (a kind of men); 14 units to u-do-23; 2 and Lm9 units to *66-ru (a kind of men); 8 units to DA-u-da, i.e. the confraternity DA ὕδης (of the family, see Hsch); 3 units to me.*23 (perhaps Μέλιος).

Note

Κνωσός standing here for a group of people, perhaps a tribe, and, obviously, not for the name of the whole city.

U-do-*23 perhaps ὕδριος, what is concerning water.

HT10b

It belongs to the third type and concerns a payment of the commodity U. Translation:

Payment (TI) of the substance U: the RE of DA 2 units; Τηλίνης (ta-ri-na) 15 units; 10c-ta 6 and Lm9 units; KAsa-ru (Σάρος as KA offering) 6 units; ta-na has already paid (TI) 9+Lm1 units.

Note

U is an ointment which appears also recorded in ligature with oil (passim) and with vessels (see TY3a,3).

HT11a and b

The tablet is unfortunately damaged in the initial part. It belongs to the mixte type and contains five records, the last three of which are in side b and are totalized together. The first record is the continuation of some other tablet since it is followed by a total (ku-ro) whose figure does not correspond to the sum of the figures of the preceding items. The record begins with a term (a-ru-ra) which is followed by a very damaged sign, which, perhaps could be SU. In this case the translation could be as follows: 3 units of ἀλεύρα (flour) contained in vessels SU; 2 KA offerings of ῥοινά = pomegranate, and 1 unit of an unknown commodity (*185b+RI?) for a total of 10 units. The second record follows. It refers to men and, although it is not very clear, could be translated as follows: a-su-ja (a divinity, cf. Linear B a-si-wi-ja). 3 HOMO+I, 15 DIMen and 1]de-nu for a total of 20 units. This total is expressed by means of the word ru-ra₂, but the first sign is uncertain and I think that it is sa.ra₂ since the items refers all to men. Then follows the third record, which has the verified total (ku-ro=κῦρος) of 180 units, which refers to offering (KA).

The translation is *35 (an association of men perhaps sailors, since the correspondent sign represents a ship) has given three kaofferings respectively of 40, 30 and 50 units; ru-*101-na one kaoffering of 30 units and sa-qe-ri one kaoffering of 30 units for a verified total of 180 units.

Note

The tablet is badly damaged, it was certainly a part of a set which most probably referred to religious aims.

The last sign of sa-qe-ri seems to have the central stroke, so it is the equivalent of “ri”.

HT12

Normalization:	qa-tiDA	TE	OLE+DI	5
			*67	5
	qe-tu-jo		*40+PU	1
			*44	30
			MA+RU	*85 5
			HORD+Lm1	3
			FIC	1
			*40+PU+RE	Lm18
			da-no	50

The tablet records a debt (da-no = δάνος, in the last line) which is of fifty unities of different commodities. This debt is of two types: two commodities (OLE+DI and *67) are lacking in the payment of the tax and there are another six commodities which must be entirely paid.

Translation: Lack (χῶτις) of a part (δαίς) of the tax (TE): 5 units of *diOLE* and 5 units of *67;
 Must be paid (qe-tu-jo) : 1 unit of *40+*PU*; 30 of *44; 5 double mina (*85) of wool (MA+RU=μαλλός); 3 units of *LM/HORD*; 1 unit of figs; Lm18 of a unit of *40+pu-re for a total debt (δάνος) of 50 units.

Note

Χῶτις, dorian for χῆτος.

Qe-tu-jo > qe-ti-jo (variation u/i) = Greek θετέον; Linear B qe-te-jo (variation i/e).

*40+*PU* and *40+pu-re, since *PU*= πυρός, wheat, and since pu-re= πυρήν, seeds, grain, it is very probable that *40 is a corn.

Δάνος, the scribe has forgotten Lm 18, a fraction. It is not rare that a scribe makes errors in totaling units.

HT13

It is similar to HT 9 and, like this, refers to wine. The pattern is of the fourth type and the translation is as follows:

Given (de-ta=δοτά) quantity (ka-u) of the tax (TE) concerning wine: 5 and Lm9 from re-*23 (a kind of men); but they already owe (te-tu=θετός) 56 units; 2/ and Lm9 units from Τελχίς; 18 from ku-*101-ni; 19 from ΔΑσιτίον (a confraternity); 5 from the NE of the sacred (I) du-jo. For a verified total of 130+Lm9 units.

Note

Ka-u from χέω, is a measurement for liquids, see χούς.

De-ta=δοτά verbal adjective from δίδωμι (root de/do), with the variation e/o also present in δέκα/δώρα of ZAZb3.

Ka-u deta, also Καῖος ἐδότην.

HT14

Two records belonging to the first type.

Translation: pu-*82, must pay as tax (TE): 30 units of wheat; 3 of *miOLE*; 3 of *diOLE*; 9 of *67; 13 of OLIV. He must also give as Apu-naDU= i.e. donation (DU= δῶς) as a fine (pu-na= ποινή) to pay to the Palace (A) 45 units of GRA; 5 units of *miOLE*; 4 units of *diOLE*; 6 units of *67; 14 of OLIV.

Note

Although the records are two, the contributor is only one, Pu-*82, Linear B Πύρρος, who must pay two kinds of contributions, τέλος e δῶς. This latter, in this case, is a fine (ποινή) owed to the Palace (A).

HT15

Two records belonging to the first type. The second is a deficit.

Translation:

Celebrations (ὑμνησις): 684 du-*65-a vessels of wheat and 570 Lm20³+Lm20³ quantities of wheat. The class of men *87 owe 400 units.

Note

By analogy with Lm20³+Lm20³ also du-*65-a represents a kind of measurement. Otherwise the quantities of the wheat would be too high.

HT16

Fourth type. The commodity is recorded before the two x terms.

Translation:

The *ka* offerings of the men KU to the temple (na-u=ναῶ) of DI are of Lm2 of a unit; of the men *70 they are of Lm19 of a unit. The men *87+KU must give Lm1+Lm2 of a unit plus a couple (ZE) of σάρποι vessels for a quantity of Lm18 of a unit.

HT17

First type

Translation:

Payment (TI) of the tax (TE) of 38 units of wine from ra-*43, 10 units of wine from sa-*188 and 5 from the attendant (RE) of Νέδα.

Note

It is not clear if the first symbol of the last word has the central stroke. If it had, it must be read *si* and the attendant (RE) would not be the attendant of Νέδα (a nymph) but of Σίδα (a place name).

HT18

Two records of the first type:

- 1) Πάσης (pa-se): 20 units of *qeGRA*, 2 units of *kiOLE*, 13 units of *67;
- 2) σάλια (sa-ra₂, stocks): 10 units of wheat and 10 of figs.

Note

Πάσης, man (vir, arte magica excellens), also Πέρση, woman (Od.10,139) or Πέρσης, man; *67, in the figure 13, a point substitutes the dash.

HT19

It contains, like HT17, three records belonging to the first type.

Translation:

Payment (TI) of the tax(TE) of 30 units of wine from ra-*43; 5 and Lm9 units of wine from sa-22b; 43+Lm9 units of wine from the DI (a class of men) of Δύμη (a place name).

HT20

Two records of the third type.

Translation:

First record) Lm 1 of a unit of the aroma βάρος in vessels SU from ku-ma-ju;

Second record) millet (qe-ku-re = κέγχρος): Lm9+Lm2²+Lm2 of a unit from DI; Lm2 from sa-re-ju; Lm1 from *70 and Lm9 from *87+KU.

Note

ku-ma-ju = κυμαῖον, a person's name (see Κῦμα, a place name, Il 2.209),

qe-ku-re = κέγχρος or also κάρχρος = roasted barley;

*70 and *87-KU are acrophonic abbreviations which indicate class of men such as DI.

HT21

First type

Translation:

Tax (TE) of pi-ta-ka-se: 161 unit of wheat; 11 of *roOLE*; 3+Lm8 units of *eOLE*; 7+Lm8 of *67; 1+Lm1 of OLIV.

Note

Pi-ta-ka-se, perhaps the SE πίθηξ or also from φυτεύω=to cultivate.

*67, probably ζέα a kind of cereal (see afterwords).

HT23a

First type. There are two records on side a and only one on side b.

Side a) First record: vessels κανᾱ (κάννα, κάνεον) containing: Lm19 of barley, Lm7 of *90, Lm7 of joOLE, Lm7 of tuOLE, Lm7 of riOLE, Lm7 of 96+RU, 10 units of wine, 10 units of the corn *40+PU, 10 units of the corn 40, 17 units of *44.

Second record: *79+ri : Lm18 of a unit of τύφη (tu-qa, a plant), Lm18 of an unit of σησάμη (sa-sa-me), 10 young (ne=νέον) sheep (ME= μῆλον) 1 little pig (χοῖρος).

HT24a and b

First type. Three records on side a. Side b is damaged at the beginning.

Translation:

Side a) first record: for commerce (ku-pa₃-ri-ja =καπηλεία, variation i/e), oLANA+ME the quantity has been lost; there are recorded 10[units of LANA+ ME and 6 units of LANA.

Second record: pa-sa-ri-ja, LANA+ME[.

Third record: ru-i-ko, LANA[etc.

Side b) They are legible 1) the ligature ME+NE (young sheep) followed by KI (=castrated) followed by the double mine (*85) and the figure 1+Lm8 and 2) the ligature JAKA followed by the double mine and by the figure 1.

Note

MARU= μαλλός, tuft of wool.

Pa-sa-ri-ja could perhaps be the equivalent of βασιλεία.

ru-i-ko, perhaps 'Ροίκος, a proper name(see Linear B ro-i-ko).

ME+NE refers to the wool of a sheep castrated to increase the production.

JAKA = a type of fabric which, as the preceding one, was weighed (the double mina stands for a weight measure).

HT25a

The tablet is devoid of the upper part and is not possible to normalize it. All the figures are whole. Several x terms are recognizable and it is probable that the terms U ru-wi and DU ru-wi are connected between them and each of them is the beginning of a new list.

HT25b

The remaining part begins with the ratification of the total of 160 units of a lost record. Then another record follows. It refers to 52 men of two different kind (unfortunately the first symbol is damaged).

The translation is: WI te-ro, sacred (I) payment (TI) HOMO 28 and HOMO 24 for a verified total of 52 men.

HT26a

Fourth type with the commodity recorded before the first two x terms.

Translation:

Of the commodity *110 (VAS+KE, χέρνιψ = lustral vessel) there are requested (*36-te-te =ζητηθέν from ζητέω) 21 for the payment to θής (TATI), 15 for mi-ki-se-na and 5[for sale (ῶνιος).

Note

VAS+KE, see Linear B.

*36-te-te, on the basis of Linear B, the value of *36 = “ze”.

HT26b

The commodity is the same as the side a, but the tablet is very damaged. The following terms are recognizable:

Line 2-3: ka-u-dja-ni followed by the figure 4 and the ligature MUKI (muMen KI) followed by the figure 12.

Line 4: IKA (sacred offering) and *87*35, a class of men, probably sailors, since *35 is the symbol of a boat.

HT27a

Mixed type. A record of the fifth type is followed by a record of the first type. The first record refers to 355 men, the second refers to three agricultural commodities. The structure of the tablet is the same as HT89, 94a and 100. The transaction sign, in the first line, is *56.

The translation is:

First record: ti-ni-ta, for aim*56, there are 70[men plus other 50 men, of whom only the figure remains, there are 51 *35 (sailors), 20[re attendants, 43[]i-mi-sa-ra, 21]qe, a missed number of ki-da[and other class of men, among which there are, in the fifth line, 5]sa-raDI and, in the sixth line, 42 men represented by the sign *99c, for a verified total of 355 units.

Second record: 9+Lm8+Lm19 units of barley, 10+Lm19 units of figs and 7 units of wine.

Note

The transaction sign *56 is constantly associated to men.

Ki-da[is perhaps ki-da-ro=κύδρῳι, noblemen.

HT27b

Unfortunately the tablet is damaged at the beginning. It records various quantities of different kind of wine, among which there is also vin+wheat. They who receive the commodities are only two: SA and RE. The quantities recorded for RE are higher than those recorded for SA.

Translation:

*mi-da (Μίδας): waVIN 7 units to SA

]graVIN : 1 unit to SA and 14 units to RE

neVIN[

Pa-se (Πάσης) : waVIN, 4 units to SA and 70 units to RE

]graVIN : 4 units to SA and]40 units to RE.

Note

Μίδας and Πάσης are the contributors.

waVIN =wine ἀπαλός (light), neVIN =wine νέος (young), graVIN, a kind of beer?

HT28a

a-si-jaKA	ja-wo ₂	GRA+QE	5
		OLE+RO	2
		OLE+KI	Lm9
		OLE+MI	1
		OLE+TU	Lm26 ²
	sa-ra ₂	OLE+DI	1
		FIC	2
		VIN	3
	HOMO+KA	VIN	6
	a-ru-da-ra	GRA	5
		*67	2
		OLE+DI	3
	i-ta-ja	<u>OLE</u> +DI	10

The tablet contains five records of the second type.

Translation: Offerings (KA) for 'Ασία (a divinity): 'Ιάων (a man): 5 units of qeGRA, 2 of roOLE, etc.; the stocks are (σάλῖα) : 1 unit of diOLE, 2 of figs, 3 of wine; the carriers of offerings (a class of men): 6 units of wine; 'Αριδήλα (a woman's name): 5 units of wheat; 2 of *67, etc; Itea (a woman's name): 10 units of di OLE

.

Note

A-ru-da-ra with the variation *i/u* = 'Αριδήλα, a woman's name, see Hsch: 'Αριδήλαν . τήν 'Αριάδνην . Κρήτες:

I-te-ja, see 'Ιτέα. In Linear B i-ta-ja= woman's name. It is possible that its etymology is "sacred (I) to Τηά".

HT28b

a-si-jaKA	u-mi-na-si	sa-ra ₂	GRA	20
			OLE+DI	5
			FIC	2
			VIN	4
		pu-ra ₂	FIC	6
		ja-wo	VIN+DI	6
		wi-di-na	OLE+DI	3
			VIN	3

[

It is very similar to the side a but there is further evidence of the reason for the offering (u-mi-na-si = ὕμνησις = hymns of praise, celebration).

Translation: hymn of praise (u-mi-na-si=ὕμνησις), offerings (KA) for the goddess' Ἀσία: σάλια (stocks): 20 units of wheat etc. 5 of *di*OLE, 2 of figs and 4 of wine; πολιάς (pu-ra₂, a class of men): 6 units of figs; 'Ιάων (man): 6 units of *di*VIN, "Υδνη (wi-di-na, a woman's name): 3 units of *di*OLE and 3 of wine.

Note

Pu-ra₂, Hsch: πολιάς=γῆρας, here to indicate a class of persons.

HT29

The tablet is damaged in right hand side and it is impossible to identify the type. However it is very plausible that it is the continuation of some other tablets. Several x terms remain. The most relevant are:

Line: ru-ma-ta 2[;

Line 2: pa-ja-re = the RE of βαία;

Line 3]di-ja I = sacred to]di-ja, a priest;

Line 4 sa-*09-MI = MI of sa-*09;

Line 4 [.] ki-ta = Γέτας, mn;

Line 5 a-re-da-no = 'Ηριδανός;

Line 6 KAdu-ma-jo = offering from du-ma-jo, an ethnic, inhabitant of Δύμη.

Note

A-re-da-no: in final position the sign Ψ has the value of "no".

In the sixth line, with the words KA and du-ma-jo another record begins which has KA as y term.

HT30

It is the continuation of another tablet. It begins in fact with a term (NE) directly followed by the figure 4. Then follows a long record which has sa-ra₂ as x term followed by eight items standing for so many commodities. Then follows a deficit of five of the preceding commodities

The commodities are barley, figs, wine, perfumed oils, the corn *40+PU (πυρός), sa-ra-ra and PA+RO (βᾶρος).

HT31

The tablet, which is damaged on left side, contains a record of vessels of different form and size, the last of which is followed by a very high figure (3000). The heading is damaged. Since this tablet is very important to understand the general way in which the Minoan wrote their records, it is also very important to attentively observe it. The first thing one must observe is the word karopa₃ written on the upper part of the symbol of a vessel in line 3. To be precise the scribe wrote KA. ro-pa₃, adopting the point to divide the sign KA from the signs ro-pa₃ which are recorded close together. The other signs, on the upper parts of

other vessels, are well distanced. According to the rules that govern the formation of the words in Linear A, the translation of what remains of this tablet is the following one:

line 1:]ti-sa Πύργος (a proper name) TRIPOD[

line 2: 10 vessels QA containing corn PA₃ (σπέρμα, seed, see Linear B), 10 vessels SU containing corn PU (πυρός);

line 3: 10 vessels KA for offerings containing ἀλοιφή (ro-pa₃), 30[containing σάαμον i.e. ointment of sesame;

line 4: ki-de-ma-*09-na;

line 5: 400 vessels, the content of which is lost, and 300 SU vessels containing pa₃-ra= πέλλα, bowls, buckets;

line 6: 3000 VAS on the upper part of which the word pa-taQE, i.e. all (πάντα) the *qe*units, is written.

Note

For QA, see σκύφος (root (s)qap). There is another reading which is possible for line 2: 10 VAS+βαφή = vessels for dying, and 10 VAS+σιπιύς = jars, but, in my opinion, the above is the correct one, on the basis of the potential energy of PA₃ and SU.

Σάαμον is not written on the symbol of a vessel. Since there is no doubt of its meaning, the type of vessel which contained it must be the preceding one, the same which contained ἀλοιφή.

ki-de-ma-*09-na, unfortunately the fourth sign has an unknown value, that makes it difficult to read and consequently to understand its meaning.

Pa-taQE, the figure which follows it (3000) is very high, but it cannot refer to all the preceding vessels for three reasons: a) because they are of different size and form; b) because, even if many figures have been lost, they cannot absolutely be the equivalent of 2300 units; c) because the tablet, although damaged, has a heading and it does not seem to be the continuation of another tablet. So, my opinion is that a) since in the fifth line we have 300 vessels SU containing pa₃-ra= πέλλα, bowls, buckets, also the preceding 400 vessels, the content of which is lost, must contain bowls, buckets or similar goods; b) there were precisely these 700 (400+300) vessels which contained 3000 *qe*units. The logogram QE, besides to indicate a substance, is also used as metrogram indicating a unit smaller than the highest one. Minoans traded vessels and carried them in larger vessels.

HT32

Mixed type. The tablet contains three records. The first is of the first type and has *56 as transaction sign and sa-ra₂ as x term. The second and the third are of the third type and have SU and joOLE as y commodities.

Translation:

First record: the reserve (sa-ra₂) for the aim *56 is: Lm 9 of a unit of *90, Lm9+Lm18 of a unit of joOLE etc.

Second record: the men RE and DI have respectively given 108 and 65 vessels SU.

Third record: of the commodity joOLE [, RE has given 104 units and DI 53 units.

Note

There is a punctuation mark, after the first RE, before the figure.

HT34

The tablet is very damaged. The first line is very difficult to read. It, perhaps, means : da-jo, tax (TE) of vessels NE for sacred aim (I), stocks (sa-ra₂). The vessels contain various commodities, among which there is mu-ku= μήκων, poppy, and E+KA, offering (KA) of the commodity E.

HT35

Ti-ti-ku *41 i-ku-ta HORD 1, *96+RU Lm19, OLE+RI Lm19, *90 Lm19, OLE+TA [], E 5, *40+PU Lm18, VIN+RO Lm23.

Translation: for the religious contribution (*41) of the sacrifice (ti-ti-ku=θυτικόν), they who come to implore (i-ku-ta=ίκόντες): 1 unit of barley, Lm19 of a unit of *96+RU, Lm19 of a unit of riOLE, Lm19 of a unit of *90, [] of taOLE, 5 units of E, Lm18 of a unit of *40+PU, Lm23 of a unit of roVIN..

Note.

Θυτικός is an adjective which occurs also on ZAZb3, with the same meaning. Here it refers to the transaction sign *41, which appears also in others religious and cultural contexts.

I-ku-ta = ἱκόντες da ἱκω, to come to implore. However, other readings are possible: I=sacred + ku-ta=Σκύθης, a man's name or χύται (m.p.), a kind of workers.

HT36

Only one record of the first type with transaction sign *56b.

Translation:

JeDI (a type of men) for the *56b aim: 44 +Lm9 units of wheat plus 7+Lm9 du-*65-wa units of the same substance.

Note

*56b = πέμψις (ΑΑ), procession.

Du-*65-wa, for analogy a measurement more than a commodity.

HT37

Tablet very damaged, but a record of the third type with commodity *96+RE as y term is recognizable. It is impossible to normalize the tablet. In line 5 a deficit becomes, the first term is KAKI, offering of the men KI.

HT38

Only the last two lines are legible. A vessel, one pig, one ox and three kinds of cloths are recorded on them.

HT40

A Mycenaean scribe would write this tablet in the following way:

nu-du*75b . TE GRA 207
ki-da-ta GRA 134

Translation: A tax (TE) of wheat from two contributors (nu-du-*75b and ki-da-ta).

HT41a and b

The tablet is very damaged. The lines 3 and 4 contain three brief records; the first two of which belong to the first type and the third is of the fourth one. Their translation is:

- 1) *66 (a class of men) has given 10 units of the commodity *67 ;
- 2) RE (the attendant) has given 10 units of the same commodity;
- 3) Μίδας has given 2 and Lm23² units of figs to Βαία.

Note

Μίδας, a man with the same name as the son of the great goddess Ida.

Βαία, nursing mother, is an epithet of Δημήτηρ, but it could also be the equivalent of the woman's name Φαία.

HT43

Ma-neDU . pa-tjo . I IGRA 5[

Μάνης, as donation (DU=δῶς), must sow (pa-tjo =σπαρτέον) for sacred aim (I) 5[units of sacred wheat (IGRA).

Note

Between the second I and GRA there is no punctuation mark. It is the sign which is damaged on the right side. The notion of IGRA= sacred wheat is also present on other tablets (see, for instance, HT93a 4-5; 120,4;etc).

HT44

A record of the first type.

The translation is: for religious purposes, it must be given (qa-tjo) the following units of wheat, perfumed oils, etc.

HT 45a and b

Not normalizable.

They are recognizable:

side a, line 2: *66, a kind of men preceded by the symbol *35 which indicates sailors;

side a, line 3: the same kind of men (*66) preceded by 81b;

side b, lines 3-5: a record which is impossible to normalize since one cannot ascertain

if the first sign in the fourth line is the logogram PA (𐀡) or the metrogram RO (𐀢). In the last two lines occur twice KU, which could here be the acrophonic abbreviation of ku-mi-na (see ZA 10a) which means cumin.

HT47

The tablet is, unfortunately, very damaged. Religious terms such as ku-pa₃-na-tu, ki-da-ro[and]mi-nu-mi are recorded on it.

HT49a

Very damaged, but several terms referring to men, such as a-ru, *67b, ku-pa₃-nu, tu-su-pu₂ and KI are visible in the sixth and seventh line of side a. At the end of the fourth line there is the word ti-du-ni which means payment (TI) of a tribute (DU=donation) of figs (NI).

HT 62

Very damaged. Are recognizable: line19 [ADU]sa-ra.TE.VINUM[; line 2 KAKU, an offering (KA) of KU.

HT63

Only the first line is recognizable. It refers to a tax of men *66. The items which is possible to read are ka-ti (κηθίς, a kind of vessel) and su-pu₂ (σιπύη[another kind of vessel).

HT64

A little fragment, in which it is possible to recognize:]ku-dja-na[, ru-ma[and 140c (a fractional unit) which, since in this case is followed by the figure 6, stands for a vessel of correspondent capacity (cf. also MA10).

HT85a

An interesting tablet which contains a record of the fourth type with HOMO as y term.

The translation is:

Donation (δῶς) to the Palace (A) of men (HOMO) for the procession (𐀡𐀡 = πέμψις): 12 from DAῦδης, 12 from pa₃-ni, 6 from u-de₂-*23 (ὑδρεύς, carrier of water), 24 from DA σιτίον, 5 from ku-dia-ni, 3 from Τελχίς, 4 from the RE of DA, for a verified total of]66 men.

HT85b

The tablet contains a record of the third type which is the continuation of side a and has KI as y term.

Translation:

Need (ki-ra-ja= χρεία) of castrated men (KI=χίρων, Hsch): the college of Κυρίτα (ki-ri-tja) 1; Θήχης (a proper name) 1; PA (a kind of men) 1; Θέστωρ 1;]ka 1; DI (a kind of men) 1; Μολίων 1; the SE of re-di 1; the MI of wa-du-ni 1; the DI of MA 1; qa-*63-no 1.

Note

Ki-ra-ja, see Hsch: χρηία· πηνία· Κρητες.

HT86a and b

The tablet contains two records separated by means of a horizontal stroke. Both belong to the fourth type with the commodity (wheat) recorded after the first x_1 term. Both the records begin with a transaction term, the difference is in the fact that the first transaction term indicates that the wheat is an agreed quantity available for the palace, the second that the wheat is a donation for the palace.

Translation:

First record: GRALm18+Lm23² agreed (καίρος) with the Palace (A): ku-ni-su (Κνώσιος) 20 units; sa-ru (Σάρος) 20 units, di-de-ru 20 units; Τηλέας (qe-ra₂-wa) 10 units.

Second record: GRALm19 for donation (δῶς) to the palace (A), δάμος, people (da-me=δάμος) 20 units and the servant, μνοίτης (mi-nu-te=μνοίτης) 20 units.

Side b is damaged but it seems to contain the same terms as the side a.

Note

Μνοίτης or μνωίτης is a Cretan name of servants.

HT87

It contains the record of several goods which must be paid for offerings in thanks to the goddess MA.

Translation:

Offerings in thanks (χάριτες) to MA, must be carried (wo₂-tu-jo=ὄστέον): 1 jar (pi-ta-ke-ne=πιθάχνη), 1 unit of mint (MI) of the kind reserved to the temple (ja-re=ἱαρή), 1 double libation (di-ki-se=δις-χύσις), 1 unit of QE (a spice) in a vessel σιπυίς (su-pu), 1 unit of κρόκος (ku-ru-ku), 1 ra-[.] of royal quality (A), and a royal (A) *tu*vessel.

HT88

The tablet contains a mixed record followed by a deficit.

Translation:

Royal donation: 20 carriers of offerings and 6 re-*23 (men), 7 offering plates (ki-ki-na= n. pl. of κερχνίον, offering plate) of figs. Are debtors: ku-pa₃-pa₃ 1; Σκάιος 1; the priest (ku-pa₃-nu=κάβαρνος) 1; the RE of Βαία 1; sa-ma-ro (Σέμελος) 1; the τηρός of DA 1; for a verified total of 6 units.

Note

Ku-pa₃-pa₃, if it is not an error for ku-pa₃-nu, it can be the equivalent of Κυβήβη = Κυβέλη, in this case the name of woman.

HT89

An important tablet which, with HT27a, 94a and 100, constitutes a group a part, very indicative about the Minoan social system. It belongs to the mixed type since it contains first a record of the fifth type, concerning men, and then a record of the first type, concerning agricultural products.

Translation:

First record: Asa-ra₂ (σάλῖα i.e. reserve for A i.e. the palace), for the procession (*56) there are 23 *66, 22 MI+A+QE, 24 MA+I+MI, 13 HOMO+HASTA and 5 ta-ra for a verified total of 87 units.
Second record: 2 and Lm8 units of barley, 2 and Lm1 units of figs and 6 of wine.

Note

MA-I-MI= Sacred (I) healer (MI) of MA.

Ta-ra, τέλη, soldiers (Il 10.56).

HT90

Two records of the second type with the same transaction sign.

Normalization

I ku-ri-na sara₂ GRA 20, FIGS 10, OLE+DI 3
si-ru ma-ri-ta₂ GRA 1, FIGS 1, OLE+MI 1, *67 1

Traslation:

First record: stocks (σάλῖα) for sacred aim (I), to those who belong (-na) to the goddess Κύρη (a confraternity): 20 units of wheat; 10 units of figs and 3 units of *diOLE*;

Second record: division (ma-ri -tja =μεριτεῖα) of the confiscated goods (si-ru =σῦλον): 1 unit of wheat, 1 of figs, 1 of the perfumed oil *miOLE*, 1 of *67.

Note

Ku-ri-na: -na = belonging to, also elsewhere. For Κύρη, see Hsch: Κύρη. ἡ Δημήτηρ.

Σῦλον, spoils, confiscated goods.

HT91

Two records of agricultural commodities, both belonging to the first type. The transaction sign *41 indicates a religious aim.

Translation

First record: sacred (I) offering (KA) for religious aim (*41): Lm5 of a unit of wheat, Lm20 of a unit respectively of *67, of *kiOLE*, of *uOLE*, of *miOLE*, oliv, ficus and vinum, 5 units of E.

Second record. Te-mi: Lm20 of a unit of *miOLE* etc.

Note

The reading of the initial term of the second record is very uncertain.

HT92

Normalization: TE. ADU . GRA 680 *67 12

Translation Tax (TE). Donation (δῶς) for the Palace (A) : 680 units of wheat and 12 of *67.

.

Note

The record remarks the difference between TE and ADU. The first stands for tax, imposed contribution, DU means instead donation (δῶς), which, since it is almost always united with A, indicates a donation for the palace. The quantity of wheat is very high.

HT93a

This is, in my opinion, the most difficult tablet among the Linear A ones. It is a big tablet which contains twelve very brief records belonging to different patterns. It can be normalized as follows:

- | | | | | | |
|-----|-----------------|--------------------------|-----------------------|------------|-----------------------|
| 1) | Fourth pattern: | pa ₃ -ni-na . | GRA+PA ₃ . | SERE | 12 |
| 2) | Fourth pattern: | di-ri-na . | | SEREDA | 43+Lm9 |
| 3) | First pattern: | ki-di | FIC | | 5+Lm 9+Lm7 |
| 4) | First pattern: | ASE . | IGRA of the kind PA | 26+Lm8, | sa-ra ₂ 20 |
| 5) | First pattern: | Qa-qa-ru | IGRA of the kind PA | 5 | |
| 6) | First pattern | HOMO+I | | 6 | |
| 7) | First pattern | De-ju-ku | | 1+Lm9 | |
| 8) | First pattern | 04b-ti[| | 3 | |
| 9) | First pattern | Da-we-da | VAS 2 | *114 (FIC) | 2 |
| 10) | Fourth pattern | Pa ₃ -ni-na[|]pa-se-ja | 20 | |
| 11) | Fourth pattern | HOMO | | 10+Lm2 | |
| 12) | Fourth pattern | IKA | | 4 | |

Note

Almost all the records concern wheat.

The tablet has the following characteristic: if the commodity is the same, it is not repeated in the records belonging to the same type. In fact the commodity (GRA+PA₃) is not repeated in the second record and the commodity IGRA of the PA kind is not repeated in the records 6, 7 and 8.

The commodity of the tenth record is lost but it must be the same as the following two records which belong to the same pattern.

HT94a

The tablet belongs to the sixth type, since it contains two records the first of which is of the fifth type and the second of the first type.

Translation:

First record: ka-pa (collected) : 62 men, 20 sailors (*35), 7 ATI, 18 men with the lance (HOMO+HASTA), 4 servants (TA= θής). For a verified total of 110 units

Second record: sa-ra₂: 5 units of barley, 3 and Lm7 units of figs, 2 of a lost commodity, 11 of je-wo₂ etc.

Note

The total of the first record seems to be mistaken since it would be 111 and not 110 as it is actually written.

HT94b

It contains two records. The first is a deficit which refers to five men. The second is very damaged.

First record: of a commodity which was recorded on another missing tablet the following persons are χῆροι, each of one unit: tu-ma, pa-ta-jo, de-di, ke-ki-ru and sa-ru, for a verified total of 5 units.

Second record: *35 (sailors) RA[] de-me-te 1, wo-tu [1[

HT95a

The tablet records on both the sides a list of wheat (but the symbol is damaged on side b)

Side a

Translation: DAδωματα (to the house of DA), wheat, 10 units from δᾱμος, 10 from μνωίτης, 20 from Σάρος, 10 from Κνωσός, 10 from Δένδρον, 7 from Τηρεύς.

Side b

It is the same as the side a, but the terms are placed in a different order.

HT96a

A tablet containing more records separated by means of horizontal strokes. Only few signs remain of the record after the first horizontal stroke. The normalization of the tablet up to the first horizontal stroke is the following one:

First record (fourth type) I ti-ti-ku Ficus . Apa-ra-jo 10

Second record (fourth type with the commodity written after the x₁ term):

A*65 TE . ne-mi-ta GRA 5
ru-sa 4

Third record (third type) *09 . *52b 1
pi-ta-ra 1
*09+117 1

Fourth record (first type) *ku-ma-ro TE Ficus 20[

Etc.

With the following translation:

For sacred use (I) concerning the sacrifice (θυτικός), to the regal old 10 units of figs;

At A*65 tax (TE) Νημηρτής 5 units of GRA, Λύση, 4 units of GRA;

Of the commodity *09, 1 unit from *52b, 1 from pi-ta-ra, 1 from *09+*117

]χίμαρρος tax (TE) of figs etc.

HT96b

Apa-ra-jo qa-tjo ra-re I GRA 40+Lm8, OLE+RO 4, FIC 2+Lm18.

The royal (A) old (παλαιός) must give (qa.tjo) to the RE of RA, for sacred aim (I), 40+Lm8 units of wheat, 4 units of the perfumed oil roOLE, 2+Lm18 units of figs.

Note

Apa-ra-jo, old in the sense of venerable.

For the RE of RA see also HT117a and the man's name 'Pᾱρος.

HT97a

The tablet contains two records divided by a space . The lower part is lost.

Translation of the first record:

Available (ka-ru = *καῖρός*) for the procession (56b): 82 carriers of offerings (HOMO+KA) and 33 *08men.

Translation of the second record:

KA offerigs: 25 from nu-ti, 6 from Φαῖστος (man's name) , 4 from Νῆστις, 5 from the DI of MA, 15 from *68, 3 from KI,]3 from dja[, 2 from Θέστις etc.

Note

Φαῖστος, like Κνωσός, stands in my opinion for a group of people, perhaps a tribe.

HT98a e b

The upper part is lost. Therefore it is possible to read only several terms on both the sides of the tablet, without normalizing it:

Side a (lines 2-5) Payment (TI) of ta-na, belonging to the DI of di-re (di-re DI-na), te-qi, Τελχίς, ro-ke 'Ροίκος, man's name etc.

side b (line 2) Vin Lm8 DAru-jo TE Lm18

Note

It is possible that on side b there is a record which means that of the tax (TE) of Lm8 of a unit of wine, DAru-jo (a confraternity) has given only Lm18 of a unit of it.

HT99a

A simple record belonging to the second type.

Translation: donation (DU= δῶς) to the Palace (A) for the reserve (sa-ra₂): 4[] units of barley, 4 of figs, 1 plus Lm7 of wine and [] of wheat +the spice QE.

HT99b

A record of the third type concerning figs with the commodity written after the first term x.

The translation is : of the commodity *figs*, 6 units from SENE, 2 from ΔΑσιτίον, 1 from dja-du, 1[]from ru-ma-ta.

HT100

The tablet has the same structure as HT27a, 89 and 94a. To a total of men (in this case they are 97) a record of agricultural commodities (which in this case is preceded by the word sara₂=stock) follows. The initial part is lost.

The translation is: for a verified total of 97 men, 58 of which are]carriers of offerings, [?] are *67c, 12 are ATI, 2 are KI, 5 are *66 and 16 are HOMO+HASTA (soldiers), there are the following commodities for the stock: 5+Lm1 units of barley, 2 and lm23² units of figs, 2 and Lm9 units of wine, 2 and Lm7 units of roOLE, 3 of miOLE and lm8 of a unit of joOLE.

Note

Carriers of offerings (HOMO+KA) = *κανηφόροι*

HT101

The tablet contains more records belonging to the first type. The first record occupies the lines 1 and 2.

The second record is the indication of the reserve and occupies the third line. The third record is on the fourth line. Then, there is a division stroke which is followed by another record, which is devoid of the initial part.

The normalization is:

Dja-17bDI	GRA+QE	40
	OLE+RO	8
	OLE+MI	8

	OLE+KI	2
Sa-ra ₂	GRA	41
	OLE	10
	DI+QE	3
Ku-pa[-nu	]OLE+RO	2
	]20]67	3
	OLE+KI	2[
		]3
	OLIV	1+Lm1
	OLIV+TU	1

HT102

The normalization is:

Ka-pa	sa-ra ₂	GRA	976
	pa ₃ -ni	GRA	33[
	]HOMO	GRA	33
	Di-we-na .	ma-dja	3
		WI	10
		IKA	5

With the following translation: Collected (ka-pa) for the reserve (sa-ra₂) 976 units of wheat; pa₃-ni (a class of men): 33[units of wheat; the class of men [I]HOMO: 33 units of wheat; Di-we-na (they who belong to DIwe, a confraternity): 3 μᾶζα, 10 WI and 5 sacred donations (I+KA), for a verified total of 1060 units.

Note

The recorded reserve is substantial: assuming approximately 96 litres per unit, it would amount to about 94,000 litres.

HT103

The first line is the continuation of some other tablet. A record of the third type, which refers to the commodity PA₃ begins in the second line.

The normalization is:

First record (first pattern)	u-tja .	FIC	40
Second record (third pattern)	PA ₃ .	DAku-se-jo [	]6+Lm9
		*87	13
		DAku-na	1
		DAkusejo	1 Ki-ra 5+Lm9

With the following translation:

First record; utja, 40 units of figs.

Second record: of the commodity PA₃ (a corn, probably σπέρμα= seed),]6+Lm9 units from DAχύσεως[, 13 from *87 (a class of men), 1 from DAγυνή, another unit from DAχύσεως with a rest (ki-ra = χρή) of 5+Lm9 units.

Note.

PA₃ is a corn (σπέρμα= seed, see Linear B) which occurs in ligature with wheat on HT93a,1.

DAku-se-jo[], TI could be the lost sign (see DAku-se-joTI on HT104,1-2). In this case, the repetition of the term in lines 4-5 would indicate that, of the total payment of 6+Lm9 units of PA₃, the confraternity DAχύσεως has given 1 unit but it must give other 5 +Lm9 units.

*87, here and elsewhere, a class of men.

DAku-na = DA γυνή= young bride, a confraternity.

Ki-ra = χρή.

HT104

ta-pa .	te-ro .	DAku-se-joTI	45+Lm9
		IDUTI	20+lm9

	[pa-da-su-TI]	29
ku-ro		95

Traslation: baskets, (ta-pa=τάρπη n.pl) containing harvest (te-ro=θέρος), payment (TI) from the confraternity DAχύσεως : 45+Lm9 units; payment (TI) from the sacred (I) donation (DU=δῶς): 20+lm9 units; payment (TI) from [] 29 units. Verified total (κῦρος): 95 units.

The tablet belongs to the fourth type. The fifth term is very uncertain, except for TI (payment). It records three different kind of contribution of harvest, for a total of 95 units.

Note

Te-ro, Hsch θέρος. σίτος.

IDUTI is fully logographic I+DU+TI.

Ku-ro=κῦρος, check, ratification (see κυρώω= to check, to confirm).

HT105

Mutilated in the initial part.

They have been collected (ka-pa[] 234 men (*99); with a reserve (sa-ra₂) of other 235 men (*99b).

HT106

The tablet has two records separated by means of a horizontal stroke. The second is very damaged. The first record belongs to the first type and has the following translation:

μνοίτης has given 6 and Lm [] units of wheat divided into one NE of 5+Lm9 units and another NE containing only 1 unit.

Note

Μνοίτης or μνωίτης or also μνώτης = Cretan servant.

HT108

Two records, the first of which belongs to the first type and the second is the continuation of some other tablet.

First record, translation: one man and 70 units of wheat of the type Lm7 belong to Κυρίτα.

Of the second record two words, di-na-ro and du-su-ni are recognizable.

HT109

A fragment. Two terms are recognizable: a total (ku-ro) and the term]a-ra-ju =] Ἀρήιος or Ἀλήιος.

HT110a

A record which is the continuation of another record.

Normalization of the lines 1-2:

neDU	69b	ku- <u>mi</u>	HORD+Lm1	<u>20</u>
		ku- <u>pa</u>	1[	
		ku-ro	100[	

Translation: *ne* donation (neDU) monthly (*69b) Χάρμης (ku-mi) must pay 20 units of HORD+Lm1 and 1[bowl (ku-pa= κύμβη, κύπα). Verified 100[units.

Note

NeDU, probable new (ne= νέος) montly (*60b, the symbol of the moon also in Linear B where it is used with the same meaning) donation (δῶς).

The record is followed by a total which certainly refers also to other preceding records.

Only few symbols are recognizable on side b.

HT114a e b

A record of the second type which continues on side b, where only one item is recorded.

Side a) stocks (σάλῖα) of Κυρίτα (ki-ri-ti-ja), a confraternity: 10 units of wheat, 1 of figs, 1 of wine, 1 of φᾶρος (PA+RO an ointment).

Side b) 9 units of wine of the kind SA.

Note

For *saVIN*, see also HT131b,3; SA = σαπριάς = well-matured wine or σάκκος = filtered, or, simply, a trade mark which means wine produced by SA.

HT115a

The tablet is palimpsestic and appears very confused since the scribe did not erase well the preceding record. It contains a record of the fourth type, with the t.s. I = sacred. The commodity is *Lm2* GRA, followed by the word *ri-suMA* which is written smaller than the other signs.

The normalization is:

*101	nu-ra-ja	I	<i>Lm2</i> GRA	<u>ri-suMA</u>	nu-wi	2
					<u>qi-u-ra</u>	[]
					na-wo-jo-mi-na	1
					se-ku-tu	<i>Lm9</i>
					pa-ra-jo	<u>1</u>
					ASEja	<i>Lm23</i> ⁴
					KApo-ru	1
				etc.		

Note

KApo-ru = carriers of KA offerings.

ri-suMA seems to be repeated in sixth line.

HT115b

Although the initial part is damaged and, consequently, the tablet is not normalizable, the words are more visible than on the side a. The tablet contains probably a record of wheat. The terms which are recognizable are:

Line 1 pa-ra-jo (παλαϊός).

Line 2 nu-wi and du-pa₃-na (Δάφνη)

Line 3 ku-ru-ma followed by the transaction sign I, sacred, which, in this case, refers to wheat, and wo-tu-ja (Ὀρθία).

HT116

Six records are in the side a with the total registered on the side b.

Translation side a: Tribute (TE) for DAta-ro, the keeper (te-ro=τηρός) of DA: 16 units of wheat from ku-pa-ja; 40 units of wheat and 5 units of *diOLE* from pu-ra₂; 16 units of wheat, 1 unit of *kiOLE*, 5 units of *miOLE* and 3 of OLIV from SENE; 5 units of wheat, 5 of OLE, 1 unit of *miOLE* and 2 of *tuOLIV* from pi-mi-na-te; 12 units of wheat and 12 of *67 from ne-ki-jo; 20 units of wheat and 3 of *67 from *23-nu-ma.

Side b: verified total: wheat 100[], *67 15, ole 17.

Note

DAta-ro, the τηρός (guardian) of DA, must be an important person.

As it is evident all the units of the perfumed oils of side a are added up, in side b, only as oil.

HT117a

MAka-ri-te	.	ki-ro	u-mi-na-si	u-su	1
				mi-tu	1
				ku-ra-mu	1
				ma-ru	1
				ku-pa ₃ -nu	1
				tu-ju-ma	1

u-di-mi	1
mi-ru-ta	raRE 1
	te-jaRE 1
	na-daRE 1

with the following translation:

Hymns of praise (u-mi-na-si = ὕμνησις), offerings in thanks (χαρίτες) to MA; are all debtors (ki-ro) of one offering: Ἴσος, (u-su, II 11,101 etc.), Μίτυς (mi-tu), Κάλαμος (ku-ra-mu), Μάρων (ma-ru Od. 9.197), the κάβαρνος, i.e. the priest of Δημήτηρ (ku-pa₃-nu), Θώμας (tu-ju-ma), Idmis (u-di-mi, the female of Ἰδμῶν); they are also included (mi-ru-ta = μερίτης, nom.pl.) the RE of RA, the RE of Te-ja (θεῖας), and the RE of Na-da (Νέδα, a nymph).

Second record. Translation:

Units of wheat (sa-ta): ku-ku-da-ra 1, ko-sa-ITI (κόρη, with the cut heard) 1, DA_{mi}-nu (Δασμῆνος = DAbeehive, a confraternity), da-jo-kuTI (payment of Δηίохος), ki-da-ro (perhaps χυδρός = noblemen).

Note

For sa-ta see Hsch. σάτον . σιτικόν μέτρον (or, also, σάτα . μόρια, sacred olive trees).

Note

Mi-ru-ta, see also μεριστής = divisor

HT117b

A deficit: two persons are respectively debtors of one unit of the commodity (sa-ta) recorded on the second record of the side a.

Translation: ku-re-ju and di-ki-se must pay (wo-tu-jo) 1 unit of sa-ta.

HT118

A record of the fourth type concerning pigs.

PIGS for sacred purposes (I): the DI of MA (MADI a confraternity): 15 pigs, 10 of which have been castrated (KI = κίρων, castrated, Hsch), the uninitiated (qa-qa-ru = βήβηλοι) a class of people: 6 pigs, 4 of which have been castrated; Αῦσων (A-we-su, a man's name): 4 pigs, 1 castrated; Ἐρύμας (we-ru-ma, a man's name): 10 pigs; verified (ku-ro = κύρος): 30 pigs, 15 of which have been castrated.

Note

Both the “we” of “we-ru-ma” and “a-we-su” do not have the central stroke on them.

We-ru-ma, also Ὀρύμας.

The total is mistaken since it would be 35 but the scribe wrote 30.

HT119

The tablet is the continuation of another tablet. It contains a record of men. There are: 34 men *08 (spinners from the pictogram), 68 HOMO (*99), 13 ri-mi-ne, 10 ko-ja, 7 ku-pa₃-na-tu, 7 TI, 10 ja-*101, 2 wo-tu, 8 *08-*68b for a verified total of 160 men.

Note

Since Minoan prefer the sound *j* to the Mycenaean sound *w*, in my opinion ko-ja is the equivalent of ko-wa, girls.

TI here refers to people, its meaning is guardians, debt collectors (see also ATI, royal collectors).

Ku-pa₃-na-tu, priestess, perhaps the female form of ku-pa₃-nu.

HT120

The tablet contains a record which refers to various amounts of wheat that the people must give to several associations. It belongs to the fourth type but the scribe does not repeat (as he usually does) the term da-me which refers to all the lists. The tablet becomes clear by normalizing it according to the Linear B rules.

DAqe-ra .	Da-me	GRA+ Lm18+Lm26 ²	74,	paGRA	62+Lm9+Lm20
DAu-pu ₃	Da-me	IGRA+Lm20	20		
Ki-re-ta-na	Da-me	GRA+Lm19	60,	GRA+Lm20	48
PA	Da-me	IGRA	3+Lm23		

Translation: the δήμος (da-me) must give 74 units of GRA Lm18+Lm26² and 62+Lm9+Lm20 units of paGRA to the confraternity DA of hunting (θήρα); it must give 20 units of sacred (I) GRA+Lm20 to the confraternity DAopium (ὄπιον); it must give 60 units of GRA+Lm19 and 48 units of GRA+Lm20 to the confraternity which belongs (-na) to Κυρίτα (a name of Demeter) and it must also give 3+Lm23 units of sacred (I) GRA to PA (a class of men).

Note

DAME= DAμῆλον, flock of DA, perhaps the meaning of δήμος.

HT121

Two records belonging to the first type.

Translation: first record: ki-ri-tja (a college of priestess devoted to Κυρίτα): 10 units of diOLE with the spice QE;

second record: stocks, reserve: 5 units of GRA, 4 of OLE, 2 of FIC, 3 of VIN and 3 pa-ro= φᾶρος (pieces of cloth or also βᾶρον, aromatic plant).

HT122

The tablet is devoid of the upper left part. The heading is lost. Side b is the continuation of side a. It contains two long records, each of which has the respective total. At the end of the side b, there is po-to kuro, which stands for the general total and means φόρτος κύρος, i.e. loaded goods which have been verified. Since the heading is missed, it is impossible to establish the type with certainty. In the side b the commodity is *11, which, comparing its occurrences, is probably a spice, an aroma. In the side a x terms survive, the most part of which are also present on other tablets. The most recognizable among them are: u-de-*23, ΔΑΣΙΤΙΩΝ, a confraternity, Τελχίς, a man, qa-*63-no, the RE of ja-mi-da, the RE of Νέδα, so-di-ra, pa-de, παίδες, ku-pa-nu =κάβαρνος, pa-ta-jo (see πάστας, cretan owner), wo-tu, ὦτος, DAwe-da Da ὕδης, a confraternity. The figures are low and the total, in the eighth line, is of 31 units. The last term is ku-da l.

The terms more recognizable on the side b are:]wo-ki-tja (ὀχέτιον from ὀχετός, a kind of vessel);]a-ra-ju =Ἀρήιος, u-de-*23, qa-qa-ru =βέβηλος, uninitiated; DI, a class of men, the RE of DA, a man. Then the verify of the partial total follows, which is in turn followed by the general total.

Note

Since ku-da occurs after the total, more than a proper name, it in my opinion means δαίς part belonging to KU (a class of men).

HT123a

The tablet contains four records of the first type followed by the total. Each of these records refers to OLIV and *90 . Of this latter substance the deficit is always indicated. At the end the general total of OLIV and *90 is indicated and the general deficit of *90 is also indicated. In the first line there is the transaction sign “I”.

Translation:

Σκύθης (ki-ta, man), for sacred aim (I): 31 units of OLIV and 8+Lm1 of *90: the deficit of *90 1+Lm5;

Πύρρος (pu-wo, man): 31+Lm9 units of OLIV and 8+Lm8 units of *90; the deficit of *90 is of Lm5 of an unit;

Σάρος or also Σάλιος (sa-ru, man): 16 units of OLIV and 4+Lm20[of *90; the deficit of *90 is of Lm8 of an unit;

Δαίτος or Δαίτωρ (IL.8.253, Da-tu, man): 15 units of OLIV and 4+Lm1 of *90; the deficit of *90 is of

OLIV, verified: 93 and Lm9 units; *90, verified: 25 + Lm7 units with a deficit of 6[units.

It is impossible, at the moment, to establish the meaning of *90 since its occurrences with other terms are rare. But it must be a fairly precious substance since the scribe accurately records its deficit.

Mixed tablet containing two records, the first of the third type and the second, which concerns a payment (TI), is of the fourth type. The total refers only to the second record as it is also proved by the fact that it is followed by the deficit, which refers only to the commodity da-ta.

Second record (third type) TI da-ta . pi-sa⁴
 *87 1
 *87DU 10
 tu-pa-diDA Lm9+Lm 26²
 ka-na[
]neDU Lm20
 du-ma-i-na Lm1+Lm2

Du-ma-i-na, see Δύμεινα, a tribe. But the reading du-ma-no-na with -na, the suffix meaning belonging to, and du-ma-no= δίμηνος, two months is not impossible. The sign that stands for *i* is quite similar to the sign that in final position stands for *no* and the preceding term on the tablet is jneDU which on HT110 stand for *ne* (new) donation (DU) monthly. So the entire record could refer to monthly, bimonthly and other rations.

Si-di-ja, perhaps from Σίδη, a place name.

Verified for use *56,	156	[
	72	KU
	24	HOMO+ HASTA 24
	15	<i>mu</i> KI
	11	*88
	14	<i>mu</i> KI

*56= procession. The record concerns various kind of men.

*41 pa-ra tu-ru-nu IME GRA 10
 Wa-tu-maRE GRA+KU 12
]mi-ta GRA+PA Lm9[, GRA+KU 6

etc.

Translation: For religious aims (*41), at pa-ra, the sacred (I) ME of tu-ru-nu: 10 units of GRA; the attendant (RE) of wa-tu-ma : 12 units of kuGRA;]Μέντης (Il 17.73), man: Lm9[of an unit of GRA+PA etc.

Note

In the fourth line there is]ma-ri, probably a man's name (see Μάρις, Il 16.319).

HT129

Two records belonging to the first type.

Translation:

First record: ki-re-tja, a confraternity of women, consecrated to the goddess Κυρίτα: 33+Lm9+Lm19 units of GRA, 10 units of *67, 22 units of figs;

Second record: tu-wo-ri-na: 40+Lm9 units of GRA, 1[of OLE+DI, 6 of OLE+KI etc.

Note

Both ki-re-tja and tu-wo-ri-na (na=belonging to) stand for religious class of people.

HT130

The tablet is very damaged. The lines 5-6 contain a record of the first type.

Translation lines 5-6:

NE: 8 units of barley, 6 of figs and 3 of wine.

Note

In my opinion NE stands here as in HT 106 for a vessel used as a unit of measurement.

HT132

The tablet belongs to the mixed type. It contains three records, two of the first type and the third of the third type.

Translation: First record: the royal SE (A-se) , 5 units of *14;

Second record: Καλήτωρ (IL 15.419), man (qa-re-to) 27 sheep;

Third record: σπέρμα, seed (PA₃), 1 unit from *66, a kind of men.

Note

A-se, see also Ἄρης, man.

HT133

Only one record of the second type.

Translation: Tax of 55 units of GRA+DA (δαίς) to give as royal (A) donation (DU= δῶς).

HT140

The tablet is very damaged. Only the first two lines are normalizable. They contains two records; the first, having two items, belongs to the second type and the second, having an unrecognizable number of items, belongs to the fourth type:

1^ record	u-mna-si.	*35	siFIC	1[
		jeDI	kiOLE	1+Lm9
2^ record	u-mna-si	*35	si-tjo	KA 3, etc.

Translation of the first record: celebrations (ὑμνησις), *35 (a class of men): 1[unit of si figs; JeDI (a class of men): 1+Lm9 units of kiOLE;

Translation of the second record: celebrations (ὑμνησις), *35 (a class of men): one KA offering of 3 units of wheat (σιτίον), another offering of etc.

Note

siFIC, the reading of si is uncertain. It can be *ne*FIC and *ne* is a kind of vessel standing for a type of measurement.

HT146

A fragment

MA and ri-ka-ta (Λυκάστη) are congruent x terms.

KN 1

- a) ja-ku TI *44 240
- b) ja-du-ra TI *44 105

which means:

- a) Ἄργος payment (TI) of 240 units of the commodity *44.
- b) Ἡδύλη payment of 105 units of the same commodity.

Note.

Ja-ku and, possibly, ja] du-ra occur together also elsewhere (see respectively MA2b,2 and 2a,1).

Ἄργος represents a man whose name could also be Ἀλκων or Αἶγων or it could also be ἀρχός = leader, magistrate.

*44 (𐀓) stands for a commodity which appears frequently and is always followed by high figures respect to all the others in the record. Since the phonetic value of 𐀓 is *e* it could stand for ἐλαία= olives, ἐρέβινθος= chickpeas, ἐλάτη= dates, which are all bulkier than the other commodities.

Ja-du-ra could also be the female equivalent of Ἀδωρος = who does not accept gifts, an epithet of Kore.

MA1

The tablet records that an offering to the goddess Δώς and another to the goddess MA have taken place.

- side a) X I DU-wi . *102 . qe-de-mi-nu
- side b) A MA . *102 . qe-de-mi-nu

The tablet has no figures and, on side a, it begins with the sign X which in Linear B indicates that the scribe has checked it. So the meaning of this tablet is the following one:

side a) it has been checked (X) that the offering (*102) for the sacred (I) Δώς (DU-wi) has been obtained with profit. (qe-de-mi-nu = κερδημένος);

side b) for the royal (A) mother (MA) the same offering (*102) has been obtained with profit.

Note.

Δώς (root in of) means gift and it is a name of Δημήτηρ (Hom122).

*102 an offering, but, although the symbol is very similar, it perhaps has a different meaning than KA.

Qe-de-mi-nu = κερδημένος p.p.m. of κερδάνω, to obtain with profit. One would expect a dental exitus of the labiovelar but also elsewhere, and in the same Linear B, a velar exitus is not rare. For “mi” instead of “me”, see the Linear A variation i/e (for instance ki-ri-ta₂/ ki-re-ta₂ etc.).

MA2c

Line 1]u-na-na = belonging to]u-na

Line 2]ja-ma-u-TI payment (TI) of]Ἀμάος.

MA4-6

Several kinds of PELLIS. On MA9 there is the very high figure of]2000 skins which perhaps is the total of all the PELLIS recorded. The animal skins appear variously modified, with signs inscribed (SA) placed before to the symbol (TA) or placed after (RO).

PA1

The tablet is similar to HT43 , but the commodity is different:

- a-ku YU pa-tjo 35
- Ἄργος must produce (pa-tjo= σπαρτέον) 35 units of FAR (YU).

Note. "Αργος represents a man whose name could also be "Αλκων or Αἶγων or it could also be ἀρχός = leader, magistrate.

The third sign stands for a commodity which, as it is possible to ascertain by the photo, is FAR (or, more difficulty, FAR+I, i. e. FAR for sacred aims).

Pa-tjo= σπαρτέον from σπείρω to sow, more than φατέον from φημί, because, also elsewhere, as on HT43,1, it has the same meaning.

PK1

The heading is unfortunately damaged but a long record of SI (the sign seems to have a horizontal stroke at the bottom) is recognizable. SI is repeated also in side of the tablet. The type is the fourth.

Translation: SI[]-jo Payment Χάβης, (ka-qa), 2 units; Αἶδωλιος (a-du *23), 1; the τηρός of Θεά (Tja ta-re), 1; the θυτήρ of Θεά (Tja ti-te), 1; o-ka-mi*23-i-na, 1; Ortea (o-te-ja, 1); ra-na-tu-su, 1; ni-mi-tu-su, 1; ma-ti-*23-i-te, 1; ma-te-ti, 1; the sacred (I) θής of Μάχα, 1.

Note

For ti-te see Hsch θύτες·μάντις (Minoan variation i/u);

For Ma-kaITA, see Hsch μαχητής· στρατεγός.

PH1

Side a, line 1]di-ra-di-na 133[

Side b, line 2]FICUS 2 *140 Lm18

Note

The tablet is damaged on the right side.

*144 is a liquid unit of measure, which is here used to indicate a correspondent liquid commodity.

PH2

The tablet contains two records of two types of oil. The first record refers to aOLE and the second to common oil. There is no doubt that aOLE is the ligature OLE+A written in plane.

aOLE	tu-me	.	ra-o-di-ki	60
			pi-ru-qi-ju	60
OLE			sa-pa ₃	60

The translation is:

Oil of royal kind (A) for the homage (tu-me = τιμή): Λαοδίκη (woman's name) 60 units. Φιλοίτιος (man's name Od.20) 60 units.

Oil: Σέβης (man's name) 60 units.

Note

Tu-me, the second sign is uncertain. The word, besides than τιμή, can also be the equivalent of θυμα= sacrifice, or θυμή, perfume from θυμιάω;

Pi-ru-qi-ju, the third sign is *88.

PH3a and b

The tablet probably belongs to the first type. In the side a it presents the sign *211 variously ligatured (with A, MA an RU. If we give the probable value of Ma to it, we have MA of first quality, the ointment MAMA=σμᾶμα and MARU=μαλλός, wool.

PH6

The tablet has no figure. It contains six words, four of which begin with I and two with A
In my opinion it must be normalized as follows:

Sacred (I) ναῦς (na-wa), sacred ἄρις: Ida₂-ri-ni-ta
 Sacred ἄρις: Isa-pa₃ and Isa-ri.

Note

A-ri= also A (rojal) λῖς, blanket.

PH(?)31a and b

It is only a fragment.

Side a

Line 2]ru CAPER^mku 1, MADI OVIS^m 1, OVIS^f[

Line 2]TE 1, ku-pa₃-nu SUS^{sire} 1, pa-ta-DA[

Line 3]1 ku-ro CAPER^mku 1, OVIS^m 5, OVIS^f 3

Side b

Line 1]CAPER^f 2 OVIS^f1[

Line 2]du-ri CAPER^m 1, tu[

Line 3]jo CAPER^m 1 CAPER^f 5, te-ri OVIS^m [

Line 4]ru-ma-ti BOS^m SUS^{si}[

Line 5 [a-mi-da-o BOS^m1

[

Note

A-mi-da-o, see a-mi-da-u (ZA10a,3) = A μεδέων, royal protector, here a proper name.

PYR1

The record concerns the payment of a special type of wine:

for the ru-wi of MA payment (TI) of the tax (TE) of 90 units of *te-ro*VIN (θέρος= well matured).

Note

Ru-wi, in my opinion, from λούω (a form λώς, root in ʃ in the same way as δώς).

TY2

A list of *105b, *105, *105c and *105d..

*105b+*69-pu-pi 500

*105[] 290

*105b+IKIPU 50

*105d+DAPU[] 10

DARU*105+*96KI 100

*105d+*96[

*105[]6

paHOMO 84

*105e+*67 17[]

*105e+RUKA 30

*105d+WA 80

*105b+*96 250

*105b[

Note

KIPU=σκύφος

TY3a and b

The records, four in side a and three in side b, are divided by means of a horizontal stroke. They regard various types of perfumed oils among which there is also oil for χρίσις (ki-ri-si), greasing.

Side a

] *23-da₂ OLE+KI 15 and Lm1

OLE+RO 22

	<u>joOLE+KI</u>	<u>5</u>
	OLE+*79	3+Lm9
	OLE+MI	[
	]OLE+ME	7+Lm9
ADU []	OLE+KI	51
	OLE+U+KI	2+Lm23
	OLE+ME+KI	1
	OLE+*79	4+Lm9
	OLIV	4
<u>ADA</u>	OLE+U	21
	<u>OLE</u>	<u>2</u> [
] ko-a du-wa	<u>OLE</u>	7+Lm23
A ku-tu*129[	<u>KI</u>	<u>5</u>
	OLE+TU	1
Side b		
Ki-ri-si	OLE+MI	6[]
*56 ku-da ₂	OLE+KI	4
	OLE+ <u>MI</u>	11[
	OLE+JO	2[]
pa-mi[	]220[	

Note

ADA = royal portion (δαίς).

*ko-a du-wa= χορή δύο, double libation.

Ki-ri-si=χρῖσις, greasing.

ARKH2

The tablet contains a record of the fourth type which I have normalized according to the Linear B rules. Wine, in the form *82b, is the commodity. The last line is illegible.

Si-da TE ku-ra VIN (*82b) 5
Si-da-te TE Asi-da-to-i VIN 12
Si-da-te TE Da₂-*161-se-de o₂-tjo VIN 6
Si-da-te TE Asu-pu-wa VIN 4

Translation: tax (TE) of wine at Σῖδα, 5 units belong to Κύρη, 12 units to the royal (A) inhabitants, 6 units must be given (οἰστέον) to Da₂-*161-se-de, 4 units to the royal (A) larder (σιπύη).

Note

Σῖδα=Σῖδη (place name also in Linear B).

Κύρη= ἡ Δημήτηρ (Caeres).

Asi-da-to-i , also dat. pl. of σύνδετος, relative.

ARKH5

Not normalizable. On side a, in lines 1-2 one can notice:

ADU FIC ta-na 41[and in line 2: a-da-ro GRA40[

Note

A-da-ro= Ἄρδαλος

ARKH6

A fragment. In line 1 the word Dana-tu (DA νηστός, cloth, a confraternity of weavers devoted to the goddess DA).

ZA4a

The tablet is unfortunately damaged in the upper part but, since all the terms that remain are x terms, they certainly must refer to a lost commodity. The terms which are visible are:

Ja-to-ja, a proper name, see a-to-jo-to-i on KH11,4.

a-ti-ru, a man's name, Ἀστυλος.

Itu-me SE = SE (a kind of man, probably a supervisor) to the τιμή, homage.

qe-ne-dja E= by analogy a kind of man.

Inu-maRE= RE (attendant of the sacred (I) νομή= pasture or distribution.

ne-piKI= KI (a type of man) of ne-pi).

e-tjo, the term refers to the preceding terms and means ἐτέον = must send (ἴημι), i.e. it is necessary to give other fifty units of the commodity in question.

The KA offering of DI (a class of men) is of three units.

ZA5a and b

Only the upper part of the tablet remains. Side a begins with a transaction sign (79b-tjo=wo-tjo) which means that wine in vessels SU must be paid. The record is of the fourth type.

The side b is the continuation of the side a. It contains three names with the relative units but we do not know if these units refer to the same substance as side a. The names are RE of the sacred νομή, ne-pi-KI and the sacred θές of Μάχα (ma-ka-i-ta) 3. The respective units are 20, 1+Lm9 and 3.

Note

HSC: θής μιστωτός and μαχητής στρατηγός.

ZA6b

Translation: For sacred aims (I), payment (TI) of ku-ju (from χέω): 50 units and Lm1 of sacred (I) GRA of the kind PA; 40 units of raVIN, 10 units of kaVIN; *36-tja: 40[units of GRa of the the kind PA. The rest of the tablet is very damaged.

Note

RaVIN= ῥάξ.

KaVIN, see καρύνος or wine for offering.

*36-tja has the characteristic of a transaction terms, see e-tjo on ZA4a.

ZA7a and b

A few terms are visible. Among them there are: u-ju = υἱός, son; a-ra-tu = Ἀλάστωρ or Ἀρητος; a-re-tu-ju = Ἀρεταῖος.

At the beginning of side b there is perhaps the word AMA[= royal (A) MA.

ZA8

The tablet belong to the fourth type with the commodity (figs) which is recorded after the first term x₁. The normalization, according to the Linear B rules, is the following one:

kira .	a-ta-re .	FIC	Lm9
ki-ra	Ku-to-ko-re	FIC	LM23 ²
ki-ra	a-ri-ni-ta	FIC	1[] lm19 ²
ki-ra	ta-i-nu-ma-pa	FIC	Lm9
ki-ra	ma-ka-i-SE	FIC	2+Lm8
ki-ra	da-i-pi-ta	FIC	2+Lm9
ki-ra	ka-i-ro	FIC	4+ lm19 ²

Translation:

It is necessary (ki-ra=χρή) that the royal τηρός has Lm9 of a unit of figs; the RE χάτοχος LM23²; the servant of the royal 'ρινός 1[]lm19²; the sacred (I) SE of μάχα 2+Lm8; Δηίοπιτης2+Lm9; Χάρων 4+ lm19².

Note

Ku-to-ko-re, Castocles.

ZA9

Many terms are illegible but it seems that the tablet records in the final part names of men or divinities who must receive sheep. Among them the royal (A) ta-na[in line 4, must receive a young (NE) sheep,]ma-ju, a female sheep and wi-ra-re-mi-te a female sheep.

ZA10a and b

The tablet is inscribed on both the sides and, since it has no heading, it is the continuation of another tablet. It belongs to the sixth pattern and contains five records of different type. The scribe writes the point as a vertical dash which is confusable with the units. This happens twice after the word ku-mi-na (n. p. of the Greek word κύμινον) which is certainly a spice.

Side a:

First record (continuation of another record)		ta-na TE 2
		PA 1
Second record (third pattern)	Aku-mi-na '	Ata-na TE 1
		Ami-da-u 1
Third record (fourth pattern)	ADU ku-mi-na ' !	Da-i-pi-ta 1
		Du-re-*23 SE 2
		Wa <u>no</u> 2

Side b

Fourth record (first pattern)	Du-re-*23 SE	VIN 5
		u-pu ₃ 6
		ma-dja 2
		ma-ki-de TE 5
		sa-ma 5
		a-de 4
		a-mi-ta 3
		ra ₂ -ro- re 2
Fifth record (first pattern)	PA	ia-[.] 1
		KAKu-joTE Lm9
		TA 2
		DU 1[

Translation: side a, first record (third or fourth pattern):

ta-na (a kind of men) must pay the tax (TE) of 2 units of a substance that was indicated in a preceding lost tablet; PA (another kind of men) must pay 1 unit of the same substance.

second record (third pattern): of the substance κύμινον (n.pl.) of first quality (A), the royal (A) ta-na (a kind of men) must pay the tax of 1 unit; a-mi-da-u must give 1 unit of the same substance;

third record (fourth pattern): donation (DU) to the Palace (A) of κύμινον: Da-i-pi-ta, Du-re-*23-se and Wano must respectively give 1, 2 and 2 units.

Fourth record: the SE du-re-*23 " must give 5 units of wine, 6 of ὀπιον (u-pu₃), 2 μαζα (ma-dja), 5 μαγίδες (ma-ki-de) suitable for the tax (TE), 5 sa-ma, 4 (αἶδης) a-de, 3 ἀμιθάς (a-mi-ta) and 2 ra₂-ro- re.

Fifth record: the people PA (the same as the first record) must give: one unit of ia-[.], Lm9 of a unit for the offering of the ku-jo tax (TE), 2 workers and 1 δῶς (DU) doffering.

Note

A-mi-da-u, see Μέδων (IL 2,727).

Da-i-pi-ta, Δηίοπιτης.

WAno, the second sign is very difficult to understand. It could also be a ligature.

Du-re-*23-se, also the SE of the re-*23 donation (DU).

U-pu₃ = ὄπιον

Ma-dja = μᾶζα, a kind of flat bread.

Ma-ki-de TE, μαγίς, a kind of flat bread.

A-de, αἶδης, a kind of flat bread.

a-mi-ta ἄμιθας a kind of flat bread. But also μίνθη of high quality (A) is possible.

The first record is not legible since the second and the third signs of the first word are very damaged. The initial PA can stand for a class of people followed from a list of the first type. Ja- [] is the first term which stands for a kind of tax.

ZA11a and b

Only the first line of both the sides is normalizable. At the beginning of side a there is a record of *paGRA* for sacred aims (I). The normalization is:

DI di-ko-ra-me [] tja. I .*paGRA* []

At the beginning of side b there is the following record:

e-to-ri [] I . sa-qi-ri . *paGRA* []

ZA14

The normalization of this tablet according to the Linear B criteria is the following one:

Ki-di . o₂-tjo . ME 1

Pu-ni-ka-so . o₂-tjo ME 3

Qa-ti-ju . o₂-tjo . ME 8

Ku-pi . o₂-tjo . ME 1

Tu-mi-ti-*23-se . o₂-tjo . ME 45 []

Pa-nu-qe . o₂-tjo . ME 2

Ia-wi[]

Note

o₂-tjo = ὀστέον.

Qa-ti-ju = Κητεύς.

Pa-nu-qe = Πανόπη.

Ia-wi[] = Ἄρις, Ἄλυσ.

ZA15a

*102	ku-na	saVIN	qe-ne-dja E	57
		saVIN	i-ti-ni SA	10
		meVIN	mi-*23 SE	3
		meVIN	Inu-ma-RE	6
		meVIN	si-pi-ki	2+Lm9
		meVIN	ja-sa <u>mu</u>	5
		meVIN	sa-mi-da E	4
		meVIN	so-ke-ma SE	5

Note

saVin and meVin= aged wine(σαπρίας) and honeyed wine (μελιτόν).

Si-pi-ki, the sign *si* has a vertical stroke inside it.

ZA15b

Two records, of wine. The first regards a KA offering of 3 unit of wine from DI (a kind of men).

The second regards a total of 78 units of wine and of 17 units of *ravin*.

Note

The first two signs KA and DI are separated by means of a punctuation mark.

Ravin see ράξ, grape.

ZA20

A fragment. The terms which are recognizable are si-te-tu in the second line; si-tu, te-*65; and ru-ma-taSE in the third line. Then the term ku-ra follows. Since this term is followed by a high figure (130), in my opinion, it stands for the total and means to the lady, a divinity or a very important woman (Κόρη) to whom all the preceding items are dedicated.

The others tablets are damaged but ZA21b, 24a, seems to begin with IDA[.
ZA26a begins with si-pa and si is written in the Linear B way.

KH5

The tablet contains two records of the second type having the same heading. It, according to the Linear B way, can be normalized as follows:

ADA ki-si-KA . a-ra-uDA . wi-sa-sa-jo lm1HORD 2, *09VIN 2
Wi-naDU . qi-na . ku-pa-dja HORD 2 and Lm20, FIC 2 and Lm1+Lm19

The translation is : royal (A) portions (δαίς) which is the iheading and refers to both the record.
First record: σχίσις (division) of the offerings (KA), portion DA=δαίς of 'Αρείος Wi-sa-sa-jo ...
Second record: donation (DU) for the ὕνα (Hsch), qi-na (woman name in Linear B) ku-pa-dja ...

Note

A-ra-uDA, also A-ra-u-da, see the proper name 'Ηρώνας.

Wi-sa-sa-jo and ku-pa-dja, two ethnical adjectives, the first masculine and the second feminine.

KH6

The tablet is very damaged. Only few terms are recognizable.

We-ta-je in the fourth line, which is followed by several y terms (barley and animals) and au-re-te (αὐλητής =flutist) in the seventh line, which is followed by female sheep, a lost commodity and barley.

KH7a

Lines 3-4

Ija pa-me . ta-ta . qa-ti kiHOMO 4, HORD+ Lm23 and Lm19

Translation: for the sacred (I) voice (ιά) of the oracle (pa-me=φήμη) has been confirmed (ta-ta=ἐθέθη) a lack (χᾶτις) of 4 ki men and Lm 19 of a unit of Lm23HORD.

Note

Ija can also be the equivalent of ja-ja, the female of ἰήιος= invoked.

Ki is certainly used as logogram since it is written smaller both before HOMO and in the first line, (see κίρων, castrated, Hsch.)

KH10a

Lines 3-4

i-pa-sa-ja . qa-tjo [] a-ki-pi-e TE GRA 90.

Translation: 'Αλκιβίη must give (qa-tjo) 90 units of wheat to the sacred (I) Psaia (see 'Υψαῖος).

KH11

It contains three lists of the second t type concerning a royal donation (ADU). The three x terms are re-23, a-to-jo-to-i and a-ta wo.

Note

A-to-jo-to-i and A-si-da-to-i (dat. pl.) ethnical from Ja-to-ya[and Si-da (place names).

*23-nu-ma wo₂-tjo FICUS 10
pu-de 8

*23-nu-ma must pay (οἷστέον) 10 units of figs and 8 libations (pu-de=σπονδή = libations, wine).

Note

The word *23-nu-ma can be *23-nuMA, the great mother preceded by a place name. In this case the translation of the record becomes: it is necessary to pay 10 units of figs and 8 libation to the Mother of *23-nu.

THE INSCRIPTIONS

The “formula”

It deals with a dedicational formula which we find on religious objects coming from different places. It is mainly divided into several parts, the first of which often ends with the word *ja-sa-sa-ra-me*, the second ends with *si-ru-te* and the third, which is not always present, changes and sometimes contains the groups *i-na-ja re-ta* and *i-na-ja pa-qa*.

I have always regarded this formula with some distrust and therefore began studying it only long after I had started working on the accounting documents. The reason is simple. The accounting documents are repetitive and in large amounts. They allow us to verify our interpretations and to correct our mistakes. But not the dedicatory formula, where the variations are several and hard to recognize so to make uncertain even the results of the comparative method. There are many difficulties and only after years of experience on accounting documents, can one, in my opinion, start feeling secure enough to face up the study of the details that these religious documents require.

Of the three parts that compound the formula, the second is the one which remains the most constant, seeing as it is made up of three words: u-na-ka-na-si i-pi-na-ma si-ru-te which have few variations. For these reasons it seems to me the easiest to deal with. In fact, among the three words that compound it, the second “i-pi-na-ma” has only one variation “i-pi-na-mi-na”. Observing the respective endings “ma” and “mina” we can see how both find a convincing explanation in Greek, corresponding one to the acc.n. s. of ἐπίνευμα = nod (consent), and the other to the acc. n. pl. of the p. pr.m. of the corresponding verb ἐπινεύω = the things which are consented¹⁰. The third word si-ru-te seems not to have any variation other than once when the ending sign is damaged and that which remains could make one think of a different sign from “te”. Actually, the ending “te” is very indicative, since it corresponds to an imperative 2nd p. pl in my opinion from the verb συλλύω (Linear A variation i/u) = to make favorable, with the result that the second and the third words of the second part of the formula can be translated “let you make a favorable nod” or “let you make favorable the things you nod”. This implies an immediate observation. Being a plural verb, there must also be a plural subject. A morphological element immediately comes to corroborate this theory. It is the “ka” of the first term u-na-ka-na-si, which is the equivalent of the Greek conjunction καί and joins u-na and na-si, which are the subjects to which the verb refers. This has further evidence in the fact that u-na has the variation u-na-ru and na-si has, in turn, the variations na-ti and na-[ja]-si. The problem arises when we try to find two plausible Greek words to translate them. The first thing that comes to mind is that they must refer to two gods to whom the offering was made asking for their benevolence. But, although it is possible that na-si is a nymph or even a goddess, the only possible translation for u-na / u-na-ru, is οἶνη / οἶναρον = wine. So, the idea that we are dealing with two gods must be questioned and we must think that we are dealing with two offerings by means of which he, who was performing the

¹⁰ Also sacred (I) πνεῦμα, breath, and sacred things that you breathe (from πνέω) referred to the divinity are possible.

rite, asked the gods to grant his request. But what kind of substance is indicated by the word na-si? We know that wine, oil, cloth, perfumed oils, barley and honey were offered to the gods. The most evident Greek equivalent for the word na-si is νῆσις, thread, cloth, weaving. It occurs also in the form DA-na-si = DA weaving, which represents a confraternity of weavers devoted to the great Goddess DA. But, the translation “wine and thread grant me a favorable sign from the gods”, i. e. “grant me my request”, leaves me a bit perplexed. Na-si alternates with na-ti and na-[ja]-si. Na-ti could be νάντι = μήκων ροίας, a kind of poppy, while na-[ja]-si could be the equivalent of νήσις from νηέω, another form of νῆσις, which also means accumulation, amass. But it is very probable that this term means bandage, cloth or something similar, because on SYZa2 it is ligatured with oil and we know that presenting oneself with a band soaked in oil was typical of supplicants (see Homer). However, although I think that νῆσις means thread, cloth, I prefer to translate generically “wine and offerings grant me my request”.

But the first word of the first part a-ta-i-qi-wa-ja seems to me easy enough to take on and to offer a good possibility of translation. In fact, regarding it, one can immediately make the following observation: the third and the fourth sign appear elsewhere in ligature (KN2,2 and HTWa1022), so, occurring always together also here, they must constitute a word by itself. The result is that the word a-taIQIwa-ja is made up of three words: ata, IQI and wa-ja, which is confirmed by the fact that, on ZAZb3, we have a-ta IQI de-ka. A-ta has various Greek equivalents, it can be ἄντην=publicly, in the presence of all (a word that occurs also in Homer), ἄντη = prayer, and ἄττα =Cretan word for “fine”. Actually I prefer to give it the value of ἄντη = prayer, rather than publicly since it alternates with θέναρ, altar. The word I-QI can be translated as sacred QI, but here we have the first problem, because, comparing the occurrences of QI, we can see how it belongs to the group of logograms -there are several even in Linear B- that have two meanings, since in some contexts it refers most to men and in others it indicates certainly a substance. So, IQI can mean either sacred offering or sacred man. Since it alternates with ra-te, ραντήρ, that is perfume spreader I am inclined to think that it stands for a substance. In the formula it is followed by wa-ja (which in one case, on PKZa1, appears as wa-e), which I have always suspected it is a verb because of its alternation with de-ka (ἔδωκα, I gave) and because it corresponds to a form of the verb αἰώ= to hear, to receive, to accept. So, linking these three words together, the most probable translation is the following one: ἄντην ἱερὸν QI αἰε = accept the sacred substance as prayer. With this we naturally suppose the presence of divinity in the words which follow, where, in fact, often IDA, that is the sacred goddess DA appears, who, we have already seen, how much importance she had in the Minoan world.

Another term which often occurs is du-pu₂-re, which is the equivalent of λάβρυς = axe. Since the double axe was the symbol of absolute power, there is no doubt that the word is a title of the divinity.

We are now left with the word ja-sa-sa-ra-me (variation ja-sa-sa-ra / ja-sa-sa-ra-ma-na), an original brain teaser, that has been given an impressive number of interpretations without ever establishing if it was related to a goddess or to a kind of donation. I have interpreted it as a-sa + sa-ra / sa-ra-me. A-sa female adjective from αἶσος =αἶσιος, of good omen, or as genitive case of Αἶσα, Fate, destiny. Sa-ra-me=θελήμη, will, desire, from σέλω, laconic form of θέλω (with the variation σ / θ which is present also elsewhere¹¹), although also θελή (which has the same meaning) plus the suffix *me/mana* (this latter from μηνός) is possible. The meaning in my opinion could be “will, hope of good omen” or, alternatively, and perhaps more plausibly, it could mean ‘the will of Αἶσα, that is, ‘the will of Fate’. On this interpretation, Aisa would be a deity personifying fate.

We are now left with Ina-ja pa-qa Ina-ja reta, which occurs in the last part of the inscriptions. I have a lot of sympathy for this formula because its meaning is in my opinion very clear. The logogram *I* means sacred, na-ja is the Cretan word for νόας=snake, and Ina-ja pa-qa Ina-ja re-ta can be translated with the invocation: sacred snake Léthē and sacred snake Fébē, knowing that Lete and Febe were two giantesses included in the list of mythological gods as direct descendants of Ophion, the great primordial snake from whom everything was born.

And, moreover, being the famous snake goddess represented with arms raised and a snake in each hand, I am led to believe that they were actually Léthē, representing oblivion, i.e. the darkness of the night and Fébē (the Doric form of Phoibē, the female hypostasis of Φοῖβος, symbol of the solar disk), representing the sunlight.

¹¹ See, for instance, σάλλω / θάλλω.

Many other observations can be made about the inscriptions but they still require a complex and reasoned approach. They are fundamentally different from each other because they respond to different personal needs. Translation is also difficult because once read, compared and verified, it is a matter of rendering a thought clearly and fluently. I have done my best but I take comfort in the fact that others, more intelligent than me, will do better.

INSCRIPTIONS

KOZa1

a-ta IQI wa-ja tu-ru-sa du-pu₂-re . IDAA u-na-ka-na-si . i-pi-na-ma . si-ru-te

Translation: as prayer (ἄντη) the sacred (I) offering (QI) accept (ἄιε), Tu-ru-sa, owner of the λάβρυς , sacred (I) DA of the Palace (A). Wine and offerings (οἶνη καὶ νῆσις) grant me my request (συλλύετε τὸ ἐπίνευμα).

Note

A always means royal i.e. belonging to the Palace.

Tu-ru-sa is an epithet of the goddess, perhaps from θύρα.

PRZa1

ta-na su-te-[i]-ke se-to-i-ja a-sa-sa-ra-me

Translation: Siteia (a place name also in Linear B) put (συνέθη[ι]κε) the altar (ta-na=θέναρ) as hope of good omen (a-sa-sa-ra-me).

Note

Su-te-[i]-ke, another translation is possible: Σύς (man's name) έθη[ι]κε. In this case Siteia is the place in which the altar has been dedicated.

Tana, I prefer the meaning of altar because of its variation with a-ta (prayer) but also the meaning of "this" could be possible since τήνος is the Dorian form of the demonstrative pronoun of the object.

ZAZb3

VINUM 32. DI di-kaSE . Asa-me-jo . ASE . a-ta IQI de-ka . a-re _ pi-re-na . ti-ti-ku

Translation: 32 units of wine.

To DI, administrator (SE) of justice (δίκης), royal (A) image (σημεῖον), royal (A) guide (SE), as prayer (ἄντη) I "Άλῆς" (a-re, man's name) gave (de-ka) as sacred (I) gift (QI) grape (πυρῆνα) for the sacrifice (θυτικόν).

Note

SE= σημάτων, guide, administrator;

De-ka = έδωκα (aor.);

A-re also ARE= royal attendant;

Πυρῆν means seed, also grape. It is acc. m. like θυτικόν.

CR(?)Zf1

AMA wa-ne . ka-ni-jaMI . i-ja . *23-ki-se-nu . TI . a-ta-de

Translation: to the royal (A) mother (MA) "Άρνη (wa-ne), once again (ka-ni-ja= καινή from καινός) healer (MI), invoked (i-ja), *23Ξενος (a proper name), as payment (TI) gives (άντάρδε)

Note

*Αρνη (wa-ne) is Δημήτηρ with the mare-head, worshipped for her medical skills because donkey milk is very healthy especially for sick children. Since the sign ψ does not present any stroke inside it, I give it the value of “ne”. But *Αοίς, another divinity present also on the tablets, is possible.

MI, logogram for protector, healer (μεδέω), occurs also elsewhere;

i-ja= several translations are possible: unique (from ἰός) or sacred voice, i.e. oracle (see KH7a), but I think that here it is the equivalent of ja-ja (see PKZa18), female of ἰήιος, invoked (for i/ja see infra), a term which is used for more than one divinity.

ἀντάδε, pr. 3[^]s. from ἀντάδω.

SYZa2

a-ta IQI wa-ja . ja-su-ma-tu OLIV . u-na-ka-na-si+OLE

a-ja

Translation: as prayer (ἄντη), the sacred (I) offerings (QI), receive (ἄτε), Ja-su-ma-tu (the name of the divinity), olives, wine and offerings +oil (οἶνη καὶ νῆσις+oil).

Αἶας (the name of the offerer).

Note

Ja-su-ma-tu, in my opinion is a compound name: *Ιασώ = health and μήστωρ advisor, both used as gods' epithets.

OLE ligatured with na-si could be a symbol to ask peace to the divinity.

TLZa1

a-ta IQI wa-ja . o-su-qa-re . ja-sa-sa-ra-me u-na-ka[na-si i-pi]-na-ma si-ru[-te

Translation: as prayer (ἄντη) accept (ἄτε) the sacred (I) offering (QI), O-su-qa-re (the name of the divinity), as hope of good omen (Ja-sa-sa-ra-me). Wine and offerings (οἶνη καὶ νῆσις) grant me my request.

IOZa2

a-ta IQI wa-ja . ja-di-ki-tu . ja-sa-sa-ra[me . u-na-ka-na]-si _ i-pi-na-ma . si-ru-te . ta-na ra-te u ti-nu . IDA [

Translation: as prayer (ἄντην) Ja-di-ki-tu (the name of the divinity) accept (ἄτε) the sacred (I) offering (QI) as a gift of good omen. Wine and offerings (οἶνη καὶ νῆσις) grant me my request (συλλύετε τὸ ἐπίνευμα). The altar (θέναρ), I Ἀῖθος, this (ὄν or ho-) buy (τίνω). Sacred (I) DA[

Note

Ja-di-ki-tu, see Δίκτυς;

u ti-nu is ὄν τίνω or ho- (as in Linear B) τίνω.

IOZa6

Ta-na IQI u ti-nu . i-na ta-i da₂ DI ne-ka . ja-sa-sa-ra-me

I buy (τίνω) this (ὄν, ho-) as altar (θέναρ) for the sacred (I) offering (QI), where (ἶνα), I Taidēs (Θαίς), have collected (νέκα from νέω) the gift of good omen (ja-sa-sa-ra-me) for DI of Dia.

Note

Da₂=dja

POZg1

Ri-qi TI a-sa-sa-ra DO

Payment of Ri-qi as DO of good omen.

The “grammatical “rules which allow to translate the texts and to recognize the kind of Greek the Minoan people spoke

So, the previous documents prove that Minoans spoke Greek. But what kind of Greek did they speak? The following aspects induce me to think that they spoke a Doric dialect.

- the word DA, Dorian for Γῆ in ancient exclamations;
- typical Dorian words such as μνοίτης, χᾱτις for χήτος, θῖνος for θεῖος, χίρων for χείρων, etc.
- the prevalence of the vowel sound “a”: Νέδα, μάχα, Δαμώ, κύρα, κύπα, ἰαρός, ta-re for τηρός, a-ru-da-ra for Ἀριδήλα, a-re-da-no for Ἠριδανός, pa-me for φήμη, ka-ti for κηθίς etc.

However, for a language to be truly deciphered it needs to reveal the reality of the world of which it is the expression. A reality that in the case of Linear A reveals wide, varied and, at the same time, homogeneous aspects, that is, in line with what the scholars would expect from a people like the Minoan one, whose customs and habits can be described with five key words: taxes and tributes, gods, men and products.

The Minoan social organization

Taxes and Tributes

The Minoan social organization is based on a system of taxes to devolve to the gods, religious feasts and Palace administration.

One of the five transaction signs, the most used one, refers to a contribution that represents a real tax, the most important of all. It is the sign whose phonetic value corresponds to TE, in Greek τέλος= tribute (from the root *tel* of the verb téllō), which is widely used in the lists and indicates the main tax, a mandatory obligation, recorded very meticulously by the scribes. In fact, a tablet (HT12) records two types of deficit concerning this tax. The first deficit consists of two products whose payment must be respectively supplemented with the addition of five more units and the second one concerns six products that must be paid in full. Since the tablet is the continuation of some other one, we do not know the name of the “lucky” debtor but other records are more precise and inform us of other debtors, such as, for instance, Mr. Πύρρος (pu-wo, HT14, the name is also present in linear B), who must pay considerable amounts of wheat as well as olives and perfumed oils. Another registration, coming from Khania (KH10), concerns a woman, Ἀλκιβίη (A-ki-pi-e), who must pay 90 units of wheat as tax (TE) to the sacred Psáia. There are also registrations in which TE is associated with a single substance, sometimes wine, in which case it is paid to confraternities and men’s associations.

Although TE indicates the main tax, it is not the only one because there are other terms indicating other types of taxation. The one which is most common among them, second for importance only to TE, is surely DU which is equivalent to the Greek word δῶς= donation. DU is almost always preceded by the logogram A which indicates the palace, and therefore means donation for the Palace. However, it can also be preceded by the names of people as in the case of Μάνης, a man we know by a tablet (HT43) who, for sacred purposes, must produce more than five units of grain reserved to the gods. Considering that DU is the equivalent to the Greek δῶς which means donation, it should be, as the word itself says, a free tax but the registration concerning the already named Mr. Πύρρος (HT14) informs us that he must supplement his TE tax with an additional DU donation due to the Palace (A) as a fine (ποινή). Since we are talking about a fine, the question arises to what extent DU is a real "donation" or if it is not a compulsory tax with a softened name. The term has the characteristic of always being postponed to the word to which it refers. Only once it is before, but the explanation is clear. It is the word DUda-ma (HT6b) which, being followed by a high figure, not in line with the others in the record, indicates the partial total of a donation, well equivalent to the Greek δῶς δάσμα= part of the donation. On another tablet, (HT110a), by normalizing the lines 1-2, we have :

neDU *69b ku-mi Lm/HORD 20
ku-pa 1[
ku-ro 100[

by which we find out that for the new (*ne* = Greek νέος, new) monthly (*69b is the symbol of moon and it has this value also in Linear B) donation (DU=δῶς), Mr Χάρμης (ku-mi) must pay 20 units of HORD+Lm1 and 1[bowl (ku-pa= κύμβη, κύπα) for a verified total of 100[units which refers also to other preceding items, of which the tablet is the continuation. So the doubt that DU represents more than a voluntary donation becomes stronger.

Another term indicating a kind of donation is KA which, most likely, is the acronym of kána, from κάνα, vases for donation. We find it associated with various terms. IKA means sacred offering (HT91), DAKA means offering to the goddess DA (HTWa1001), and A-si-aKA (HT28) means offering to 'Ασία, another goddess, daughter of Ocean and Tethys, The most interesting association is however KApo-ru which is equivalent to KA phòroi i.e. bearers of KA, which also exists in the pictographic version HOMO+KA (𐀓𐀓) and it is equivalent to the Greek κληφόροι carrying “cerni”, a type of jars containing various kinds of agricultural products, widely used in the sacred processions in honor of Demeter.

Ka-ru, Greek καιρός, agreed measure, indicates a form of transaction. It can also be associated with A in the form Aka-ru, which means a measure agreed with the Palace. A tablet (HT2) records various types of perfumed oils and contains two lists, the first indicating that some quantities of perfumed oils are available for the Palace and the second indicating that other quantities are indeed reserved for a priestly college devoted to Κυρίτσαλί, an epithet of the supreme goddess.

TI is another term inherent to the transaction. It has the characteristic of being postponed to the term which it refers to. It means payment, or something similar, and it seems to be connected with the Greek verb tínō which means to pay. Its use appears evident in a tablet coming from Knossos, the number 1, which records the payment respectively of 240 and 105 units of the substance *44, on whose identification there is still no certainty. It is found in association with A in the form ATI, a type of men, perhaps royal tax collectors, and appears in the inscription PSZa2 which must be read ta-na IQI TI whose translation is altar (Greek thénar) paid (TI) as sacred (I) offering (QI). IQI is in fact the term by means of which the sacred offering is indicated in the inscriptions, i.e. the offering addressed to the deity to achieve his benevolence.

Other terms which are very important for the transaction are sara₂, ki-ro and ku-ro.

Sara₂ corresponds to the Greek word σαλία / θαλία (the sign ra₂ is equivalent to *rja* and the sound *r* in Minoan-Mycenaean is also *l*), which are forms derived from the verb σάλλω, to abound, to flourish. It therefore means reserve, surplus, stocks. The term is quite frequent and shows that the Minoans were very attentive to the art of preserving and accumulating goods. In fact, a tablet (HT30) records a stock of various products followed by the indication of the relative deficit. Of the products destined to constitute a reserve, the scribe specifies that it is necessary to integrate some with the addition of further quantities. The largest stocks concern wheat. One tablet from Haghia Triada (HT102) records a reserve of 976 units. Assuming an estimated capacity of approximately 96 litres per unit, although scholars do not fully agree on this value, the recorded stock would amount to about 94,000 litres.

Ki-ro, as long established, indicates the deficit. It is equivalent to the Greek word χήρος = missing, devoid but it is not the only word that the Minoans used to indicate the deficit. There are also ki-ra which is equivalent to the Greek χρή, there is need and ki-ra-ja=χρεία, which means there is lack.

Ku-ro instead indicates the total. It is the equivalent of the Greek word κύρος, ratification, validation and the scribe writes the sum of the validated figures after it. Po-to kuro, a form used to indicate the sum of several totals, is equivalent to φόρτος κύρος which means validated goods. Since φόρτος often refers to the cargo of a ship, it is possible that the goods validated in this way were be traded.

The verbal adjectives in -τέος are also widely used to specify the transaction and they, by indicating necessity, have the same value as the classical Greek. They, according to Minoan phonetic laws, end in tjo. Particularly used are qa-tjo (Greek θετέον) which means that one must give, pa tjo (σπαρτέον) which

means that one must produce and o₂-tjo (οἰστέον) which means that one must carry.

But it is impossible to conclude the discussion about taxes and tributes without talking about the transaction's terms. Chadwick was very interested in them and, after Minos '88, he wrote to me:
I have said that Linear B tablets basically fall into three types: contributions, distributions, and stocks. That is to say, the palace has to receive supplies moving into its various stores; to send these out again; and keep an inventory of what is available: but we can apply another dimension: time: Contributions may be already made (past time), made repeatedly (present time), or foreseen (future time). Even where there is no verb we can work out as a rule to which of these categories the records belongs. And of course the same applies to distributions. Thus it is possible that some of the "transaction" categories of Linear A refer to past and prospective operations. Linear B tablets refer to obligations ("he ought to do something, but is not doing it"). There is also what the Mycenaeans called ta-ra-si-ja (probably talansia), which is a system by which the palace issues goods (bronze, textiles, etc.) to craftsmen (or women) to be worked on (decorated, worked into weapons, etc.) This establishes a corresponding obligation on the workers to account for the raw material and return the finished goods. I should be surprised if that system were an invention of the Mycenaeans; similar systems are found in the Near East, and I would guess also in Minoan Crete. You might begin thinking about how your transaction signs might fit into such a pattern.
I checked whether anyone of the Linear A transaction signs fits into one of the Chadwick's suggestions, but referring time I found only HT110a and (perhaps) HT123b. Actually the logographic transaction signs are five: TE, I, *56, *56b and *41. TE means always and everywhere τέλος, tax; I means always and everywhere ιερός sacred, *56 and *56b (pi-pi= πέμψις, procession) have always to do with aggregations of men and *41 has to do with worship and occurs together with the word sacrifice (ti-ti-ku=θυτικόν). The word ka-pa stands in my opinion for "collection" (from καρπόω, which means also to collect), and there are several tablets which surely refer to a distribution. Four among them (HT27a, 89, 94a and 100) are easily recognizable since they have the same structure. But as far ta-ra-si-ja is concerned, although I have the suspect that some documents refer to a similar usage, I am uncertain because they are unfortunately too damaged to allow sure deductions. I can only add that on an interesting tablet from Hagia Triada (n.24) I have translated καπηλεία= commerce, i.e. for commercial purposes the initial term ku-pa₃-we-ja which is followed by a long record concerning wool and fabrics. It is a very instructive subject but we would need to have a whole set of tablets on this topic and we unfortunately have no set in Linear A.

Gods

They play a very important role in the Minoan world. They are mostly goddesses and the most important among them is the great mother DA (Δᾱ) who is worshiped under different names. She is normally preceded by the logogram I (sacred) and appears in the form IDA, i.e. sacred DA. On a silver double axe (ARZf1), being a ritual object, we can read IDAma-te, that is sacred (I) DA mother (Greek μάτηρ). With the name IDA, i.e. sacred DA, the great mother often is invoked in the inscriptions where the word du-pu₂-re (λάβρυς), double ax, a ritual symbol of the Cretan deity, is associated with her. On a libation table (IOZa2) the form IDAA is also attested, which can be interpreted as sacred DA of the Palace. The symbols that indicate the highest authority are in fact two: I which stands for sacred and A which, being the acrophonic sigle of the word axínē, double ax i.e. the symbol of the Palace, stands for belonging to the Palace, royal. They are both associated with the Great Mother, which however is also invoked with other names among which: Βαία the nurse, Κύρα/Κόρη the lady, Κυρίτα/Κυρήτα Cirita, Δώς the gift, MA the mother and Μάχα, the battle, all representing different hypostases of the goddess.

Βαία receives an offering of figs from Mídas (HT41, 4). It also appears in the name pa-jaRE which means attendant (RE) of Βαία that we do not know if it is a title or a proper name whose etymology can be derived, given the evolution it had in B where it became Pajaro.

Κύρα, the Lady, better known as Κόρη, the goddess of the Underworld, appears in a tablet from Archanès (n.2) where she receives as tribute 5 units of wine in the locality of Side. She also appears in the form Κυρίνα which means belonging to Κύρα since the suffix -να indicates belonging. The tablet in question (HT90) contains two lists, the first of which records a stock of products due to the sacred Κύρα and the second the part due to her of some confiscated goods.

Another name of DA is Κιρίτα (Κυρίτα with the typical Minoan variation i/u), to which the Κιριτία priestly college is dedicated, which appears in more than one registration associated with various types of products such as wheat and figs. Κιρίτα also appears in the form Κυρετόνα which means belonging to Kurita to which are associated both men and perfumed oils and other types of products.

The appellative Δῶς, that is gift, appears in a tablet from Mallia (N.1) which specifies, on each side, how a sacred offering to two divinities was successfully performed. The two divinities are both hypostasis of the Great Mother, who on side a is indicated with the appellation of Sacred Gift and on side b as Royal Mother.

Thanksgiving feasts are also dedicated to the Great Mother. She appears in fact in the heading of two tablets (HT87 and 117a) receiving both thanksgivings and hymns of prayer. MA represents the acrophonic abbreviation of the Greek word μάτηρ, the Great Goddess celebrated in her capacity as universal mother. A tablet from Chania (no. 14) attests the form AMAja, interpreted here as “belonging to the royal MA”. This could designate either a deity protecting childbirth or a priestly college associated with the royal MA. The strange thing is that, among other products, this college also receives two dogs. Unusual, but not implausible, if we consider how to the goddess Artemis, protector of the births, just the dogs were sacred.

Μάχα, is not attested by itself but it appears in two very indicative compounds: makhaITA which means sacred (I) servant (TA=θής) of Μάχα, i.e. of the goddess of battle and evidently indicates a type of soldier, and makaISE which means sacred (I) guide (SE) of Μάχα which presumably indicates a type of strategist. The first term then evolved into μαχητής, which in Greek means soldier. However, even in this case, we might also be facing with two names of person, whose etymology can be traced.

Ἀσία is a goddess in her own right. She is mentioned in the heading of both the sides of a tablet from Haghia Triada (n.28), where she receives KA offerings from various contributors. Side b of this tablet specifies that for the festival reserved to her, in addition to the various offerings, there is also a reserve of various units of wheat, wine, figs and perfumed oil.

Θεά is another divinity in its own right. She also appears to be attested in the form Θjá (PK1) as the two compounds Thja ta-re and Thja ti-te, which mean respectively guardian (Greek ta-re= τηρός) and sacrificer (Greek ti-te=θυτήρ) of Θjá, demonstrate. The notion of guardian also appears in other meanings such as, for example, DAta-re which is equivalent to guardian (ta-re= τηρός) of DA and Ata-re which means royal (A) guardian (τηρός). In ancient mythology Tea was a prophetess, companion of Artemis, transformed into a constellation by Poseidon.

Of male divinities only one is recognizable at the moment. He is DI, which appears in a long inscription on a vase coming from Zakro (ZAZb3) and, besides receiving 32 units of wine, it also receives various appellations among which the title of “justice administrator”. In all likelihood he is the god who in Mycenaean is identified with Zeus.

Various terms related to worship are connected to the gods. Among them, in addition to the transaction sign indicating sacred (I), there is also another transaction sign (*41) which, in a record (HT 91), refers to a sacred offering (IKA) of various products and in another record (HT35) is associated with the term θυτικός which means sacrificial.

Χάριτες and ὕμνησις are also two terms related to worship, the first means thanksgiving and the second hymn of praise. Both appear in the heading of HT117a, which refers to a religious holiday.

Many congregations are dedicated to the great mother DA. Some of them refer to aggregations of workers but others seem to have a decidedly sacred character and indicate various types of religious colleges. DAγυνή, that is DA young bride, indicates a priestly college of young women sacred to DA. DAθηλή means DA breast and since this part of the female body is associated with the concept of abundance it must be an association with purely religious purposes. In the same way DAῶπιον= opium probably indicates an association of healers, if we bear in mind the medicinal virtues of opium and its importance in the ancient world.

Among the religious terms that refer to men there is the pictogram of man preceded by the symbol I (ιερός), which indicates men with sacred functions, perhaps a type of priest or simple worshipper. It is a fairly widespread notion in the tablets. Ku-pa3-nu is equivalent to the Greek word καβάρνοι which, as Hesychius teaches, indicated a kind of priests of Demeter. The term refers to a priestly college that appears

several times in the records as a contributor. Among other terms related to worship there is also the very quoted RE which must be, in my opinion, associated with the Greek verb λεύσσω and means therefore intendent or also superintendent. Lesōnis means in Egyptian superintendent while λείτωρ indicates in Greek a type of priest.

Men

In the Minoan texts there is ample mention of men who are indicated by their own names, by the name of confraternities and associations, by common names, acronyms and trade-marks.

There are many proper names, having Greek equivalents: Ράθις, Τηλίνης, Σκαίος, Ροϊκος, Ιάσος, Μόλος, Πάσες, Τηρεύς, Θεροίτης, Μίδας, Θέστις, Νήστις, Δείοχος, Σκύθης, Ἀστυλος, Δαίτος, Ἀρίδηλα etc.. They all were people of a certain rank since the tablets do not show that they have a servile condition. To indicate the people, we have three very clear Cretan words: δάμος, μνοίτης and θής. Among the other names there is not rare to find several of them beginning with the sign of the double axe, which has the phonetic value of A and can be omitted, since this use is probably a sign of distinction and respect for the highest authority.

Confraternities

They constitute the peculiar aspect of Minoan society. Many are devoted to the Great Mother, and their name begins with DA followed by a Greek term indicating the type of the confraternity itself. Some of them represent religious colleges, but there are others that are real associations of workers. DAθήρα, DA of hunting, probably indicates a brotherhood of hunters, while DAχύσεως (<χύσεως), that is DA of metal production, refers to a group of specialized blacksmiths. DAsμῆνος, i.e. DA beehive means an association of honey producers. DAvῆσις = DA weaving, a confraternity of weavers. A separate matter deserves DAME which equals δάμος / δήμος and means people. The etymology of DAME could be equivalent to DA flock, where ME would be the acrophonic abbreviation of the Greek word μῆλον, which means sheep, flock. A very suggestive image because Homer often compares the people gatherings to a flock that is called to assemble.

Other confraternities are represented by the already appointed priestly colleges and the καβάρνοι, the priests of Demeter. However, the Minoans were also divided by age and rank. In the first case the terms that indicate them are pa-de =παίδες páides, children, followed by the βέβηλοι, that is, the uninitiated and, as far as we know, the παλαιοί, that is, the old men who also appear in the form Απαλαιοί, that is, royal old men, an obviously honorary title. If we make a comparison with Sparta we are led to think that there is something similar between the two social organizations. In this sense we can assume that the παίδες were the youngest (up to seven years of age in Sparta), followed by the "uninitiated" who are perhaps those adolescents who in Santorini are suggestively depicted with their heads shaved in locks, followed by other types of classifications that are not currently traceable with certainty.

To indicate slaves there is a typically Cretan term, μνοίτης, slave. TA= θής indicates a worker of condition not necessarily servile. Other workers are indicated by the corresponding symbol, a loom indicates for example spinners, a boat indicates sailors. The man pictogram is quite frequent and it is represented by a stylized figure. It sometimes has notches on the legs. We do not know what this means but one thing is certain, there is a difference between the symbol with and without the notches, both appear on the same tablet (HT103) and, if there was no difference, the scribe would have had no reason to record them in a visually different way.

Acronyms

There are acronyms indicating types of men. Some have unknown meanings but the meaning of others is intuitable. SE and SA refer to two officials of important rank. SE seems the abbreviation of σημαντωρ, guide, indicator, and it is an attribute of the male deity DI (ZAZb3). SA can mean σαίς, young, used as a special attribute. A particularly interesting abbreviation is KI. It is used several times in a tablet (HT118) that records two types of pigs, common pigs and KI pigs. Since in Hesichius κίρων means castrated, it is possible that they were castrated beasts according to the still valid use of making the animals unproductive to make them fattened more. The symbol occurs, however, also associated with men in a

record contained on lines 3-4 of a tablet (n.7a) from Chania where there is recorded a lack of *ki* men for the sacred voice of the oracle. It is evidently a type of eunuchs working on sacred purposes.

Four tablets, HT27a, 89, 94a and 100, are particularly important to understand the social organization of the Minoans. They all have the same structure. They belong to the mixed type and are formed by a list of the fifth type followed by a list of the first type (in one case the lists of the first type are more than one). Since there is no doubt that the first list refers to men and the second to commodities, we are almost certainly dealing with a distribution. HT27a records just under ten units of barley and just over ten units of figs, with the addition of seven units of wine which are distributed to a total of 355 men. Unfortunately the body of the tablet is ruined and it is not possible to identify all the types of the men. HT89 refers to a total of 87 men receiving about three units of barley, a little more than two units of figs plus an undetermined quantity, but it seems quite high (more than six units i.e. almost six hundred liters) of wine. In the first line appear A σαλία which means royal reserve and the transaction sign *56 which is always associated with men and when it is doubled *56+*56 means procession, parade. The tablet is well preserved and the men are indicated both with pictograms (men with spears, therefore a type of soldiers) and with ligatures and groups of signs. HT94a refers to a total of 110 (the figure is not certain) men to whom are distributed different quantities of barley, figs and another substance, perhaps wine, which constitute a reserve (σαλία), plus other quantities of the same substances. Of the men recorded 62 are represented by the relative pictogram, 20 are probably sailors (*35 indicates the prow of a ship), 7 are ATI, perhaps royal tax collectors, 18 soldiers (HOMO+HASTA= spear bearers), 4 workers (TA=θής), for a total of 110 units. HT 100 is unfortunately mutilated in the initial part. The first list includes a total of 97 men among whom there are offering bearers (κανηφόροι), lance bearers and KI men (eunuchs) who receive, in addition to barley, figs and wine, also three types of perfumed oil.

Products

The variety of the products gives the idea of the Minoan prosperity. To treat them, they should be divided into agricultural products, animals, textiles and, above all, pottery.

Agricultural products

The most common products are wheat and barley. The symbols that represent them are respectively  and . Recently, even in Linear A as well as in Linear B, the respective equivalences have been questioned. Among the other clues, there is in Linear A a record (HT27b) which quotes twice the notion of "wheat wine" which, as I have already noticed, would make much more sense if it were "barley wine", that is beer of which it is certain that the Minoans, like the Egyptians too, were consumers. The question is debated but the theory remains valid since the symbol attributed to wheat is very widespread in the area of Messarà which, even in recent times, has been a great producer of this commodity. Beer, moreover, can be obtained from the fermentation of any cereal and it is therefore possible that the Minoans, having a grain surplus, produced beer also from this cereal, even if the idea is not very tempting. Moreover Haghia Triada, from which most of the tablets in our possession come, is located in the southern part of the island where the great and productive plain of Messarà stretches. A tablet (HT102), coming from this place, records in the first line a stock of 976 units of wheat (about ninety-four thousand liters), which in other tablets is often associated with other products such as figs, perfumed oils, wine and so on. The symbol that represents it also appears variously modified both with the addition of signs indicating units of measurement, and with the addition of other terms, whose meaning is not always clear. When it appears modified by metrograms, i.e. signs indicating measurement, this means that the unit used to measure it is not the highest one (about 96 liters) and consequently the respective quantities are proportionally smaller. Several times a symbol quite similar to the grain (*40) appears in the records. It is generally ligatured with both the logogram PU and the term pu-re. In the first case, since PU is the abbreviation of πυρός meaning wheat, it is likely to be a particular type of wheat. In the second case, since pu-re is the Greek word πυρήν meaning seed, it is possible that it is wheat seed. A rather surprising notion, but attested more than four times, is that of IGRA, i.e. sacred wheat. A type of wheat, certainly very valuable, reserved for purely religious purposes, perhaps for festivals or priestly celebrations. We have already talked about Μάνες, who, for sacred purposes, must produce more than five units of wheat reserved to the gods.

Barley appears poorly documented in Haghia Triada. It is in fact more common in Chania, where it is the most popular commodity. Like wheat, barley also appears modified by various types of signs

indicating measurements and like wheat it occurs in records that also contain other types of agricultural products. Wheat and barley have the characteristic of excluding each other since, until now, they appear recorded together only on a single tablet (HT99a). Barley is the substance which, together with wine and figs, is recorded in the four tablets (HT27a, 89, 94a and 100) which contain two complementary records, the first one concerning various types of men and the second one concerning barley, figs and wine and, in one case (HT100) also perfumed oils. Barley was offered to the gods and Demeter herself was called Mother Barley.

Together with wheat and barley another symbol (*67) often appears, whose value is still uncertain. However, two characteristics are quite indicative. Like wheat and barley, the symbol appears modified with signs indicating measure, which suggests that it is not a liquid. Furthermore, the phonetic value of the sign that represents it should start with *z* since the sign that in Linear B resembles it represents this consonant. It could then be equivalent to the Greek word ζέρνα, cyper, a substance which is very common in Linear B but does not appear to be attested in Linear A or, more probably, to ζέα, a cereal often used in grains, which is currently cultivated only in Northern Europe but which in ancient times was widespread throughout the Mediterranean area. If it was cyperus, as it appears several times associated with wheat, it should be the cyperus esculentus and not the more famous cyperus papyrus, which would be badly listed in records concerning food. The identification with ζέα leads to the observation that it must be the type of spelt (triticum spelta) also attested in the common form of triticum dicoccum.

Figs, like in most ancient Mediterranean civilizations, are another important voice of the Minoan economy. They represent in fact a highly caloric food, very suitable, once dried, to be preserved. A tablet coming from Zakro (the n.8) records a whole list of figs, while another record coming from Haghia Triada records 7 ki-ki-na, i.e. jars for offerings, (Greek κέρχνον). The phonetic value of the symbol representing figs is NI, which is the abbreviation of the Greek word νικύλεα, a type of wild fig. The characteristic of this symbol consists in the fact that it is one of those signs which, besides ideographically, appears to be very used phonetically. As a result, it is often confused and many words have not been correctly read because the publishers have been unable to recognize the value of the sign from time to time.

Wine is another popular product. It appears recorded on fragments of vases and also appears in economic documents where entire tablets are dedicated exclusively to the recording of this commodity. It is offered to the gods and is a valuable product that appears in different varieties. One tablet of Zakro (the n.15) records different quantities of two different types, wine SA and wine ME which are equivalent to aged wine (σαπρίας) and honeyed wine (μελιτόν). However, there is also a RA wine which indicates a type of grape since the Greek word ράξ means grape. KA wine means both wine to be offered and κάροινον wine, i.e. wine flavored with nuts, which is still used in Greece. Wine WA is equivalent to wine άπαλός, light, fresh and NE wine means wine νεός, that is new wine.

A commodity that was certainly traded was the oil that was used both for culinary purposes and to make perfumes and ointments. The use of perfuming the oil with substances of various types is amply demonstrated in the cuneiform tablets even if it were the Egyptians who made it a true status-symbol already from the third millennium before Christ. The variety of perfumed oils in the Minoan texts is surprising, far superior to that of the Mycenaean texts. Among the various signs with which the oil appears ινος in ligature there are some that refer to measuring system, some of which indicating the pots in which the oil was placed both for measurement and marketing. Other acronyms are trade marks, signs indicating the place and probably the type of production; oil +U means έλαιον όμφάινον, a type of oil obtained from unripe olives; oil +E means έλαιον έλάτινος oil perfumed with date palm, very widespread both in the ancient and classic world. Oil + MI can indicate a type of oil perfumed with mint (mì-ta = μίνθη, mint) while oil +A certainly indicates a royal oil, i. e. of superior quality, reserved to nobles and gods. A tablet from Phaistos (the n. 2) records two types of oil, the first of which is of superior quality and the second of common quality. In Chania there is a type of perfumed oil, oil + TA, which can be the acrophonic abbreviation of the Greek word τέλιν, a product “usus ad candorem oleo reddendum”, i.e. used to clarify the oil. Strangely the notion of sacred oil, as one would have expected, does not appear but on one tablet (TY3b,1) we have more than six units of mint perfumed oil to be used for anointing (χρίσις) and another tablet, HT116, contains on the side a six records that include various types of perfumed oils. On side b the total is recorded. What is interesting is that the various perfumed oils are summed together under the generic mention of oil.

Other products are spelt and a mysterious substance indicated by the symbol *44 which phonetically sounds E. This substance is quite frequent in the lists and has the characteristic to be followed by figures always higher than those of the other products with which it is recorded. It is not a particularly valuable product and, since the substances were all measured by placing them in jars, it should also be particularly bulky. I was undecided whether the vowel E was the acrophonic indication of the word ἐρέβινθος, a type of chickpea, but, now I think that it stands for the Greek ἐλάτη, dates. I support this hypothesis with the fact that among the perfumed oils there is one of the type E, which is well equivalent to the ἔλαιον ἐλάτινος, an oil perfumed with date palm, still widespread in classical times.

Spices also have an important place in the Minoan records. Among them are mint (μίνθη), sesame (σησάμη), this latter also in the form of ointment (σάαμον), there are also a spice called βᾶρος (pa-ro) and an ointment with cleansing properties called συμῆμα (ma-ma). The poppy is indicated both as ὄπιον, opium, and κρόκος (ku-ru-ku). ZA10 contains a very interesting record that contains on the side a two lists concerning cumin (κύμινον) and on the b side a list of buns including the one called μᾶζα, a barley bun which appears more than once on the tablets.

Animals

The tablets record sheep, goats, cattle and pigs. Their symbols are similar to those of Linear B. Cattle, goats and sheep may have the inscribed PA logogram that in Linear B we know is used to indicate male animals. In Zakro sheep have an inscribed NE which means νεός and therefore indicates that they are young animals. An ideogram that appears associated with both sheep and cattle is KU, whose meaning is, at the moment, unknown. Pigs appear registered in the already mentioned HT118 but there is another registration, PH31, which is interesting because it contains a list of domestic animals, including sheep and pigs.

The notion referring to textiles is rather limited since it appears to be closely related to the animals one. Some tablets from Mallia record many animal skins for a total of more than two thousand units. Such a high number gives an idea of the importance that they must had in the economy of the Cretans who, in addition to covering themselves, also used them for commercial purposes. There are in fact many uses of leather that could be used for furniture, for parchment, to make shoes, armor and also for the large shields that the Cretans used to defend themselves in war. It is also known that the leathers were a status symbol. Warriors wore them in war. Hercules was recognizable by his lion skin besides than the cudgel. In the ancient world, tanned skins were considered a precious commodity and were used for trade. The copper ingots were forged in the form of animal skins and it is probable that the legend of the golden fleece, which presumably represented a commercial expedition in search of precious hides to be used both as fungible instead of coins and for other conventional uses, was born from here. The Cretans, however, also knew wool, which is not much mentioned in Egyptian papyruses, perhaps because it was little used for climatic reasons. Some tablets of Hagia Triada, record various units of ma-ru, that is μᾶλλός= woollen core, wool. Naturally, like skins, wool was also used for clothing. Ligatures indicating fabrics are the same that appear in Linear B, while DAna-si, is equivalent to DA νῆσις i.e. spinning and represents a confraternity of weavers.

Pottery

The vessels represent the most important part of the Minoan economy since they appear to be registered in large numbers and are widely used for commercial purposes. A bar from Mallia (n.10) bears the symbols of single-handled, two-handled vessels and goblets. Also a tablet from Hagia Triada (n.31) records vessels of various types, all used to contain substances except the last two that seem, instead, to contain other vessels. The use for which a great vase was used to contain other smaller ones is certainly not a novelty in the ancient world. In the absence of boxes, it was obvious that the goods were transported either by hampers, which were often made of rush or by other vases. The latter was also a way to save space and is widely attested both in Santorini and in Egypt. The symbol of a rather widespread vase bears the syllable KE. Since χέρνιψ means lustral water in Greek, it is likely that we are dealing with vessels used for ritual purposes. Other vases are called σάρποι; then there is the vessel κύπη or κύμβη, which is also preceded by KA and therefore indicates an offering. The already named kánna pots are more like baskets used to contain various kinds of products. Very common is the type of vase indicated by the logogram SU. It is, however, the tablet HT31 which gives us the most important indications in this regard.

It is unfortunately damaged on the left side and contains at least two records, the second of which has the total indicated and refers to pots containing others. The heading is damaged at the beginning. On the first lines it is possible to recognize 10 QA pots containing wheat seed (PA₃ =σπέρμασπέρμα, seed), 10 SU pots containing wheat (PU =πυρός, wheat). Line 3 shows 10 KA pots containing ointment (ro-pa₃ = ἄλοφή), 30 pots[containing sáamon i.e.σάαμον, an ointment. In row 5 there are 400 pots, whose contents are illegible, and 300 SU pots containing pa₃-ra= πέλλα, ampoules, glasses. The sixth line contains the indication of 3000 vases on the top of which is written the word all (πάντα) the vases. A total that refers to the units, indicated with the abbreviation QE, contained in the jars of the second list.

Although he is no longer with us, the name of John Chadwick will never die. He lives where all the great men live: in the memory of the nations, in the school books and in the hearts of those who had the privilege of knowing him.

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01		30		53		68b		87		101b		140		186		
01b		31		54		69		88		102		140b		187		
04		32		55		69b		88b		103		140c		188		
04b		33		56		70		89		105		140d		189		
05		34		56b		71		90		105b		146		201		
06		35		57		72		91		105c		146b		206		Lm1
07		36		57b		74		91b		109		148		208		Lm2
08		37		57c		75		91c		109b		161		209		Lm5
09		39		58		75b		92		110		171		210		Lm7
11		40		59		76		93		110b		174		211		Lm8
14		41		60		77		94		110c		175		212		Lm9
16		42		61		78		95		110d		176				Lm18
17		43		61b		79		96		110e		178				Lm19
17b		43b		62		79b		96b		110f		179				Lm20
17c		44		63		79c		97		110g		180				Lm23
21		45		64		81		98		110h		181				Lm26
22		48		65		81b		99		113		181b				Lm34
23		48b		66		82		99b		114		181c				
24		48c		66b		82b		99c		116		182				
25		49		67		82c		99d		117		182b				
26		51		67b		83		100		120		184				
28		52		67c		85		100b		129		185				
29		52b		68		86		101		133		185b				