



Introducing the Minoan Language

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INTRODUCING THE MINOAN LANGUAGE

THE Minoan inscriptions from Knossos and elsewhere, though they have been known for forty years, remain the only extensive writing of the ancient world which cannot yet be either read or understood. This is no reflection on the ability of those who have devoted their studies to them: considering the extreme difficulty of the problem, it is almost inevitable. Where the material is restricted almost entirely to accounts written in very abbreviated form, one cannot expect the same progress to be made as in languages which have left an extensive literature. Although Minoan evidently had a literature, it is very doubtful if any part of it will ever be recovered, as only the clay tablets used for accounts have been durable enough to survive long burial in the Cretan climate.

The enormous obstacles that stand in the way of decipherment, and the general lack of data, have led, on the part of more serious students, to considerable prudence and reserve; but equally, to a great variety of bizarre and ill-founded conjectures from the more amateur.

The unwillingness of the leading authorities to commit themselves to any particular interpretation is very natural. But I feel that if the existing data were more carefully co-ordinated, a more positive viewpoint might be made possible. I do not propose to offer here any broad "translations" of the inscriptions. All I want to do, within this short space, is briefly to review the evidence and see what lines of approach it suggests.

The more fanciful interpretations do not require a detailed criticism, as none of them have received any real support, and the contradictions they bring up are generally quite obvious. All the same, they deserve a word or two of mention, if only to help dispel any illusions they may have created.

§ 1. The fantasy with most followers appears to be that which makes Minoan out as Greek. It has several champions, among them the late Miss Stawell in England, Axel Persson in Sweden, and Dr. Hempl in the United States. They agree in their primary identification, but that is all: their readings are, substantially, quite unrelated one to another.

The theory that Minoan could be Greek is based of course on a deliberate disregard for historical plausibility, and the wonder is that the Greek readings have been got into publishable form at all. As a single example, let us briefly consider Miss Stawell's interpretation.¹

Beginning with the earliest hieroglyphic inscriptions, she applies to each sign a syllabic or alphabetic value derived from the Greek name of the object: the names are not always classical Greek, as she allows herself the formation of a good many terms "which had died out before Homer." These values are combined to make words, a few of which are quite plausibly constructed. But as she goes deeper, her method gradually resolves itself into each syllable standing, when in difficulty, for one whole word, either a vocative or an imperative: these are very skilfully allotted,

¹ *A Clue to the Cretan Scripts*, Bell, 1931.

so that what she reads as MiNoS, might, if the word Μίνως had not existed, have been read as Μῆ, Νῆ, Σοξώ, which is supposed to mean "Mother! Nymph! Savior!" (The Greek leaves very much to be desired). Needless to say, this method, being purely arbitrary, always works. The alternative way out is brought into play more and more as the words lengthen and are harder to spell out properly into whole Greek words.

The later Linear Scripts, which form the vast majority of the evidence, are largely ignored. But when Miss Stawell feels forced to demonstrate on them, Method 2 naturally comes into its own. For instance, the word generally assumed to be Minoan for Cybele, is taken by her to mean "Goddess of Dawn! Io, Io! I call!" But this is obviously absurd, as in the Linear Scripts the division of words is very definitely indicated by vertical strokes: what she reads perforce as sentences, cannot be anything but single words.

Finally she reads the word-group for *total*, about the only one with a generally accepted meaning, as *pa-an*, i.e. πᾶν. This seems very plausible, until one notices that the first letter has been deliberately confused with another very similar to it, where the vertical bar projects beyond the top. Supporting these theories are certain conjectures as to a Greek origin for the Phoenician alphabet, but after the failure of her previous contentions, not much weight can be attached to these.

The conjectures of Persson are less extensive and more conservative, but the fundamental principle being the same, they cannot be any more right. Appearing simultaneously with Miss Stawell's was the Basque interpretation of Mr. Gordon.² This theory, which is no more plausible from the Minoan point of view, can also be seriously criticized from the Basque end: so it may fairly be put aside. There remain a number of other conjectures, some connecting Minoan with Semitic, some with other languages, but they have none of them been convincing enough to win acceptance.

The wide variety of possible views as to the nature of the Minoan language is due to the almost complete absence of *legible* records in it. But this disadvantage is, as a matter of fact, largely compensated for by a wealth of more subtle evidence, even though some of the supposed legible records turn out, on examination, not to be Minoan after all. Such is the case with the Eteocretan inscriptions, which are considered in the next note.

The real and valuable work on the Minoan inscriptions has so far consisted almost entirely of research into the method rather than the meaning. A great deal of labor has gone into classifying the signs and tracing their varying forms throughout the successive systems, in sorting out the records according to certain recurrent ideographs, and in the detection of that large element consisting of proper names. All this we owe to the untiring energy of Sir Arthur Evans.³ No further progress would be possible without it.

§ 2. The only legible records of a non-Greek language found in Crete are the two stone inscriptions from Praisos, which are written in the Greek alphabet. They are

² *Through Basque to Minoan*, Oxford University Press.

³ *Palace of Minos* iv, passim. *Scripta Minoa*, Oxford, 1909, deals mainly with the Hieroglyphs, as the projected second volume has never appeared.

both much disfigured, but enough can be made out of the words to show that the language does not exactly correspond with any known hitherto. Praisos, together with its neighbor Polichna, was reputedly the seat of a pre-Hellenic people, the Ἐτεοκρῆτες, or "original Cretans." Whoever they were, this is evidently their language. To judge by their name, one would expect them to be survivors of the old Minoan people, and so it was natural for many to assume that these inscriptions were written in the same language as the Knossian archives. Evans does not commit himself on this point, but all the same he uses "Eteocretan" as synonymous with "Minoan."

Minoan is almost certainly an Asianic language of some type or other, and Evans suggests Carian as its nearest relative. It is, therefore, rather disconcerting to find that on close analysis this Eteocretan language does not appear to be Asianic at all. The evidence is too fragmentary to make any conjecture absolutely certain, but it does seem to point to an Indo-European origin. In general phonology, and in certain apparent inflections, it appears to fall within the "Adriatic" family, together with Illyrian, Venetic, and Messapian.⁴

Professor Conway was at first inclined to bring the whole Asianic group into the Indo-European family as well, but I do not think anyone would press that theory today, in spite of certain undoubtedly Indo-European features which they have somehow managed to acquire. So if Minoan is Asianic, we have before us the serious problem of explaining away these "original-Cretan" inscriptions.

However, given the historical evidence, I believe it would have been possible to foretell that these inscriptions were not in Minoan, even in spite of the very plausible derivation of the name Ἐτεοκρῆτες. For the Κρῆτες may originally not have been connected with Crete at all.

The names *Crete* and *Cretans* do not occur until after the Minoan collapse. The first instance of either is in the name given by the Hebrews to a tribe invading Palestine from overseas, the *Cherethī*. During the Minoan period, the name universally given to Crete and its inhabitants is *Caftor*. There can no longer be any doubt that the Egyptian variant *Keftiu* (or more accurately, *Kaftiu*) does, in fact, represent Crete and nothing else, at any rate until Ptolemaic times. The idea that it includes a large stretch of Asia Minor as well is based on the supposed derivation from the Egyptian *Kefatiu*, with a vague meaning "hinterlands;" but this is effectively disproved by the Hebrew *Caphtor*, and the Akkadian *Kaptara*.⁵ It is hardly likely that the Jews and Babylonians would have borrowed an Egyptian term, and in addition the ending *-ōr*, *-ār*, cannot by any means be explained as Egyptian, while it can be explained, if it is a native term, as an ordinary plural suffix, as I hope to show later. Moreover, both *Caphtor* and *Kaptara* are used in reference to an *island*.

After about 1350 B.C. the name *Keftiu* disappears, and when we hear of Crete again, it is under the Greek name *Kρήτη*. It looks very much as if, after the Minoan collapse, an Indo-European-speaking tribe called the *Κρῆτες* invaded the eastern end of the island, and gave their own name to it.⁶ By and by, all the inhabitants of

⁴ R. S. Conway, "The Prehellenic Inscriptions of Praisos," *BSA*. viii, pp. 125–156.

⁵ *Road Survey of Sargon* i, 141.

⁶ Note especially that Polichna and Praisos were recorded to have been the only Cretan cities not to take part in the disastrous Minoan expedition to Sicily. This would be readily understandable if the

Crete would come to be known as Cretans, and the invaders would have to be distinguished as "original Cretans." That these "original Cretans" should have been Minoans is not at all necessary under the circumstances, and as the linguistic evidence goes, extremely improbable.⁷

The Cherethites (translated "Cretans" in the Septuagint), who invaded Palestine, were no doubt the same people as the Eteocretans. They are coupled with the Pulesati (Philistines) and Zakkalai on the Egyptian monuments, and as the Philistines can be traced back to Caphtor (*Jeremiah*, 47, 4), it is probable that all three had come direct from eastern Crete, which they had invaded earlier, say about 1375 B.C.⁸ At any rate, none of them are Minoans, to judge from their portraits, and the feather headdress which the Philistines wear bears most resemblance to that delineated on the Phaistos Disc⁹ (see § 3), which was certainly imported into Crete, probably from somewhere in Asia Minor.

But the extent to which they are linguistically related one to another is very uncertain. If we take Eteocretan to be Indo-European, it still remains doubtful whether the same can be said of its partners. The names of the three peoples are alike in showing no Asianic suffix in *-sh* or *-na*, and they all end in *-i*, which may or may not be an Indo-European nominative plural. But beyond this it would be rash to conjecture without more evidence.¹⁰

As their language seems to be connected with Venetic and Illyrian, the Eteocretans presumably came from the Adriatic region, whether *via* Macedonia or by sea; in the case of the Pulesati and Zakkalai we have much less to guide us.¹¹ But such speculations need not concern us here; the important fact is that Eteocretan is almost certainly not Minoan, nor likely to shed any light on it.

§ 3. The as yet unanswered question of where the Phaistos Disc came from, and what language it is in, does not bear directly on our problem either. It is obviously foreign, probably from Asia Minor, and almost certainly not in Minoan or anything like it. As it was found in Crete, it has been usual to treat it together with the Minoan inscriptions: that is as far as the connection goes. However, Miss Stawell, to take only one instance, makes the language of the Disc a companion dialect to Minoan, calling them both Ionic Greek, although no evidence at all can be found to

inhabitants of the two cities had not yet arrived. Archaeology reveals that neither was of any importance until later.

⁷ Some later Greek writers make the Eteocretans the earliest inhabitants of the island, bringing the Pelasgians there some time after them: they were evidently as capable of misunderstanding their name as we have been.

⁸ The use of "Eteocretan" to mean "Minoan" is, therefore, misleading, and ought to be discontinued.

⁹ Though they need not necessarily be connected.

¹⁰ Of the two Philistine words preserved in Hebrew, the first, *sarn*, "king," need not worry us, as it is probably borrowed from Minoan. But the second, *caphtor*, "chaplet," seems to be I-E. Note that it shows the same treatment of I-E (?) *pt* as that which Conway has detected in Eteocretan.

¹¹ It is just possible that the ethnic terms *Zakkalai* and *Shakalsh* are identical, one being the native term, the other an Asianic transcription (cf. the Asianic transcription of Akaiwash = 'Αχαϊφοι). In view of Eteocretan being related to Messapian, the idea of one or both terms being connected with Sicily, as first suggested by de Rougé, may not be so silly after all. At any rate, the current identification *Shakalsh* = Sagalassos does not carry very much conviction. Note also that the fall of Knossos, which may have been sacked by any one of these peoples, was attributed by later history to the failure of an expedition to Sicily.

bring the two together. In view of this and other equally unjustified conjectures that have been made, it would be as well to examine the Disc briefly here.

It was found at Phaistos in 1908, in the lower part of a M.M. III stratum: it dates, therefore, from about 1700 B.C. Made of clay, it is about 7 in. in diameter, and bears on either side a longish spiral inscription, the letters having been stamped into the clay from metal (?) dies. There are 123 letters on Face A, and 119 on Face B, but they come from only 45 separate dies (possibly 46, as one letter is obliterated). Most of the signs occur several times each, so we can reckon we have nearly the whole lot: when complete the range can hardly have been much more than 60.

The signs are divided by vertical strokes into what are undoubtedly words (some 30 on either side), most of these having 4 letters.¹² The exact proportions are as follows:

Words of 1 letter	0%
2 letters	8%
3 letters	26%
4 letters	38%
5 letters	20%
6 letters	3%
7 letters	5%

These proportions, taken in conjunction with the limited range of signs, make a syllabary an almost certain inference. Evans has come to this conclusion with regard to some of the signs, but the proportions he gives lean more heavily in favor of the shorter words: this is because he leaves one or two letters in each word out of the count, as he thinks they are ideographs.¹³

But there is no real evidence that a single sign in the inscription is anything but purely phonetic. In such a small range of characters the likelihood of any appreciable ideographic element is infinitesimal, and the question of how the ideographs would fit in with the phonetic signs in the separate words is extremely problematic.¹⁴

Alone the "head," coupled with the "shield," a combination which occurs at the beginning of 30% of the words, might at first glance strike one as a personal determinative, or something of that sort. But closer examination will show that several of the words recur in exactly the same form without it, and it may, therefore, most reasonably be regarded as an inflection.¹⁵

The characters in the system represent for the most part recognizable objects, showing much the same variety in the choice of these as the other pictographic scripts. But beyond this its resemblance to the Minoan hieroglyphs in particular ceases: the peculiar shapes of each object show that the Disc belongs to a quite un-

¹² The strokes which occur under the last letters of certain word-groups are generally taken to indicate the ends of metric phrases. Various other evidence also points to the Disc being a poetic composition.

¹³ *Scripta Minoa*, p. 283.

¹⁴ Evans considers that the divisions do not indicate words but "concepts of a somewhat wide extension." But this is not drawn from any real evidence: it is a conclusion forced on him by his supposed ideographs, and it can not, therefore, be used to support them. Both assumptions are fanciful guess-work, which a strictly logical analysis would have discredited.

¹⁵ Possibly a plural affix. In the fifth word on A it was added afterwards, so its omission evidently did not affect the syntax of that particular sentence.

related system, nearer to that of the Hittites in its general outlines. The figures represented are Armenoid in type, and their clothes¹⁶ are most like those of certain Asianic peoples. It is tolerably certain, therefore, that it came from Asia Minor, though we cannot yet say where. Evans thinks that the ethnological evidence points to Lycia.¹⁷

On the other hand, there may be some hope of progress if we can establish the general type of language to which the Phaistos Disc belonged; and this depends very much on the order in which we read the inscription. It is now generally thought to read from right to left and so from the outside inwards. For one thing the characters all face the right, and on the analogy of Hittite, Minoan and Egyptian, that should be the beginning. Also there are definite signs of certain letters having been stamped *after* their right-hand neighbors: so we may take this order as tolerably certain.

Now if we accept the most obvious conclusion, that it is a syllabary, we cannot help recognizing certain recurrent groups of signs as coming from the same radicals. And if we carefully study their variations, it will be possible to establish certain initial and final syllables as pure inflections, and to separate these from the radicals with which they occur. For instance the last word-group on B obviously contains the same radical as word 24, where, however, it is preceded by the "breast." This leads us on to guess that the "breast" which begins the 10th word on the same side may equally well be only a prefix; and so it is proved by word 2 on A, which is the same radical without it. And so on. The following are the separable inflections, in order of importance:

Prefixes	Suffixes
the head and shield	the shield
the lion's (?) head	the branch
the head alone	the angle
the syrinx	
the hide	
the breast	

The curious thing is that the prefixes occur in a proportion of about 4 to every one suffix. They are too numerous and too varied to be dismissed as mere articles or prepositions; so if we continue to read from right to left, we shall have to assume that the language of the Phaistos Disc belongs to a type which uses prefixes almost exclusively instead of suffixes to modify its words.

It would be risky at this stage to draw any very definite conclusions from this fact, but it is worth noting that the only extant language which shows this morphological peculiarity and is situated within a radius of 1000 miles from Crete, is Khattish, the non-Indo-European language of the Hittite plebs; and that the total range of syllables and average length of words in this language correspond very reasonably with the figures one may draw from the Disc.¹⁸

¹⁶ Note especially the representation of the specifically Hittite *tiara*.

¹⁷ But we hardly know enough of Anatolia in the eighteenth century B.C. to be able to narrow down the field so closely. At any rate, the Lycians of later times were not Armenoid in type.

¹⁸ For Khattish forms see: E. Forrer, "Die acht Sprachen der Boghazköi-Inschriften." It is distin-

The Hittite hieroglyphs are not found before 1500 B.C., and appear to be a spontaneous creation, rather than the result of any long development. It may be that the idea and basic forms were suggested by some pre-Indo-European system of writing closely parallel to the one we have here. At any rate, if this language is related to Khattish, a location somewhere in the region of the central Anatolian lakes would fit in very well with the ethnological evidence, and also with the mastless ship-“sign,” already taken by Evans¹⁹ to suggest a country of landlocked waterways.

There is not, so far as I know, a single recognizable prefix in any Minoan Linear inscription: suffixes, on the other hand, are frequent and easily distinguishable. This only confirms what has already been generally assumed: the Phaistos Disc is not in Minoan or anything related to it. And though of considerable interest in itself (which is why it is perhaps worth a short review), it is strictly a problem for Anatolian archaeology: we will therefore leave it, as it is not likely to help us in the problem we are considering. Perhaps some day it may be read, but that day is still far off.

§ 4. Since neither Eteocretan nor the Phaistos Disc turns out to be Minoan at all, the only records of the language outside the Minoan scripts proper are those preserved in contemporary Egypt, one a writing-board containing a list of Keftian names, the other a medical work which quotes a Keftian magic formula. And here, unfortunately, the peculiar nature of Egyptian spelling makes it impossible to draw any very definite conclusions.

The names contained in the writing-board are spelt as follows: 's'hwrrw, n'swj, 'k's'tj, 'k's'w, 'tjm'j, pjn'rt' and rwś'. Also in the list are Bnzbr, which is considered corrupt, and two purely Egyptian names, Sannafre and Santnafret, which may conceivably be intended as a translation of 'k's'w and 'k's'tj,²⁰ or were inserted to fill up space.

The spelling is of the Egyptian “syllabic” type, used for transliterating foreign words. In this each consonant is followed by one of the semi-vowels ', j, w; but as the latter seem to have no connection with the actual pronunciation, they can be ignored (except in initial and final positions). We are thus left with only the consonantal outlines of the words, and even then the R's may equally be L's. So they tell us very little.

There cannot be much doubt that they are all personal names, not place-names. In the absence of the place-name determinative, “names” naturally means “personal names.” Of their gender nothing can be said, though 'k's'tj does appear to be the feminine of 'k's'w.²⁰

But though they seem useless now, they will come in very handy later. The Minoan material consists almost exclusively of proper names, and if the latter can

guished, like its neighbors, by a fair number of very long words: such words might easily fill out the Disc's seven-letter groups, and the latter would be very hard to reconcile with a Semitic or I-E language.

¹⁹ *PM*, i, p. 656.

²⁰ T. E. Peet, in *Essays in Aegean Archaeology*, Oxford, 1927, pp. 90–99. Max Müller connects Akashau, as he reads it, with Philistine *Achish* and Syrian *Ikausu*. Nothing much can be said for or against, beyond that the names are superficially not unlike.

There are two more words on the other side of the board, which though mixed up in quite heterogeneous material, may be intended as Keftian names. But, like Bnzbr, they are hopelessly corrupt.

be attacked from some other angle, the evidence of these Keftian names will be invaluable in confirming some of the main conclusions.

The other piece of evidence from Egypt, a "charm against the Arab disease in the language of Keftiu," is of less value. It runs as follows:

s'ntjk'pwpjw'j'jm'ntjrk' 'r

In the absence of any evidence as to how the words are to be divided or vocalized, we can hardly expect this fragment to be of much assistance, even if it is real Minoan, and not gibberish concocted by some Egyptian. But it has an authentic sound, and Keftian was widely understood at this period, so it is probably genuine.

In spite of its inadequacy, it does, at any rate, make it improbable that Minoan was either I-E or Semitic, and it effectively disproves any notion of a Greek or Basque relationship. On the whole, this fragment fits in most plausibly with the Asianic group, and it has perhaps an Etruscan ring about it.²¹ But, taken by itself, nothing very sure can be drawn from it.

§ 5. The contemporary legible records of the language, therefore, do not help us to any appreciable extent. We shall have to rely almost entirely on such words as have been preserved, in Greek, and which are evidently derived from the earlier language.

The most significant of these are the proper names. The native place-names of Crete are identical in type with the pre-Hellenic place-names of the mainland, and with those of the Anatolian coast. They are largely distinguished by the suffixes *-ssos*, *-inthos*, and *-na*, and by a number of identical name-roots. These recur in Anatolia, and also in Etruria, where the proper names seem to parallel most closely those of Lycia.

From these facts one might be led to infer a common language, spread out over the whole area at an earlier period. But the question is not so simple as this, and the most that can positively be asserted, for the moment, is that the names belong to a common linguistic *type*, which we may call *Asianic*.

The term Asianic is sometimes used to cover all the non-Semitic and non-Indo-European languages of the Near East, including, for instance, Lydian, Khattish, Kharrian, Vannic, Elamite, Sumerian, and others. But none of these are related to each other, and the more restricted sense of the term, which I shall use here, applies only to Lydian, Carian, Lycian and Etruscan, which do form a single, though loosely connected, group.

Although they belong to the same grammatical type, apart from the proper names only a couple of prenominal and verbal forms, combined with certain phonetic characteristics, serve to join Lydian, Carian and Lycian at all closely, while Etruscan shares with Lydian only the form and usage of a genitive in *-l*, and a copula *-c*. Their vocabularies are all almost totally unrelated: they may have had a common origin, but they must have separated early, and long been subjected to very varying influences.

²¹ -tjrk'-, near the end, has been identified, rather prematurely, with the Hittite god *Tarku*, and with the initial element of the Etruscan name Tarquin, *Tarxna* (Hall, *Aegean Archaeology*, London, 1915); but it is quite uncertain, to begin with, that the words are to be divided in this way.

Herodotus' record of an Etruscan migration from Lydia has, therefore, received little confirmation on linguistic grounds. The Etruscans probably did come from Lydia or thereabouts, as their language is obviously Asianic, but it is not related to Lydian anything like as closely as the legend suggests.

So the Asianic place-names, though identical in roots and suffixes, are found to occur over a wide area occupied by various languages which bear very little relationship one to another. As they stand, they are no evidence for attaching Minoan to any one of the four Asianic languages.

The everyday words which Greek has adopted from the earlier language are fairly homogeneous. They indicate that the pre-Hellenic language, presumably identical with Minoan, was comparatively uniform throughout the area occupied by the earlier culture. The researches of Evans have shown, too, that the language of Crete was the common vernacular of the Cyclades, the Peloponnese, and as far north as Thebes and Orchomenos during the centuries preceding the spread of Greek.²² Here, at least, the common suffix *-inthos*, as in Korinthos and Laburinthos, is an index of a common dialect.

The Greek name for the earlier inhabitants was "Pelasgian." I do not propose to enter here into any discussion of the origin of this term: as far as we are concerned, it may originally have applied only to some small invading tribe. But enough that by the time of Herodotus it definitely meant, to the Greeks, the people whose language had immediately preceded them, and to whom the names in *-inthos* and *-ssos* must be referred. There has been of late a tendency to disparage the value of this term as evidence; but the areas to which the Greeks applied it correspond so exactly with the occurrence of these suffixes that it would be unreasonable not to accept their own views.

There can be no doubt that Herodotus was convinced of the existence of a common "Pelasgian" language. Several isolated "Pelasgian" communities in the northern Aegean still spoke non-Greek languages in his day. He studied these, and, after comparing them, declared that they were identical, presumably remnants of the language which was once the common idiom of the Aegean. He lays stress on the "Pelasgian" of Lemnos, and shows that the same dialect was probably spoken in Attica in earlier times.²³

The native language of Lemnos, as excavations have proved, is practically identical with Etruscan: the difference is purely one of dialect. The languages of the other "Pelasgian" minorities which Herodotus mentions are, therefore, almost certainly in the same case.

Agreeing that the northern part of the "Pelasgian" area spoke something closely approaching Etruscan, it is extremely hard to separate this linguistic section from the southern area which we know to have spoken Minoan — to separate the pseudo-Etruscan of Mycenaean Athens from the Minoan of its neighbor Thebes. The evidence is not conclusive, but it does suggest a primary case for choosing, of the Asianic languages, Etruscan rather than Carian as the nearest relative of Minoan.

The ancient writers did, as a matter of fact, consider the Etruscans to be Pelasgiants, a term which they did not extend to the other Asianics. The story that they

²² *PM.* iv, pp. 752 ff.

²³ Herodotus i, 56.

were Lydians, told by Herodotus, is obviously only half the truth, and even if a certain section did come from Lydian soil, which is quite probable, a great part were no doubt dispersed throughout the northern islands.

With regard to Evans' connection of Minoan with Carian, it may be noted that, with the exception of the word "labrus," "double axe," the pre-Hellenic vocabulary in Greek bears a far greater general resemblance to Etruscan forms.²⁴

The suffix *-inthos* appears in Caria in the form *-anda*, *-ada*, and this divergence is significant, not only because it is farther removed from "Pelasgian" than the Etruscan *-iθa*,²⁵ but especially, because it exemplifies a piece of phonetic evidence which is of great value in determining our choice.

§ 6. Etruscan is separated from the other Asianic languages, Lydian, Carian, and Lycian, by a marked difference in general phonetic structure. Ignoring the absence of O (which is unimportant, as it had probably coalesced with U only quite recently), the chief peculiarity of Etruscan is the absence of the voiced stops. The language possessed *p*, *c*, *t*, and was also rich in *f*, *χ*, *θ*, (which were almost certainly spirants), but was totally lacking in *b*, *g*, or *d*. Other languages with this peculiarity, such as Old High German, Armenian, and Ossetic, owe it to a characteristic pronunciation with *open glottis*, which reduces the sonants to surds, and the surds to spirants: the same is probably true of Etruscan.

The other Asianic languages however, using a different range of stops, present no evidence for the existence of a similar pronunciation. They used spirants hardly at all,²⁶ but were rich in sonants. In addition they had a wider range of vowels, and shared a number of nasalized sounds.

As regards Minoan, which probably falls into one of these two groups, the significant facts are provided by the *Cypriote syllabary*.

The exact date and circumstances of the syllabary's origin are as yet uncertain, but there can be no doubt that it was adapted directly from a form of the Minoan Linear Script. A large proportion of the signs correspond exactly with letters of Linear B, and those that do not can be explained either as distortions caused by the lapse of time, or as peculiar signs belonging to some provincial variant of the official script. Any phonetic peculiarities which can be deduced from the syllabary's faulty rendering of Greek must, therefore, be imputed to the genius of the Minoan language itself.

The Greek surds, sonants, and aspirates undergo very drastic treatment: they are all indicated in the syllabary by the surd alone. The syllable *ta*, for example, may stand for *τα*, *Δα* or *Θα*. If the Minoan syllabary had possessed a sign for *da*, the Greeks would surely have adopted it, considering the confusion its absence causes.

²⁴ Hall, *Greece in the Bronze Age*, London, 1928, p. 252.

²⁵ *-inthos* has previously been identified with the Etruscan suffix *-uns*. But this is not feasible: *-uns* already occurs in Pelasgian words such as *Tiruns* etc., and anyway it is masculine, while *-inthos* is quite definitely feminine. The Etruscan suffix *-iθa*, which is a far more likely relative (the N does not present any real difficulty), is used for forming feminine derivatives (e.g. *Lautn*, "family," *lautniθa*, "freed-woman"); there is also a diminutive use, which has passed into Vulgar Latin, and thus into the Romance languages: *-ette*, *-ita*, *-etta*, etc.

²⁶ Lydian and Carian have none at all: Lycian an occasional *θ* and *χ*. They all possess the full complement of sonant stops.

The fact that they preserve no such sign indicates: a) that Minoan had none, and b) that the syllabary slavishly follows the Minoan original,²⁷ without regard for the peculiarities of Greek: it was perhaps devised by a Minoan himself.

If the Minoan syllabary did not use *b*, *g*, or *d*, it can only be because the language had no such sounds. Excepting the case of some of the rarest syllabic values in Babylonian, all the ancient languages made the distinction between surd and sonant in their own native scripts, and it is hardly likely that Minoan should be a solitary exception.

If Minoan definitely had no *b*, *g*, *d*,²⁸ it is equally certain that it possessed all three spirants *f*, *χ*, *θ*, as exemplified by *Keftiu*, 'šhrw (among the Keftian names), and *-inthos*. If these were true spirants, it is natural that the surds should have been used to transliterate the Greek aspirates in the Cypriote syllabary. Early Greek *th* is far nearer to *t* than to spirant *θ*—though in transliterations from Minoan the Greeks would naturally use *th* for *θ* (cf. Egyptian *k* for Greek *ch*, but Greek *ch* for Egyptian *h*).

The syllabary possesses in addition signs for the five vowels and for *j*, *l*, *m*, *n*, *r*, *s*, *v*, (*x*), *z*.²⁹ The only other peculiarity worth mentioning is that *m*, *n*, *ng* were not written before their corresponding stops, e.g. *a-ti*=ἀντί. But this has nothing to do with Minoan: liquids in such positions were always weak in Greek (cf. such alphabetic spellings as Ἀφιάραος, Ἀφιτρίτη).

Minoan, therefore, approaches Etruscan most nearly of the Asianic languages in its phonetic structure. In fact, if no evidence had existed save the Cypriote syllabary, it would alone have been sufficient to suggest a strong connection between the two languages: for the peculiar absence of *b*, *g*, *d* is not paralleled in any other language within reach of the Aegean area.³⁰

It might be argued that this common phonology connects Minoan and Etruscan no more closely than its opposite counterpart unites Lydian, Carian, and Lycian.

²⁷ Where a Minoan and a Cypriote letter are identical we may therefore expect them to bear the same phonetic values.

²⁸ It is true that many Pelasgian words in Greek contain these letters, but the incontrovertible evidence of the syllabary demands that we put them down to an unevenness of Greek transliteration: sonants also occur in Roman transliterations from Etruscan, where they are equally out of place. The rules followed in Greek adaptations from Pelasgo-Minoan cannot, of course, be reconstructed until we are able to read the originals of such words in the Linear inscriptions. But I suspect that a Greek *d*, when initial, mainly represents a Minoan *t*; in medial positions more often *θ*, especially perhaps where another spirant follows (as in the suffix *-inthos*). The Minoan fragments from Egypt fit in exactly with the phonology suggested by the syllabary, and sonants do not occur, except in the names which are already considered corrupt.

²⁹ Minoan probably possessed *š* and *h* as well, but they would not be needed in Cyprian Greek. The Cypriote sign for *xe* may perhaps be an innovation. *V* is, of course, a semi-vowel, not a spirant: *w* would be better.

In transliterating Minoan, I have followed the standard romanized spelling of Etruscan. The words, and particularly the vowels, should be pronounced roughly as they would be in Latin.

The remaining element of pronunciation, accent, is a problem harder to answer, as it is not directly indicated in ancient spelling. It seems likely, though, that Pelasgian had a fairly regular *stress*, falling on the penultimate or the syllable before, and that it affected to some extent the length of the vowels.

³⁰ Venetic is no parallel; admittedly *b*, *g*, *d* are never found on Venetic inscriptions, but this is a peculiarity of their alphabet, the sonants being represented by *f*, *χ*, *θ*. The presence of sonant stops is an additional reason for disconnecting Eteocretan from Minoan (see § 2).

But considering the way the spheres of the two languages overlap, I see no evidence to divide them. I prefer to assume that they are, in fact, both variants of a single "Pelasgian" language, the possible divergences being no more than are to be expected between two dialects divided by a wide stretch of sea, and the space of nearly a thousand years.

§ 7. These conclusions are based on purely linguistic data, and there is no need, in the circumstances, to try to justify them by any evidences of a racial or cultural character, since neither of these is a reliable index of language relationship. It is sufficient here that history and geography make the connection between the two idioms at least plausible: beyond this first condition, we can trust only to the evidence of the languages themselves. It does happen that the Etruscans and Minoans belong to the same racial type, but the most basic cultural connections of the former are clearly with Anatolia rather than Crete. The location of the Etruscan element during the Minoan period would naturally be to the East and the North, outside the immediate influence of Minoan civilization, and in closer touch with the earlier cultures of Asia Minor.

The early history of the other three Asianic languages, what area they covered, and by whom they were spoken, is a mystery. It is doubtful whether they can have extended east of the Halys during the Bronze Age, but there is no definite evidence that they already occupied the coastal regions where they are found in classical times.

Considerable doubt has already been expressed as to whether the Pelasgian suffixes, as they occur in Asiatic place-names, are really the creations of the respective Asianic languages. Conway suggests that the personal names of Lycia, those which so resemble Etruscan forms, are by origin foreign to the Lycian language;³¹ and similar criticisms have been made with regard to Carian.

If we attribute names formed with these suffixes to some language other than those with which they seem at first sight to be connected, they should obviously be put down to the Pelasgian idiom proper. In this case, we must assume that the Etruscan-Minoan dialects stretched in the earlier period some way into the interior of Asia Minor, and also extended round the southern coasts;³² and that Lydian, Carian, and Lycian were still confined to the highland regions inland and to the plains beyond.

In view of our almost complete ignorance of the early history of western Asia Minor, no certain answer to this question is possible. But certain Greek traditions tend to support the idea of an earlier Pelasgian stratum overlaid by a later Carian, Lycian and Lydian occupation. A branch of the Pelasgians, the *Leleges*, were said to have inhabited Caria and Lycia, and from certain confused remarks about them, it appears that they were an earlier Aegean people who had fallen into subjection under later invaders:³³ they stood to the Carians in much the same relation as the

³¹ *CAH.* iv, p. 409 (footnote).

³² Pelasgian was probably not indigenous in Cyprus, though the few Minoan inscriptions there which are in the ordinary Minoan script evidently contain the Minoan language. If this had survived in Cyprus, the writing would have survived with it: the non-Greek inscriptions from Amathus, for which the normal Cypriote syllabary was borrowed, are almost certainly not in Minoan.

³³ Strabo xiv, 27.

Helots to the Spartans.³⁴ Further north, Etruscans probably inhabited the lower Hermus valley at the end of the second millennium b.c. Here, too, presumably, the Lydian language was confined to the higher country. Some time between 1400 and 700 b.c., therefore, there may have been a movement of the eastern Asiatic languages down to the Ionic coast, where they overlaid an earlier Pelasgian element.

If this is right, and it is no more than a conjecture, we can take all the Pelasgian names and suffixes as emanating from one single dialect, and assume that they were merely adapted into the other languages.³⁵ This solution would obviously simplify the problem immensely. The radicals and suffixes which occur in Lydian show less likelihood of having been borrowed, and seem to be native: of the three eastern languages it was anyway probably the most closely related to Etruscan.

How far Minoan was divided from earlier Etruscan by dialectic peculiarities will not become apparent until we have enough material for a detailed comparison. At present the only phonetic difference that emerges is a very superficial one, concerning the treatment of final *-a*. Where Etruscan has *-a*, Minoan seems to have weakened it to some sound approaching *-e*. This is the only way to explain the second declension ending of the suffixes *-ssos* and *-inthos*: both these end in *-a* in Asia Minor and Etruria, and they would naturally fit into the feminine first declension: as well they seem to be feminine in significance.³⁶ But if Minoan had changed the last vowel to *-e* or *-ə* (*schwa*), the *-os* declension would be understandable, though the feminine gender is almost entirely maintained.

This weakening of final *-a* in Minoan may have been quite extensive, irrespective of gender. But in the ending *-na*, for instance, the final vowel is preserved in Greek (e.g., *Gortyna*, which corresponds exactly with Etruscan *Cortona*). *-Na* (*-ana*, *-ena*, *-una*) occurs in the names of several of the Egyptian "Peoples of the Sea" (mainly Pelasgian tribes, probably), and there it clearly has a plural or collective meaning, e.g., *Dana-una* = Δανα-οι. This is also quite evident in the name of the Etruscans for themselves, *Rasena*, and in that given them by the Greeks, Τυρσηνοί. In the use of the suffix in Pelasgian place-names the plural significance is not lost,³⁷ and those formed with it are most often plural in Greek transliteration: Ἀθῆναι,³⁸ Μυκῆναι, Μιτυλῆναι, Δορθάνναι (in E. Crete), etc. The feminine gender of these in Greek is probably due to the vowel *-a*.

The other two suffixes *-i(n)θe*, *-še* show no traces of plurality, and this is one good argument against the current identification of *-ssos* with the other collective suffix of the "Peoples of the Sea," *-sha*, *-asha*, e.g., *Akaiw-asha* = Ἀχαιοί. I should pre-

³⁴ Athenaeus vi, 271 b.

³⁵ The *d* which appears in *-anda* and other cases is far more likely to be a faulty adaptation of a Pelasgian *θ* than a parallel development, within Carian itself, of an originally identical phoneme.

³⁶ It is doubtful whether Pelasgian had any gender in the sense that it formed a separate grammatical category, but it does seem that certain suffixes had a more or less feminine connotation, either by association or inherent meaning. *-Inthos* appears to correspond with an Etruscan feminine formative.

³⁷ I believe we can distinguish three separate *-na* suffixes in Etruscan-Pelasgian: (a) the collective suffix, also used in place-names; (b) the nominal suffix, used in masculine personal names; and (c) the adjective-formative (e.g., *šuθina* "sepulchral," from *šuθi*, "tomb").

³⁸ The goddess Athena, of course, derives her name from that of the city, not vice versa. She is merely ἡ Ἀθήναια, "the Athenian goddess." The stem *Ath-*, to which the suffix *-ena* has been added, looks identical with that of *Attica*, Ἀττική, where it has an *-i* stem after it. ? Pelasgian forms *Aθena*, *Aθi*.

fer to separate the two completely, and read *-sha* simply as *-sh* (which the spelling equally allows), taking it as a plain Pelasgian plural inflection *-š*, *-aš*, which occurs in Etruscan, and also, I suspect, in the Minoan inscriptions. *Akaiwa-sh* is then simply the ordinary Minoan plural of a word *Acaiv-*, “an Achaean.”

The most frequent plural inflection in later Etruscan, at any rate in the names of persons, is *-ar* (e.g., *clenar*, “sons;” *aisar*, “gods”). This also occurs in the Minoan *Caftor*, Egyptian spelling *Keftiu*, which refers, following the contemporary practice (cf. the Hebrew ethnic names in *-im*, etc.), indifferently to the land or its inhabitants. This *-or* is evidently the Etruscan plural suffix *-ar*, which, in *Keftiu*, has been changed for a normal Egyptian plural ending *-iu*. In the Minoan accounts I believe there also occurs a dative (? instrumental) plural in *-oreši* (cf. Etr. *clenaraši*, “to his sons”).

The two dialects probably agreed as closely in their vocabularies as they did in phonetics and morphology; but the data is as yet insufficient. A few ordinary words, of known meaning, can be extracted from the Etruscan inscriptions, and a certain number of Minoan words are preserved in Greek, but none of their meanings overlap, and they afford no test. We might expect the Minoan forms to correspond nearly exactly with the Etruscan, but the known Etruscan vocabulary is too small to be of any help in the initial stages of Minoan decipherment. Even the Minoan vocabulary in Greek is almost useless. It consists largely of the names of commodities and objects connected with trade and commerce, and as such we might expect them to occur freely in the Knossian accounts. But the commodities with which these deal are nearly all written ideographically, and their phonetic spelling is lost: so far I have been able to identify the original of only one pre-Hellenic word, and that not certainly.³⁹

But this lack of initial data on vocabulary is no great hardship, as the Minoan Linear B records, the ones that afford the most promising material for decipherment, hardly contain any vocabulary at all. They consist largely of proper names, which form precisely the bulk of the Etruscan remains. These Pelasgian and Asiatic proper names, as we have seen, show great uniformity in their construction, in their radicals and suffixes; and in our case they afford far more reliable material than even an extensively predetermined vocabulary could supply.

³⁹ The original of *terebinthos*, which occurs perhaps in a short painted inscription on a Helladic stirrup-vase from Orchomenos. This apparently reads “*ti-re-fu* Δ 31.” Δ is the ideographic spelling of a unit of liquid measure, so *tirefu* must refer to some kind of wine or oil: τερέβινθος, “turpentine,” would fit. Note that the *b* is represented by *f* (see footnote 28), and the suffix is omitted: possibly this originally formed part of only the name of the tree itself, τερέβινθος, ? **tirefi(n)oe*.

But the great influence of Minoan on Greek can not be doubted, not merely in vocabulary, where about one word in ten is not Indo-European, but also in syntax, in phonology, and in general modes of expression. One of the most interesting chapters of linguistics will come to be written when the points of contact between the two languages can be traced out. Pelasgian, in the form of Etruscan, also had a decided influence on Latin: in fact Pelasgian is so closely bound up with the history of both the later dialects that, but for the absence, so far, of an extensive literature, it might fairly be claimed as a third Classical language.

The influence of Minoan phonology may account for certain peculiarities of Cretan Doric, viz. its treatment of the aspirates, the velarization of closing *l*, and frequent assimilation.

A few Pelasgian words may still survive in modern Cretan: Pendlebury (*The Archaeology of Crete*) plausibly suggests a Minoan origin for the pronominal adverbs *ἴγα*, *ἴδα*, etc., and for the noun *άχλα*, “tomb.”

§ 8. Minoan writing went through three successive phases, which are called for convenience *Hieroglyphic*, *Linear A*, and *Linear B*.

The *Hieroglyphic* letters are distinguished, as far as their external appearance goes, by the fact that the objects they represent are still recognizable, while in the Linear Scripts the connection is usually obscure, except in the case of ideographs. The hieroglyphs, which occur engraved on seal-stones and scratched on early accounts, seem to contain a considerable ideographic element; but there is no clear distinction between these and the presumably phonetic signs. It would be a mistake to undertake any investigations of these earliest and most irregular inscriptions until the language and spelling of the later Linear accounts are fully understood: previous interpretations have largely suffered from the fact that they begin with the hieroglyphs, and then try, with little success, to make the Linear Scripts fit their conclusions.

The *Linear Scripts*, as their name implies, consist of simple linear signs. Linear A makes its appearance about 1750 B.C., Linear B not till 1450. The relation of these to the hieroglyphs is not altogether clear, as there are traces of some kind of Linear Script contemporaneous with the earliest pictographs. The first systematized Linear Script, Linear A, was probably based on an extensive primitive material not confined merely to the hieroglyphs. Linear B seems to have been specially devised at Knossos as a new royal script: from there it spread to cities on the mainland of Greece. It is parallel to Linear A, being merely a new systematization of the same basic elements. The difference between the two is inconsiderable. Far the greatest proportion of the inscriptions occurs in B, the latest and apparently most regular form of Minoan writing. These, therefore, afford the best material for study.

Linear B has about 100 separate letters, of which only some 60 are in everyday use. They are combined, mainly in 3's and 4's, into words divided by vertical strokes. Within these words the signs appear to follow in an absolutely regular order, as opposed to the varying elements that go to make up an Egyptian word, for instance: they obviously represent syllables. A syllabary on the Cypriote model designed for the complete Minoan sound-range would require 85 letters, or open syllables; but of these some would be rare, and others might be non-existent. The remainder of the 100 letters are evidently ideographs, and they occur in positions where they are readily recognizable as such. There were probably many more of these than we at present know.

Evans suggests that some ideographs may enter into the composition of the ordinary words; but I believe we can definitely exclude any possibility of this.⁴⁰ Linear B ideographs can only be identified in the accounts, and then in three clearly recognizable forms: (a) the representation of the commodities enumerated; (b) the numerals, and the weights and measures accompanying them; (c) certain departmental reference marks. These ideographs stand clearly separated from the phonetic words which generally precede them, and are purely a clerical device: in the non-commercial inscriptions they do not exist. We are, therefore, justified in regarding Linear B, in its literary use, as a regular phonetic system, accurately and simply recording the contemporary pronunciation, syllable by syllable.

⁴⁰ He proposes, for instance, that the "horse's head" sign, which enters into some names, represents an element analogous to *Hippo-* in Greek names. This might be possible if the letter always occurred regularly in the same relative position; as it is, it is evidently just syllabic.

In this, as in the easy shapes of its letters and its regular division of words, it is the equal of our own writing, and much superior to anything used by the ancient world, previous to the Greek alphabet. Even proper names are not distinguished by determinatives or other devices.⁴¹ These considerations apply equally to Linear A.

A syllabary of the Cypriote type, such as the Linear Scripts contain, is as well suited to a language like Pelasgian as an alphabet. The only point where the sequence of open syllables cannot exactly follow the pronunciation is in the representation of closed syllables and those beginning with two consonants.

The Cypriote syllabary fills the gap by inserting the vowel of one of the adjacent syllables, e.g., ἐπτά = (h)e-pa-ta, πρῶτα = po-ro-ta; and the vowel *e* when final, e.g., τὸν = to-ne. As the language is Greek and is well known, this causes no difficulty in reading, as it is quite clear which sounds are to be regarded as silent. But in a new language like Minoan, where this same practice also occurs, it presents a considerable problem. Supposing we come across a word spelled šavatere (an imaginary example), we are quite at a loss whether to read it šavatre, švatre, švater, šavatr, or any other of the 12 possible combinations. As a matter of fact, we generally have some analogies to guide us in our readings, but still a large number of these will have to remain ambiguous.

This question links up with a very similar one in Etruscan. There the intermediate vowels are often omitted in such a way as to reduce the words to an unpronounceable jumble of consonants.⁴² Part of this may have been due to actual phonetic detrition, but in other words it was probably only a trick of spelling, as the connecting vowels occur in Roman transliteration. It is, therefore, interesting to see whether these vowels occur in the corresponding Minoan words. In some cases the evidence is inconclusive, as the vowels may be stop-gaps introduced to match an adjacent syllable. But in others the vowels would be irrational on this method, and they must, therefore, have been pronounced, e.g., in the suffix ..a-li-ne, which corresponds to Etruscan -lna. It seems, on the whole, that the consonant groups typical of written Etruscan were generally softened by intermediate vowels in the Minoan pronunciation. Only a limited number of double consonants need, therefore, be allowed for.

Several of the commonest Linear B letters are identical, or nearly so, with Cypriote signs, and I propose to give them the same phonetic values: this procedure is generally considered to be justified (see above, § 6).⁴³ The values of certain other signs have suggested themselves from internal evidence.

⁴¹ In lists of men and women a sign representing "man" or "woman" occurs after each name. This is not a determinative but an ideograph. Take for instance  in a list of men's names (the more correct spelling places a dash between the name and the ideograph). The line at the end is not a comma, but a numeral, 1: sometimes higher numbers occur, where several individuals bear the same name (the normal comma, when occurring in the same list, is made a different shape, cf. *PM*. iv, fig. 686). The entry quoted above does not, therefore, mean just "So-and-so," but "of the name of So-and-so, 1 individual," or "two individuals," and so on, as the case may be. The normal Minoan name is not distinguished at all from ordinary words.

⁴² A similar phenomenon occurs in Lydian spelling, possibly for identical reasons.

⁴³ Identical values have already been attributed to half of these by Dr. A. E. Cowley. ("A Note on Minoan Writing," in *Essays in Aegean Archaeology*, pp. 5-7). But he has not applied them extensively to the material.

In the following list of 23 basic letters the values of which I regard as tolerably certain, those corresponding with Cypriote forms are indicated by a *C* in the last column. The first two columns contain Evans' classification, and the Linear A signs which he considers identical.

<i>Numeration (Evans')</i>	<i>Linear Script A</i>	<i>Linear Script B</i>	<i>Phonetic Value</i>
B 11	𒀭	𒀭	ce C
B 7	目	目	e
A 67	魚		fu
B 49b	❖	❖	la C ?
B 54	ㄥ	ㄥ	li C
B 25	+	+	lo C
B 41	ㄒ	ㄒ	na C
B 40	ㄣ	ㄣ	ne
B 44a	‡	‡	pa C
B 60	ㄥ	ㄥ	pe C
B 47	Ѱ	Ѱ	pu C
B 30		Ѽ	ra C ?
B 46		Ѽ	re
B 13	ㅌ	ㅌ	se C
B 21	ҭ	ҭ	še
B 9	ҭ	ҭ	ši C
B 58	ҭ	ҭ	ta C
B 2	ҭ	ҭ	ti C
B 59	ҭ	ҭ	to C
B 26	Ҽ	Ҽ	θe
B 36	Ծ	Ծ	va C
B 5	Ծ	Ծ	ve C
B 1	Ծ	Ծ	vi

§ 9. The Linear B archives of Knossos have not yet been published in full, but enough examples have been illustrated by Evans in *Scripta Minoa* and in *The Palace of Minos* iv, to give a very good idea of their general character.

The commonest type of inscription consists of an entry recording the amount of a certain commodity received or issued by the palace authorities. Such entries take the form of explanatory ideographs followed by a numeral: these are generally preceded by one or more words in normal spelling, which seem to represent the names of the recipients or suppliers. These may again be preceded by another word in larger letters which forms a kind of heading. There are often several items on one tablet, and in such cases the sum of the separate entries is usually totalled at the foot or on the edge. Notes in very small letters sometimes occur above or alongside certain words or sentences.

In some cases, no doubt, the phonetically spelled words contain notes and descriptions of the commodities; but far the greater proportion appears, after comparison with the contents of certain extant lists of men and women, to be proper names.

If these showed any recognizable case-endings it would be easier to say with certainty how the individuals were connected with the commodities in each case. But they seem generally to be in the nominative: and this incidentally facilitates comparison between them.

I have gone through the available inscriptions and I have extracted from these a list of some 250 proper names. They include only those which Evans has himself classified as such, and certain others which are clearly identical in context or formation. The results of a detailed analysis of these are embodied in the following pages.

It is not always quite certain whether a particular name is masculine or feminine, but we can generally tell them by their suffixes, as we know the gender of these from lists in which the names are followed by the appropriate ideographs. Only one or two of the commoner suffixes appear to be common to both.

The names, most of them masculine, are of the typically Pelasgian type, in which a limited range of common radicals is extended by the free use of single or multiple suffixes. Evans has composed comparative tables of names⁴⁴ drawn from both Knossian and Helladic sources to illustrate this peculiarity. The radicals are identical in each case, but they are varied by a number of quite different suffixes, some masculine, some feminine. This was evidently a feature of Minoan names as a whole, and the same basic structure may be assumed for them all.

The constant element in these comparative examples consists generally of two letters, that is, two open syllables: in the spelling of Minoan names we are, therefore, justified in counting the first two syllables as the radical, and dividing off the rest as suffix-elements; 2-letter names will, therefore, usually consist of a simple radical, or a radical followed by a vowel, e.g., *Ra/l(e)*, *Ra/l-a*; in 3-letter names there will be in addition a suffix containing a consonant, or a syllabic vowel, e.g., *Ra/l-a/to*, *Ra/l-e/i*; while in longer names the suffix must be polysyllabic, and is probably compound, e.g., *Ra/l-a/ni/to*.⁴⁵ In some cases, no doubt, the root is actually of three letters, and we have misattributed one of the letters to the suffix. But this is not likely to be frequent enough to worry us.

The number of letters in each name varies from 1 to 6, but those with 3–4 are commonest: the others mainly contain 2. I can find only one example with a single letter, and those with 5 or more must also be considered exceptional.

In transliterating the names, I have taken as a starting-point those letters, the values of which are suggested by those of corresponding Cypriote signs. The resulting radicals and suffixes are themselves of a typically Pelasgian type, and are identical with those we already know from Etruscan and Lycian sources. This is good proof that the transliteration was correct. A large number of the suffixes are, of course, not covered by these basic letter-values, but as we have the analogy of other Pelasgian names to guide us, a phonetic value can often be established with reasonable accuracy even where the letter has apparently left no descendant in Cypriote.

In comparing Etruscan names we must, however, remember that their intricate classification into *praenomina*, *nomina*, *cognomina*, *agnomina*, probably did not exist

⁴⁴ *PM.* iv, figs. 665, 693, 734.

⁴⁵ The radical and the suffixes are genuine, but the names are artificial constructions not actually found.

in Minoan. Here, as in the Lycian examples, we have only one name for each person, which evidently covers the whole of the first four Etruscan categories quoted above. But this does not complicate the problem, as the suffixes used in the latter are all much the same. It is the other Etruscan categories of *paternum*, *maternum*, and *maritale* which are distinguished by special endings. These may have existed in Minoan, but they are only additional titles and do not come into the commercial documents.

The final letters of the names analyzed show considerable variety, and include nearly all the letters of the syllabary; but, in point of fact, most of these are only of rare occurrence. The great majority are formed from a very small range of suffixes. Of the masculine names, more than half end in the four letters τ , τ , τ , τ ; while the feminine names show even greater uniformity, 40% ending in τ , and the seven letters τ , τ , τ , τ , τ , τ , τ together forming nearly 80% of the total. The latter may conveniently be treated first.

The typical vowel of Pelasgian feminine endings, as seen in Etruscan, is *i*, the suffixes being formed mainly on the consonant-extensions *-n-*, *-t-*, *-l-*, *-s/š/z-*. Of the resultant endings *-ni/-nei*, *-ti/-θi*, *-li*, *-si*, all but the first correspond with the Cypriote values of the letters quoted above. τ is *ti*, τ *li*, and τ *si* ($\tau\dot{s}i$). The illegible feminine suffixes presumably represent, in some part, a continuation of this series.

The same consonant-extensions are used, in Etruscan, in analogous formations *-nia*, *-tia/-θia*, *-lia*, *-sia*, etc., where there is an additional vowel. This in Minoan would have to be represented as a separate syllable or letter (e.g., *ni-a*, *ti-a*, etc.): so if the endings in *-ia* were, as in Etruscan, in about equal proportion to those in *-i*, the letter *a* or its equivalent should occur as the final of something like half the Minoan women's names. Such a vowel is almost certainly represented by τ . It forms no less than 40% of the total, and is generally preceded by letters which are themselves common feminine suffixes, and appear largely to end in *-i*. Very noticeable is its resemblance to later alphabetic forms of *E*, and several decipherers have already read it as such. I believe the two are actually identical: we have already seen that a change of final feminine *-a* in Minoan to some vowel like *-e* is strongly suggested by linguistic evidence. The exact pronunciation of this vowel is naturally uncertain; I propose to adopt a makeshift spelling of final τ as *ɛ*.

τ occurs mainly in 4-letter words, where the suffix must be an extension, viz., one of the forms *-tiɛ*, *-siɛ*, etc. The vowels preceding it, as far as they can be read, are usually *-i-*, though other vowels sometimes occur. In these cases the Etruscan parallel would probably have an intermediate *j* (e.g., *-aɛ=aja*).

From the frequency of τ in suffixes, both before *ɛ* and by itself, I should be very inclined to read it as *ni*, supplying the remaining member of the commonest series. $\tau\dot{y}$ may possibly represent *ri*.

In other cases, though, the ending τ directly follows the first two letters which contain the root, and the consonant-extension is consequently absent, viz., *Lal-iɛ*, *Pal-iɛ*, etc. These include some of the commonest names. The most interesting example of this type is τ τ τ , which in a list of 53 women (*SM.*, fig. 25) occurs no

less than 7 times, and is also frequent elsewhere: it seems to have been the most universal of all. The last two letters read *-li-č*, and the vowel of the first syllable, which sometimes occurs directly before *-č*, seems to be *i*. The name should probably be restored as *Vil-ič*, identical with by far the commonest Etruscan woman's name *Vel-ia*: variants of the latter *Veilia*, *Vilia*, are also found. That we should find this typically Etruscan name used by women of Minoan Crete, with such frequency, is a startling demonstration of the fundamental linguistic unity.

There is a Minoan masculine (?) name *Vil-i* from the same root; but the exact equivalent of the Etruscan form *Vel* seems to be the monosyllabic *Ve* which occurs once in a list of men (*PM.* iv, fig. 687a). The omission of *-l*, whether an abbreviation or a phonetic peculiarity, is also common in Etruscan spelling. The frequency of this radical may be explained by the fact that it is possibly derived from some word meaning "citizen, man." The analogous Etruscan *Lar*, f. *Larθi/-a*, seems to be based similarly on some original meaning "noble, lord:" this must be the radical of the Pelasgian *Lariša*, "acropolis, citadel."

Also of interest is the feminine name  *Puč*, which is evidently the Etruscan *puja*, "woman, wife." Etruscan, too, is its use as a name-radical.⁴⁶

Evans has drawn attention to a series of three Minoan names whose endings fluctuate between  and . Recognizing  as a nominative feminine ending, he proposes that the variant forms are the corresponding datives,  being an inflection.⁴⁷ This is in point of fact improbable. Evans has overlooked a fourth example   (cf.   ) which occurs as a masculine nominative, followed by an ideograph.  is the most typical masculine ending (probably *ne*), and it is only reasonable to regard the three others as men's names too. The variation between *-linč*, *-tinč* and *-lič*, *-tič*, is quite regular.

The actual representative of the Etruscan dative/instrumental in *ši* appears to be the  which occurs spasmodically added to ordinary names in *-č*. In this case the *č* remains, and is not elided in the arbitrary way we should have to assume for a dative in .

 probably = *ce*; but it is more common as a masculine suffix, and I am uncertain of the precise relation of the feminine use to other Pelasgian forms.

The percentage figures for the 6 most frequent masculine suffixes are as follows:  19%,  13%,  12%,  9%,  5%,  4%.

 has no value in Cypriote, but its frequency makes it comparatively easy to identify. The commonest Etruscan male suffix is formed on an *-n-* extension, *-na*, and we might expect a corresponding ending to be equally frequent in Minoan. The value *na* does not fit any of the common Minoan endings, and seems to be filled by , which does not occur in any of the examples analyzed. If, however, there was a phonetic change of *a* to *e* such as we have already recognized, the Pelasgian suffix would be found in Minoan as *-nč*: and this value may then justifiably be given to .

, ,  and  are probably to be read *to*, *ve*, *pu*, *ce* respectively. Each of

⁴⁶ Conway, *CAH.* iv, p. 140.

⁴⁷ *PM.* iv, pp. 714–715.

these has strong analogies elsewhere. *-To* seems to correspond to Etruscan *-te*, and appears in its identical form in numerous Pelasgian names such as *Kair-atos*, *Mil-atos*, *Wein-atos*, etc. In Minoan it seems usually to be joined to the radical by means of a connecting vowel, as is the case with a large proportion of the suffixes: this is most frequently *-a-*, but there are also others. *-To* also occurs as a feminine suffix, but this use is 3 times less frequent than its masculine. *-Ve* (*-ave*, *-eve*) is the common Etruscan *-v* or *-ve*: I am uncertain whether the final vowel was always pronounced, and so it would be safer for the present to bracket it, *-v(e)*. *-Ce* is identical with the same ending in Etruscan, e.g., *Lar-ce*. *-Pu* has similar, though perhaps less marked, analogies.

The suffix *-lo* (*-alo*), second in frequency, puzzled me for some time. I had already found grounds for identifying *-alo* as the Minoan genitival inflection, and I consequently hesitated whether to assume a genitive case for these names too. They are, of course, nominative like the rest, as their contexts clearly show. But my confusion was justifiable: the two endings are as a matter of fact, identical, this nominal suffix being derived from the genitive inflection by a process peculiar to Pelasgian and its nearest neighbor, Lydian. In the latter language we may cite the name *Mane*, which forms its genitive as *Manel*: from this a name *Manelis* is derived.⁴⁸ By origin the suffix is no doubt equivalent to a patronymic or metronymic, and is analogous to the use of *-ovitch* in Russian. To determine its exact usage I carefully examined the letters immediately preceding it, expecting them to be predominantly either masculine or feminine suffixes; but the results were very discrepant. We must conclude that it was no longer strictly genitival in its use, but was added to roots in as arbitrary a fashion as the other suffixes. In the metronymic which probably followed Minoan names its genitival use would still be regular, viz., *Ve Vilielo*, which would mean *Vel (son) of Velia*. This is the normal usage in Etruscan, where it appears as *-al*. The final vowel, generally absent in Etruscan, is preserved in Lemnian, which forms its genitive in *-ale*.

The masculine suffixes so far dealt with are consonantal, and their formations consequently fill at least three syllables. But a large proportion of names has only two letters. These contain either plain roots or, more often, roots varied by a single vowel. The plain roots are non-existent in women's names, except in so far as they are derived from common nouns.

In addition to the suffixes quoted above there naturally remain a large number of rarer ones, only a few of which can so far be read. But the simple endings which are capable of transcription, and are collected in the following list, include the great majority of examples, and form the normal framework of Minoan name-formation:

Simple suffixes

Masculine: *-a*, *-e*, *-i*, *-o*, *-u*, *-ce*, *-lo*, *-ně*, *-pe*, *-pu*, *-ra*, *-ro*, *-s*, *-ta*, *-ti*, *-to*, *-va*, *-v(e)*.

Feminine: *-i*, *-iě*, *-ce*, *-li*, *-ni*, *-ri*, *-ši*, *-ti*, *-ito*, *-liě*, *-niě*, *-tiě*, *-viě*.

In their simple form these suffixes are attached directly to the root, with or without a connecting vowel. But there is, as in Etruscan, another series of names,

⁴⁸ Conway, *CAH*. iv, p. 411. The exact Minoan form recurs in Lycian (? Lelegian), Greek transcription *-alos*.

equally frequent, where the suffix may be called *compound*. In these we find an additional consonantal element interposed between the ending and the root—or, to be more exact, the simple suffix is enlarged, in a mutilated form, by the addition of another one of the same series. The ending *.a-li-ně*, for instance, contains the elements *-ali-ně*, of which the first is basically the same as the ending *-alo*. In these first elements the consonants alone remain constant, the vowels varying enormously. *-Alo*, *-av(e)*, etc., are thus reduced to an intermediate element *-l-*, *-v-*, around which the vowels may apparently be built at random. In Etruscan spelling the vowels of the intermediate suffix-elements disappear, and they are thus reduced to uniformity again: this accounts for the cramped appearance of a large proportion of Etruscan names, e.g., *Sesc-t-nei*, *Vezθ-r-na*, etc.

In the compound suffixes, the readable examples of which are listed below, the endings are drawn from a much smaller range, and are practically restricted, like the intermediate elements, to the basic consonants *l*, *n*, *t*, *v*, *r*.

Compound suffixes

Masculine: *-celo*, *-valo*, *-velo*; *-lině*, *-loně*, *-naně*, *-paně*, *-puně*, *-raně*, *-reně*, *-roně*,
-taně, *-tině*, *-vaně*, *-veně*; *-tipe*, *-pupa*; *-tira*, *-niro*; *-reto*, *-nito*, *-vito*;
-lav(e), *-nev(e)*, *-puv(e)*, *-rev(e)*, *-θev(e)*.

Feminine: *-veni*, *-nito*.

The suffixes, being an integral part of the language, naturally show greater uniformity throughout the Pelasgian dialects than the radicals themselves, which are governed largely by social factors. But though we shall not find many radicals which correspond as exactly with Etruscan forms as the suffixes do, they are all typically Pelasgian in type, and several of those we can already read can be paralleled from other sources.

Name-radicals

Lal-, *Lap-*, *Pal-*, *Pat-*, *Peš-*, *Ral-*, *Ran-*, *Šal-*, *Šar-*, *Šat-*, *Šeli-*, *Š(e)ne-*, *Šep-*,
Šeši-, *Šet-*, *Š(e)ve-*, *Šeθ-*, *Šiev-*, *Tapu-*, *Tir-*, *Val-*, *Ver-*, *Vil-*, *Vip-*, *Vit-*, *θ(e)ve-*,
θel-.

Exclusive of these are four reduplicated radicals which Evans has acutely conjectured to be *Lallnamen*, of the kind which enter into the composition of some Asianic names, e.g., *Pappa*, *Dada*, *Nanna* and the like.⁴⁹ The Minoan examples when transliterated read *tata*, *pepe*, *nono* (?), and *šiši*, and abundantly confirm Evans' conjecture. *Šiši*, which does not correspond so closely as the others, seems to be a diminutive applied to a small baby.

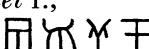
The number of names in which the whole structure, both the radical and the suffix, can be read is still small, owing to the incidence of many letters to which values cannot yet be given. But it is broadly true that a combination of any one of the radicals quoted above with any one of the suffixes would result in a possible Minoan name. It may turn out that certain types of radicals prefer certain types of suffixes, but there is no indication of this so far, and their combinations seem to be unrestricted.

⁴⁹ *PM.* iv, p. 572.

The following comparative examples, taken from figures by Evans, will serve to illustrate the way in which the suffixes vary in names from the same root. The roots themselves are largely unknown, and will be indicated by *A-*, *B-*, *C-*.

A-ě f.: A-tiě f.: A-raně m. B-to (Thebes): B-ro m.: B-nito f. C-lině m.: C-ro m.: C-roně m. D-ně: D-roce. E-ce: E-vaně. F (Knossos and Melos): F-to m.: F-tiě f.: F-tině.⁵⁰ G-vito: G-tiraě f. H-velo (Tiryns) ? real genitive: H-li f. (Knossos). If we had a wider range of examples, we should probably find long series, such as can be made from Lycian (? Lelegian) names, viz., Kottas, Kouti, Kotus, Kodalos, Kodros, Kotana, Kudna, (Kudissos).⁵¹

The Minoan names on the Egyptian writing-board (§ 4) are identical in type with those we have analyzed: they are now capable of being vocalized with comparative certainty. Where the Egyptian spelling admits of more than one analogy in Linear B, we are justified in choosing the more frequent.

'KŠW	-(A)caš-av(e)	m.	
'KŠTJ	-(A)caš-ati	f. ⁵²	For the variation between a masculine <i>-v-</i> extension and a feminine <i>-ti</i> , <i>-li</i> , etc., see H above.
NSWJ	-Nes-ui	f.	cf. Etr. <i>Far-u</i> , f. <i>Far-ui</i> , etc.
'ŠHRW	-(A)šaχ-alo	m.	(rather than <i>Ašaχ-ro?</i>)
'TM'J	-Ati-mei	f.	cf. Etr. <i>Atinei</i> f.,
PNRT'	-Pen-areto	m.	for <i>-areto</i> cf. 
RŚ'	-Res-a	m.	

Of the 5 commonest masculine endings, *-ne*, *-lo*, *-to*, the plain vowel (10%), and *-ve*, all except *-ne* are represented, in the four masculine names. The others are feminines in *-i*.

The Keftian charm against the Arab disease cannot yet, unfortunately, be interpreted, as our research on the Linear Script inscriptions has not yet been directed towards the elements of vocabulary.

§ 10. The analysis of Minoan names must inevitably form the first stage in decipherment: if we are slow in coming to the vocabulary itself, we must remember that without this preliminary stage progress in that direction would not be possible at all. As it is, the study of the names alone provides a solid basis for future research, by verifying the values of the letters, and by testifying to the exact relationship of Minoan to the other Pelasgian dialects. On this foundation research into vocabulary can proceed: it will inevitably be laborious, and we cannot expect any quick or

⁵⁰ This series is interesting both on account of its regular form of development and its wide extension. Particular stress is laid on it by Evans (*ibid.*, pp. 715 ff.). It is possible that the stem actually represents *Mi-no-*, identical in its simple form to the dynastic name *Minos*: this may have been as common among all classes of Minoans as our dynastic *George* is in England. ? *Mino*—*Minoto*—*Minotiě*—*Minotině*.

⁵¹ Conway, *ibid.* p. 409. Minoan forms would be *Cotas*, *Coti*, *Cotve* (?), *Coθalo*, *Coθro*, *Cotaně*, *Coθně*, (*Coθise*).

⁵² It has been suggested by Peet (see § 4) that *(A)cašav(e)*, *(A)cašati* are roughly translated by the Egyptian names *Sannafre*, *Santnafrē* (=“good brother,” “good sister”), which occur on the same board. This is a possibility: names formed from radicals derived from nouns of relationship are a common peculiarity of Pelasgian; and the element *acaš-* or *caš-*, if it meant “brother” (? normal form *caši*), would clearly supply the origin of the Greek word κάσις, which has no certain etymology.

startling results. But it is not too much to hope that eventually the whole outline of the language will be recovered, and that it will be shown to correspond as closely to Etruscan and other "Pelasgian" forms as the proper names already do.

Since the more fragile materials have long since decayed, the Linear Script remains are confined, practically, to: a) the clay tablets, of official provenance; b) writing on pottery; c) inscriptions on stone. In the first the material for the study of vocabulary is restricted to isolated words in the accounts, and to the contents of a few tablets that are probably not accounts but contracts, decisions, or messages, written in the ordinary literary language. The pottery inscriptions consist mainly of names, the maker's or owner's, but one or two examples have been found inscribed with longer sentences. The stone inscriptions are on religious objects and evidently contain prayers or dedications.

The extent of this material is admittedly small as compared with that left by other ancient civilizations, but it is continually being added to by new discoveries, and is already a sufficient basis for a fairly extensive research. The resulting vocabulary will not be large, but it will be enough to enable us to say that we understand the language, and will form a framework by which the translation of new inscriptions will be made comparatively easy.

This research into vocabulary must be reserved for the next stage in our studies, and it will be sufficient here to touch on one or two points which have already emerged.

Of the independent words in accounts a few of the simplest may be illustrated from the much reproduced Linear B list of women (*SM.*, fig. 25). It appears to have referred when complete to 53 persons: 7 of these share the same name *Viliē*, and 4 more share another.⁵³ Each separate name is followed by  = "1 woman, of the name of . . ." (or a higher numeral), and in addition some of them have one of the two words  or  after. After some hesitation I came to the conclusion that these meant "male child" and "female child" respectively, and I was pleased to see that both Evans and Cowley have independently come to a similar conclusion.⁵⁴ These words refer back to the women, and mean "*with a male child,*" etc. They seem to be in the nominative all the same: Minoan note-form is usually paratactic.

In the addition of the women's names those with no children are classified separately (45) from those with a female child (5) and those with a male child (?3). A fourth classification occurring once (l. 7) does not appear in the totalling, and appears to be included among the childless: it means, perhaps, *enceinte*. The words for "child" cannot yet be transliterated, but they are clearly from the same radical.

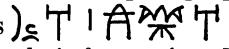
The totals in this inscription are preceded by the common formula *to-r(e)*, , corresponding with the Etruscan verb *tur-*, and meaning, in the third person, "this

⁵³ For some reason the simple mathematics of this account has baffled most students. This is largely due to the misleading first total 45, and to an imperfect understanding of the *ideograph and numeral* which follow each name.

⁵⁴ Excepting that they reverse the genders; but the genders given here are those almost exclusively associated with their respective endings. The numerals after the children also refer back to the mothers (e.g., line 5: "Velia, 7 women: one with girl/-s, one with boy/-s;" etc.). If one had both girls and boys, she would seem to have been entered under "girl" alone, as the "girl" items come first in the totals, and are more numerous. This is significant.

"gives," either singular or plural.⁵⁵ A variant form is  or abbreviated ; this evidently comes from the same root, and is, I suspect, a parallel noun (or passive?), meaning "product." , which should contain *r*, is perhaps *ro.* ? *to-r(o)-i.*

Another often illustrated tablet is that reproduced in *SM.*, fig. 26 (also *Enc. Brit.*, ed. 13, s.v. *Alphabet*). It is in literary Minoan, without ideographs or numerals, is written in large neat letters, and is divided into 3 paragraphs or sentences.

The first sentence consists of the words  followed by three proper names, which can be identified as such by their formation. The last is actually found elsewhere (as I discovered later). The ending of the first two words, *liš vilaš*, is not found in the names analyzed, and they can, therefore, be divided off. *Vilaš* seems to be a plural from the same radical as *Vilič*, and as it evidently applies to the names that follow, it should form some kind of description, such as "citizens." This first sentence is probably in the nature of a heading, so I suggest that *liš* means "about, concerning," a meaning which is equally suggested by another context in which it occurs. The first sentence *liš vilaš viriev(e) θe . . . to Lalič* can, therefore, be translated: "In the matter of citizens Viriev, θe . . . to and Lalič:", a normal introductory paragraph for a legal document.

The middle sentence, which is much longer, evidently contains the gist of the matter, but it is too early to hazard its meaning.

The remaining sentence contains the four words



divided into two lines (broken at the beginnings). The first word in each line is a masculine proper name (cf. ). If it is a legal document, these should be the signatures of the presiding officials; and the two words that follow, both ending in *-ce*, are almost certainly past tenses (cf. Etr. *turce*, *amce*, *lupuce*, etc.) indicating their functions, on the exact model of the Greek formula, A ἐπρυτάνευε, B ἐγγραμμάτευε. I am inclined to read the first verb as *ša-ra-no-ce*, i.e., *šaran-noce* (cf. the parallel Etruscan *zilacnuce*, "was Zilach"), "was governor, magistrate, etc." *Šaran* would be identical with the Philistine *sarn*, *seren*, of similar meaning, and the original of *τύραννος*.⁵⁶ The second verb is less certain, but probably refers to the recording of the proceedings. The structure of the middle sentence suggests that it goes something like this: "The court has decided (or approved) that . . . such-and-such should happen (or should have happened)." But this is mere guess-work.

Among the remaining types of inscription the only word which can be identified is the group  which occurs so frequently on Linear B stone cult-objects as to almost certainly represent the name of the divinity.⁵⁷ It has a variant form, 

⁵⁵ The letter for *re* was hitherto illegible, but this interpretation is so plausible that its value may safely be taken as such. It fits well elsewhere.

⁵⁶ Glotz (*Aegean Civilisation*, New York, 1925, p. 158) has already suggested that this term was originally that conferred on the local governors of the cities under "Minos" rule.

The Greek loan-word πρύτανις is apparently derived from a Minoan term identical with the Etruscan *purtvana* "chief magistrate", Latinized *Porsena*. ? Minoan **purt-/prut-(s)vanč*.

⁵⁷ *PM.* i, pp. 625-636.

tirely final, and the initial variation in these presents enormous difficulties, unless we assume that for some reason the order of letters has been altered, the final letter being placed at the beginning. In that case they would read ?-?-*lič*, with a normal feminine ending, the name being, therefore, that of the Minoan Mother-Goddess, and ?-?-*li-š*, which, as a variation on the first, probably refers to her male counterpart, since it can hardly be a grammatical inflection. That this order of spelling was the original one is indicated by the recurrence of the male name on an earlier hieroglyphic seal (P 41b) and perhaps on another, too: here the words begin with the reduplicated “tunny” sign and end with the “double-axe,” archaic forms of the linear letters used here. And the reason for the altered spelling is not far to seek: the final letters of the two names, *š* and *e*, happen, either by coincidence or design, to be symbols of the respective divinities, in the shape of the “double-axe” and the “gate.”⁵⁸ Like the divine element in the spelling of Egyptian names these symbols have, by a trick of orthography, been transferred to the place of honor at the head. The stem from which the two names are formed, consisting of a closed syllable followed by *l-*, may be *fufl-*, on the analogy of the Etruscan *Fufl-unš* = Dionysus, a divinity who preserves many of the characteristics of the Minoan god. ? *Fuftič*, *Fuftiš*.

The spelling of the god’s name in the hieroglyphs offers a first starting point in the study of these earliest inscriptions; but it is far from certain that the relationship of the pictographic signs to the later linear forms is on the whole as regular as this one instance suggests.

As research into the vocabulary proceeds, the Minoan forms may be expected to throw light on Etruscan, and allow us to probe into the structure of the latter in turn, where hitherto it has been impossible to penetrate. Our increased knowledge of Etruscan will then supply clues to further Minoan problems, enabling us gradually, by methods of careful comparison and combination, to build up the broad outlines of both dialects, each supplementing the other. These methods will necessarily be slow, and it will require the combined labors of many researchers before a final and satisfactory position is reached.⁵⁹

The excursions which I have here described form only the prelude to the work that lies ahead. For that reason I am prepared that many of the details I have suggested will be rejected in the final analysis; but as illustrations of the basic conception they serve their purpose, and form, taken as a whole, more than sufficient proof of its correctness.

This conception, the unity of Minoan and Etruscan within a single “Pelasgian” language, has been lying half-formed in the minds of researchers for many years past, often on the point of expression, but always held back by the apparent difficulty of demonstration, by the apparent insolubility of the problem.

⁵⁸ Miss Stawell (*ibid.*, p. 90) has drawn a very plausible connection between the sacred nature of this second sign (which she vocalizes as ’Eō) and the letter E which was a symbol, or invocation, of the god Apollo at Delphi, where, however, he was preceded by an earlier Mother-Goddess.

Two more pre-Hellenic names for the Goddess have been preserved in Greek. The first of these, Βριτόμαρτις, was said to be a compound of the elements *britu* “sweet,” *marti* “maiden.” The latter is a typically Pelasgian formation. So is the second name, Dictynna, corresponding perhaps with the ?*ti-..-na-θ* which occurs after the name *Fuftič* on a votive spoon from Trullos (*PM*. i).

⁵⁹ One of the first *desiderata* is that the whole body of existing inscriptions should be made available for study: only a small proportion of these has so far been published.

That difficulty is largely illusory. It needs only a positive assertion of what the evidence has long hinted at, for the first and greatest step in Minoan decipherment to become possible.⁶⁰ Beyond this point all that is required is hard work, and the collaboration of all workers in this field. Thus can we make up for the energies which, through a lack of direction, have been squandered on the elaboration of so many misguided interpretations.

Once a single theoretical foundation has been agreed on, based solidly on factual evidence, the initial obstacles disappear, and it is only a matter of time before a full decipherment has been achieved. In the case of Minoan this is no idle wish. It can be done.

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⁶⁰ In conclusion I must record my deep indebtedness to Sir Arthur Evans, not only in respect of the enormous groundwork covered in his publications, but also for very valuable personal help in the earlier stages of this research.