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The Decipherment of Mycenaean Greek in the Linear B Script and Its Consequences in the Field of Homeric Scholarship

Francis Thomas Gignac
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THE DECIPHERMENT OF MYCENAEAN GREEK IN THE LINEAR B SCRIPT AND ITS CONSEQUENCES IN THE FIELD OF HOMERIC SCHOLARSHIP

by

Francis Thomas Gignac, S.J.

A Thesis Submitted to the Faculty of the Graduate School of Loyola University in Partial Fulfilment of the Requirements for the Degree of Master of Arts

June

1957
Life

Francis Thomas Gignac was born in Detroit, Michigan, on February 24, 1933.

Graduating from the University of Detroit High School in June, 1950, he entered the Society of Jesus at Milford Novitiate, Milford, Ohio, on August 8, 1950, and began his undergraduate work as a student of Xavier University, Cincinnati.

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# TABLE OF CONTENTS

## Chapter

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. INTRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>A. Introductory remarks</td>
<td>1</td>
</tr>
<tr>
<td>B. Writing in general</td>
<td>3</td>
</tr>
<tr>
<td>1. Pictography</td>
<td>3</td>
</tr>
<tr>
<td>2. Ideography and rebus-writing</td>
<td>4</td>
</tr>
<tr>
<td>3. Phonetic writing</td>
<td>5</td>
</tr>
<tr>
<td>a. Syllabary</td>
<td>5</td>
</tr>
<tr>
<td>b. Alphabet</td>
<td>6</td>
</tr>
<tr>
<td>C. Cretan writing</td>
<td>7</td>
</tr>
<tr>
<td>1. Cretan pictography</td>
<td>7</td>
</tr>
<tr>
<td>2. Linear A</td>
<td>8</td>
</tr>
<tr>
<td>3. Linear B</td>
<td>8</td>
</tr>
<tr>
<td>4. Cypro-Minoan script</td>
<td>9</td>
</tr>
<tr>
<td>5. Cypriote syllabary</td>
<td>9</td>
</tr>
<tr>
<td><strong>II. HISTORICAL BACKGROUND</strong></td>
<td>11</td>
</tr>
<tr>
<td>A. Ancient rumors</td>
<td>11</td>
</tr>
<tr>
<td>B. Sir Arthur Evans</td>
<td>12</td>
</tr>
<tr>
<td>C. Mylonas's amphora reading</td>
<td>14</td>
</tr>
<tr>
<td>D. Excavations of Blegen and Kourouniotis</td>
<td>15</td>
</tr>
<tr>
<td>E. Ventris's early work</td>
<td>16</td>
</tr>
<tr>
<td>F. John Franklin Daniel</td>
<td>18</td>
</tr>
<tr>
<td>G. New interest in Linear B</td>
<td>19</td>
</tr>
<tr>
<td>H. Alice Elizabeth Kober</td>
<td>20</td>
</tr>
<tr>
<td>I. Emmett L. Bennett, Jr.</td>
<td>23</td>
</tr>
<tr>
<td>J. The stage is set</td>
<td>25</td>
</tr>
<tr>
<td><strong>III. THE DECIPHERMENT OF LINEAR B</strong></td>
<td>26</td>
</tr>
<tr>
<td>A. Internal evidence</td>
<td>26</td>
</tr>
<tr>
<td>B. The grid</td>
<td>29</td>
</tr>
<tr>
<td>C. Features of the syllabary</td>
<td>32</td>
</tr>
<tr>
<td>D. How Ventris deduced the grid</td>
<td>32</td>
</tr>
<tr>
<td>E. Assumed rules of Mycenaean orthography</td>
<td>34</td>
</tr>
<tr>
<td>F. Observations on the decipherment</td>
<td>38</td>
</tr>
</tbody>
</table>

iii
IV. CONSEQUENCES OF DECIPHERMENT ON HOMERIC SCHOLARSHIP

A. Mycenaean civilization
   1. The Greeks in Crete
   2. Lives and customs of Homer's heroes
      a. Administration
      b. Literacy
      c. Mycenaean religion
      d. Mycenaean mythology
      e. Social structure
         i. Royalty
         ii. Private property
      f. Geographical location
      g. Daily life
   h. Conclusion

B. Mycenaean Dialect
   1. Relation to other dialects
   2. Vocabulary
   3. Syntax
   4. Morphology
   5. Phonology
   6. Conclusions

C. Note on tablet references

BIBLIOGRAPHY

APPENDIX: AN ATTEMPT AT DECIPHERING

A. Purpose
B. Pylos tablet Val482
C. Pylos tablet Un267
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. THE LINEAR B GRID IN ITS PRESENT STATE</td>
<td>31</td>
</tr>
<tr>
<td>II. THE FIRST DECLENSION</td>
<td>83</td>
</tr>
<tr>
<td>III. THE SECOND DECLENSION</td>
<td>86</td>
</tr>
<tr>
<td>IV. THE THIRD DECLENSION</td>
<td>87</td>
</tr>
<tr>
<td>V. -EYE NOUNS OF THE THIRD DECLENSION</td>
<td>88</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

Our age has seen one of the most remarkable archaeological triumphs of all time, the deciphering of the writing of the Achaean Greeks, the heroes of Homer's poems, by an English architect, Michael G. F. Ventris. The achievement of the successful architect, a cryptographer during World War II, whose interest in Greek antiquity stems from his school-day education in the classics, ranks with Heinrich Schliemann's discovery of Troy and Jean François Champollion's decoding of the Rosetta Stone as one of the greatest accomplishments of archaeology. While Schliemann's excavations gave historical substance to the legends of Homer, Mr. Ventris's decipherment revealed the language of Homer's heroes; while Champollion had a quasi-translation in Greek to work from in the process of decoding the Egyptian hieroglyphics and hieratic script, Ventris worked on tablets whose sense as well as script was unknown.

A New York Times article announcing Mr. Ventris's 1952 discovery read:

An ancient Greek script that for the last half century and longer has baffled archaeologists and linguists has been decoded finally--by an amateur.
Solving of the riddle by Michael Ventris, an English architect and leisure-time scholar of pre-classical scripts, ... is looked upon as an unparalleled achievement.

Implications of Mr. Ventris's findings have rocked the archaeological world, and resultant tremors, scholars assume, will be felt in other areas of learning as well.¹

The story of the Mycenaean script began more than fifty years ago when Sir Arthur Evans unearthed comparatively great masses of engraved tablets from the palace at Knossos, Crete. No one could read the tablets, except for some numbers. When you find on a tablet this set of symbols:

\[ \begin{array}{c}
\text{I} \\
\text{====} \\
\text{I} \\
\text{====} \\
\end{array} \]

it is likely that this is merely an addition, the vertical strokes representing single units and the horizontal ones tens: thus, \(1+37+2=40\).²

But the words on the tablets were another story. They were composed of different signs, which no scholar could recognize. True, a handful of them resembled signs in other scripts, but they constituted such a small percentage that they offered little hope of leading to a solution. Indeed, the writing seemed impossible to decipher. The script was unknown, the meaning of the tablets was unknown, and, seemingly, so was the language. Unless


someone discovered a Rosetta Stone in this script, the outlook was
glum. As late as 1948 we find eminent archaeologists writing:

The final hope for a complete solution of the problem
seems to rest in the future discovery of one or more bi-
lingual inscriptions. . . . When and if such bilingual in-
scriptions are discovered in the Mainland of Greece and in
Crete they will provide the key to the prehistoric scripts
of Greece. Even inscriptions in the Greek language written
in the Linear Scripts of prehistoric times will be of great
value to the work of decipherment; but these are still a
boon devoutly to be wished.3

How ironical it is that the consensus of archaeologists ruled
out the possibility of these tablets being actually written in the
Greek language, though in a Minoan script! But before we examine
in more detail the evidence for a Greek dialect in the tablets,
and how Michael Ventris solved the riddle without bilingual in-
scriptions, a few observations illustrating various types of
writing in general and the various Minoan styles in particular
are necessary for a proper understanding of Linear B.

Writing, or the communication of conceptual language by
arbitrary signs, is the art which gives permanence to man's know-
ledge. Prescinding from such embryo-writing as symbolic icono-
graphy and "rock-pictures," writing may be divided into picto-
graphy, ideography, and phonography.4

Pictography, the most primitive stage of true writing, is
the semantic representation of ideas, i.e., representation through


pictures. We find this language used extensively in two greatly differing spheres: in aboriginal tribal writing, and in contemporary advertising.

While in pictography the pictures illustrate material things, in ideography, a further stage of development, they also represent abstract ideas. Ideography seems to be a highly developed pictography in which the pictures represent not so much the things they portray as the underlying ideas of those things. For example, a circle might represent, not just the sun, but light, heat, or the word day. Pure ideography is rarely used, seemingly only by Maya and Aztec Indian tribes, and by some of the more primitive African, Polynesian, Australian, and Asian indigenees.5

That pure ideography is insufficient can be easily seen. Try to represent names, especially foreign names, or pronouns, adverbs, prepositions, and inflections by means of pictures alone. Hence, the picture symbols came to stand not only for objects or related abstract ideas, but also for the phonetic value of words without any regard to their pictures. This is more technically known as rebus-writing, defined as the "enigmatical representation of words and phrases by pictures of objects the names of which resemble the words or their syllables."6 Such rebus-writing, or transitional writing (bordering on both ideography and phonography

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5Ibid., p. 35.

or ideography improperly so-called, is the Babylonian cuneiform system (in which the ideographs are formed out of wedge-shaped lines), the Egyptian hieroglyph, and the Chinese character system.7

In the picture-writings and the pure ideographic script, there is no connection between the depicted symbol and the spoken name for it; the symbols can be "read" in any language. Phonography, or phonetic writing, is a great step forward. The written signs now represent not ideas, but sounds. The written forms, now having a direct relationship to the spoken language, become its secondary forms.

There are two classes of phonetic writing; the syllabary and the alphabet. The syllabary, in which each sign represents a syllable, i.e., a consonant plus a vowel, is cumbersome because of the greater number of signs it must have. The Japanese Hira-gana and Katakana syllabaries each have forty-eight signs.8

7 It is a matter of historical controversy whether or not writing actually developed in a strict sense from a more primitive to a more advanced stage, or whether different forms of writing were actually invented in a higher degree of perfection. Dr. Diringer holds a Darwinian view of the development of writing. He states: "The struggle for life is the main condition of existence for a script as for other things. The best fitted resists and survives, although sometimes the surrounding circumstances may bear a greater influence on the survival of a script than its merits as a system of writing." This principle of evolution, false as regards specific evolution, seems the best working-hypothesis for the development of writing. (Quotation on p. 21.)

8 The complete syllabaries may be found in Mario A. Pei, The World's Chief Languages, 3rd ed. (New York, 1946), p. 530.
(That the adoption and use of these syllabaries along with the
Chinese characters was a simplification in Japanese reading will
be understood when one reflects that the "impossible" Chinese
signs amount to more than 80,000!)

Other syllabaries, however, have as many as 400 signs, depending upon the number of sounds
in the language.

The alphabet is by far the simplest and most highly developed
form of writing. Yet there are degrees of perfection within it.
A perfect alphabet is one which has but one letter for a single
sound and for that sound alone. The Roman alphabet is far from
perfect for the English language. There are twenty-six letters
in the English alphabet and probably four or five times as many
sounds in our daily speech. The English alone can be pro-
nounced at least eight different ways. The Cyrillic alphabet,
artificially composed for a Slavic tongue, is near-perfect,
accepting only a few variations introduced through phonetic decay.
The Sanskrit alphabet, although often considered a syllabary by
reason of the short a following every consonant unless another
vowel or a virama is written, seems to be, with its forty-nine
letters, the most perfect of all.

After this discussion of writing in general, it will be
helpful to consider that group of writings known as Cretan scripts.
Minoan, or perhaps more properly, Aegean civilization flourished in Crete and in Melos and other Aegean islands centuries before Greek civilization proper arose. By the year 2,000 B.C., the Aegean civilization had developed so fully that "Crete entered upon a period of power and brilliancy which rivals in interest the more famous civilisations of Egypt and Babylon." From the Bronze Age Early Minoan I period (3,000 B.C.) onwards, seal-engraving was practiced, along with mason's marks, label-indications, and the like. The first phase of the Middle Minoan period (say, between 2,150 and 2,000 B.C.) saw an elaboration of the early decorative devices and the transformation of the representational drawings into true pictograms. Short pictographic inscriptions were cut on hard three- or four-sided seals. This mode of writing was called Pictographic Class A or Pictographic Class B, according to the relative cursiveness of the script. These classes are generally referred to as Minoan pictographic or ideographic writing.


14Diringer, p. 75.
We are not concerned with this type of writing in this thesis.

In the last phase of the Middle Minoan period (about 1800 B.C.), the pictographic writings gave place to linear scripts. A linear script, technically, is a script composed of combinations of strokes which are straight or only slightly curved. These linear scripts are divided into two classes: Linear Class A and Linear Class B. It is Linear B which is the subject of this thesis.

Linear A script flourished at Knossos and in the rest of Crete from 1750 to 1450 B.C.;\(^{15}\) Linear B at Knossos only between 1450 and 1400 B.C., but also on the Mainland at Mycenae and Pylos between 1300 and 1200.\(^{16}\) According to Evans, the two linear scripts were parallel evolutions; Johannes Sundwall, Finnish archaeologist, and others hold that Linear B was a development of Linear A.\(^{17}\) Linear B now definitely seems to be a deliberate and thorough revision of Linear A, with some Linear A signs omitted and some new signs added.\(^{18}\) The numeration is also partly changed; the single units are represented by vertical lines, the tens by horizontals, the hundreds by circles, the thousands by circles with four spurs in the centers, and the ten thousands by similar signs.

\(^{15}\)Emmett L. Bennett, Jr., "Fractional Quantities in Minoan Bookkeeping," \textit{AJA}, LIV (1950), 204.

\(^{16}\)Michael Ventris and John Chadwick, "Evidence for Greek Dialect in the Mycenaean Archives," \textit{JHS}, LXXXIII (1953), 84.

\(^{17}\)Diringer, p. 76.

with a dash in the middle. 19

Besides these Minoan pictographic scripts and linear scripts, there are two other scripts which were used in Cyprus especially, called the Cypro-Minoan script and the Cypriote Syllabary. The Cypro-Minoan script is found on a very few inscriptions: five terracotta balls from Enkomi, some inscribed seals, and a few short inscriptions on pottery. 20 This system of writing, however, whose relics indicate it was used between 1400 and 1200 B.C., seems to be a connecting link between the Minoan linear scripts and the later Cypriote Syllabary.

The Cypriote Syllabary, a pure syllabic writing used in classical times (at least from 700 to 300 B.C.), was mainly deciphered in the last twenty-five years of the nineteenth century, thanks to the facts that the language written was Greek, and that in many inscriptions an equivalent Greek alphabet accompanies the Cypriote script. This script, whose partial value in helping to solve Linear B will be seen, consists of approximately fifty-five symbols, each representing an open syllable (such as pa, ko, ne, se) or a vowel. 21 The script, created for a non-Greek speech,

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19 Diringer, p. 76. See also Bennett, "Fractional Quantities in Minoan Bookkeeping," for a scholarly presentation of the differences between the two linear scripts in their methods of computing fractions.


21 Diringer, p. 165.
represents the Greek sounds rather imperfectly.

It is rather doubtful whether this script was derived from the Minoan linear scripts. Very few of the symbols of Cypriote are similar to those of Linear B, and even they do not represent corresponding sounds. This script does, however, play a role in the ultimate deciphering of Linear B.

With this brief discussion of writing in general and of Minoan writing in particular, a foundation has been laid for the study of Linear B. An examination of the historical background leading to the decipherment will follow, accompanied by an account of the actual decipherment itself.
CHAPTER II

HISTORICAL BACKGROUND

In Book Six of the Iliad, Glaucous tells the story of poor Bellerophon. Relating how Proteus, believing the false story of his wife, sent Bellerophon to Iobates with a letter requesting him to put Bellerophon to death, he tells Diomedes:

\[\text{πέμπε δὲ μιν \lambdaυχίηνδε, πόρεν \δ' \δ' \γε \σήματα \λυγρά, γράψας \ἐν \πίνακι \πτυχάθρο \θυμοφθόρα \πολλά, δεῖξαι δ' \ ἧνώγειν \ ὄ πενθερῷ, ὃφρ' \ ἀπόλοιτο.} \]

This sole reference to writing in Homer gave rise to controversy concerning the literacy of the Achaean Greeks. Many believed they must have been literate, at least to a certain degree; yet most scholars saw in it "precisely the attitude of an illiterate people which has heard distant echoes of the art of writing practiced elsewhere [sic] further east or perhaps in Greece in earlier ages."\(^2\)

Vague rumors of the existence of an ancient script were based on Plutarch, who described how in a grave near Haliartos, reputed

\(^1\)Iliad VI.168-170.

to be that of Alcmene, was found a bronze tablet covered with characters which neither the Greek nor the Egyptian learned men could read.³

Even less credence met the accidental discovery at Knossos of some inscribed tablets in the thirteenth year of Nero’s reign (66 A.D.), brought to light by an earthquake—tablets which at the command of Nero were interpreted as the diary of the Knossian Dictys, a follower of Idomeneus in the Trojan War (a "translation" of which diary provided the principal materials for medieval writers on the story of Troy, notably for Chaucer’s Troilus and Cressida⁴).

When Heinrich Schliemann failed to unearth any written documents in his excavations at Troy, Mycenae, and Tiryns, the illiteracy of the Achaeans seemed confirmed. But here and there evidence began to accrue from sporadic finds in the years following Schliemann’s great excavations. An engraved pestle was found at Mycenae, a handle at Nauplia, a seal at Sparta.

One of the many people who saw the Spartan seal—a four-sided seal of red cornelian—while it was on display at the Ashmolean Museum was A. J. (from 1911 Sir Arthur) Evans. He was impressed with the possibilities of this seal, whose facets were covered with a series of figures seemingly belonging to a conventionalized

³Ibid., 210.

system of writing or pictography. Evans set off for Greece in the spring of 1893, tramped all over the Mainland, and found many additional specimens. Most important of all, he traced the seals back to Crete, where they were still used as superstitious charms, particularly propitious for child-bearing.5

In 1894 Evans arrived in Crete, and determined to excavate the site of Knossos in hopes of discovering some more Bronze Age writings.6 In the meantime, he had published the results of his previous findings.7

At the turn of the century, Evans began his excavations at Knossos, and between 1900 and 1904 found important remains of Cretan art, architecture, and writing, including, eventually, 2,791 Linear B tablets.8

Within the next thirty years, Linear A tablets were unearthed at Hagia Triada, a disc at Phaistos (which was to cause more troubles in the decipherment of Linear B than it was worth), and other tablets elsewhere.9 Within these years, too, Sir Arthur Evans published his famous works on Minoan excavations, determined the classical archaeological periods of Cretan civilization, and

5Mylonas, p. 212.
7"Cretan Pictographs and Prae-Phoenician Script," JHS, XIV (1894), 270-372.
8Dow, p. 80.
9Ibid.
transcribed and classified all the writings in his *Scripta Minoa*. He made some important preliminary steps in the decipherment of Linears A and B, clearing the ground for subsequent scholars.

What Schliemann's discoveries were to our knowledge of the Homeric Age, Sir Arthur's were to our knowledge of Aegean civilization. Since his important finds at Knossos, the history of early Greece has been completely revised. And the recent deciphering of the Linear B script as a Greek dialect makes him the father, not only of Cretan archaeology, but also of Greek pre-alphabetic palaeography.

In 1933, Rhys Carpenter published an article entitled, "The Antiquity of the Greek Alphabet," in which he expressed the opinion that the absence of any Greek written in Phoenician letters before 725 B.C. proved that the Phoenician alphabet was introduced about that time, and not (as had been universally supposed) much earlier. This implied a period of nonwriting of some 475 years between the latest Cretan scripts (1200 B.C.) and the earliest Greek writings.

In 1936, George E. Mylonas published an inscription on an amphora found at Eleusis, which became the best-known Minoan inscription from the Mainland. In his article, he identified the signs on the amphora with signs of Linears A and B, and, applying

\[10\text{AJA, XXXVII (1933), 8-29.}\]

\[11\text{"Eleusiniaka," AJA, XL (1936), 429.}\]
the syllabic values of similar Cypriote signs, obtained the very plausible reading: "Oh, maiden, this potion here I offer to thee." His transliteration ran: "pa-i da ku-ka-vo-ne-da," which he transliterated into Greek as παί δὲ χυξεωνεδά. Taking παί as the vocative of παῖς and δὲ as an enclitic adverbial form meaning 'this here,' as in the demonstrative pronouns δὲς, ἰδές, etc., and accepting χυξεωνεδά as an unique accusative of the heteroclitic form of χυξεῖν, he understood the proper verb and thus derived his meaning.12

Mylonas's reading now seems merely coincidental; but his article did serve to identify the Mainland script with the Linear B of Crete, and suggest the use of the Cypriote script and of the Greek language in the decipherment of that unknown writing.

In 1939, just before the beginning of World War II, Carl W. Blegen, University of Cincinnati archaeologist, and the Greek archaeologist, Dr. Kourouniotis, discovered 621 tablets at Pylos, Nestor's home with its broad, sandy beach, where Odysseus's son Telemachus was so hospitably entertained in the Odyssey. These Blegen classified as Linear B. What is now more important, he discovered that the earliest possible date for the tablets was 1200 B.C. And finally, while admitting that it was not safe to say whether the tablets were written in the Minoan language or in a quite different tongue, he asserted that the former alternative

12 Ibid., 429.
seemed almost certain.13

That the tablets were Minoan or some cognate language was the opinion of most scholars. In fact, a young man just turned twenty wrote a lengthy article in 1940 upholding this view. The author was no other than Michael G. F. Ventris. His opinion was that the Minoan language was closely related to the Etruscan, and in much detail he adduces the best information available to support his claim.

Ventris's purpose in writing this article shows the spirit of youth combined with the patient, systematic method of a man far more advanced in years, two essential qualities of a great scholar.

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.

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.15

But the idea that the language was Greek seemed to Ventris "a more fanciful interpretation which does not require a detailed criticism."

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14"Introducing the Minoan Language," AJA, XLIV (1940), 494-520.

15Ibid., 494.
because it has never received "any real support." He wrote: "The fantasy with most followers appears to be that which makes Minoan out as Greek. . . . They agree in their primary identification, but that is all: their readings are, substantially, quite unrelated to each other. The theory that Minoan could be Greek is based of course on a deliberate disregard for historical plausibility, and the wonder of it is that the Greek readings have been got into publishable form at all." 16

Ventris makes his presence in the field felt as he urges his fellow scholars to concentrate their efforts along those lines to which all evidence points. The youthful Ventris is all optimistic as he concludes: "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." 17

And it was done, by Mr. Ventris himself. But the result was not to come immediately. A war intervened, and scholars turned their peacetime pursuits to wartime use, Ventris becoming a British cryptographer. And Sir Arthur Evans, the great pioneer, whose lecture had first interested the collegian Ventris in Cretan script, died in 1941.

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16 Ibid.
17 Ibid., 520.
Only one article of note concerning Cretan script appeared during the war. Published in 1941 by John Franklin Daniel, "Prolegomena to the Cypro-Minoan Script" treats the Cypro-Minoan script specifically as a transition between Minoan Linear and the classical Cypriote Syllabary. Finding fourteen different signs in Cypro-Minoan script which differ from any Minoan signs, Daniel concludes that either the two systems of writing fused (which he claims is highly unlikely), or else the Minoan script was adapted to a non-Minoan language. He is heading in the right direction.

Daniel also corrects some of Ventris's erroneous views. Ventris had noticed the failure of the Cypriote to distinguish between voiced, voiceless, and aspirated stops. Drawing from this evidence the conclusion that the prototype of the syllabary possessed only one of the three stops, he had compared it to Etruscan, which has only the voiceless stop. Daniel points out that the error arises from presuming the Cypriote derives directly from the Minoan Linear scripts, and not through the medium of the Cypro-Minoan script, whose transformations of the parent script to suit its own words and sounds (if it were a non-Greek language) would account for the absence of certain sounds. Daniel also points

18AJA, XLV, (1941), 249-282.
19Ibid., 257.
21Daniel, p. 264.
out that several Minoan words which survived into Greek should have warned Ventris of his error. \( \Delta \alpha \beta \upsilon \rho \iota \nu \theta \omicron \varsigma \) contains both voiced and aspirated stops, \( \tau \varepsilon \rho \varepsilon \beta \iota \nu \theta \omicron \varsigma \) all three.22

The use of known words of Minoan derivation helped to solve Linear B, and will probably help to solve Linear A, if that script should turn out to contain a Minoan tongue. Most words ending in \(-\text{inth}\) are of Minoan derivation: absinthe, acanthus, currant (from Corinth), Cynthia, hyacinth, labyrinth, mint, plinth, terebinth, turpentine (terebinthine). Likewise words in \(-\text{ss}\): abyss, byssus, colossus, cypress, narcissus, Parnassos. Other words which may come from the Minoan are: asparagus, asphodel, daffodil, cane, canna, cannon, canyon, dithyramb, govern, hymn, paean, porphyry, purple, scandal, sesame, sponge, wine.23

After the war, scholars resumed their work along these lines. An Italian, G. Pugliese Carratelli, published in 1945 a corpus of all the Linear A and Linear B tablets with the exception of those at Pylos under the title, "Le Iscrizioni preelleniche di Haghia Triada in Creta et della Grecia peninsulare."24 In 1947, Helene J. Kantor published "The Aegean and the Orient in the Second Millennium B.C."25 embodying the first full presentation of the

22Ibid.
24Monumenti Antichi, XL (1945), 422-610.
25AJA, LI (1947), 1-103.
case for extensive Mainland trade and power, at the expense of Crete, before 1400 B.C. This monograph helped to increase the historic plausibility of Linear B being written in the Greek language. John Franklin Daniel died in 1948 at the age of thirty-eight. His only published contribution, an important one, the above-mentioned "Prolegomena," was his doctoral dissertation.

In the meantime, Ventris, now out of service and established in his architectural business, circulated privately his index of the syllabary signs in 1949. In the following year he edited The Languages of the Minoan and Mycenaean Civilizations: Mid-Century Report, published privately in mimeographed form and distributed gratis. The text consisted of answers, in English or Englished, to an elaborate questionnaire which he had sent out to eminent scholars in the field, by Bennett, H. T. Bossett, Carra-telli, V. Georgiev (Russian archaeologist), E. Grumach, C. D. Ktistopoulos, Sir John Myres, E. G. Peruzzi, F. Schachermeyr, and Johannes Sundwall.26

In the meantime, also, came all the writings of Miss A. E. Kober, of Brooklyn College, New York. Alice Elizabeth Kober could well serve as an inspiration to any scholar. Her doctoral dissertation from Columbia University was entitled Color Terms in the Greek Poets. But she became interested in Minoan writing, and after an article and a couple of reviews, left the field of color

26 Dow, pp. 81-82.
for good. To prepare herself for her new field, she went back to school again, taking summer courses in Greek and Latin comparative grammar and Hittite under Sturtevant. She took nine other ancient languages, omitting only Egyptian, probably because it was not available. Then she went into the exact sciences, studying chemistry, physics, and astronomy for their method, mathematics for its use in statistics. For archaeological practice, she even tried excavation in New Mexico.\(^{27}\)

In 1944, twelve years after her dissertation, appeared her first article on Minoan script, "The 'Adze' Tablets from Knossos," in which she noted some variations in the formation of Linear B signs, attributing them to phonetic differences.\(^{28}\) More important, she drew the correct conclusion that the Linear B signs \(\text{Σ} \) meant total, occurring as they did at the end of lists of numbers and always followed by a number greater than or as great as the numbers in series. This discovery was to play a role in the final decipherment.

Following this article with another on the "Chariot" tablets from Knossos,\(^{29}\) Miss Kober reasoned very scientifically to the probability of inflection from changes in the final signs of


\(^{28}\)\textit{AJA}, XLVIII (1944), 64-75.

\(^{29}\)"Evidence of Inflection in the 'Chariot' Tablets from Knossos," \textit{AJA}, XLIX (1945), 143-151.
various sign-groups in Linear B inscriptions. The following years she worked out according to seven assumptions based on circumstantial evidence a deductive system of declension in Linear B. Remembering that the language at the time was completely unknown, and that, in fact, Miss Kober was prescinding entirely from any meaning it might have, it is little short of remarkable that she was able to deduce her declensions from internal evidence alone.30 Her mathematics was proving its worth.

Her knowledge of method next came into play. Annoyed at all the wasted energy, as Ventris had been eight years before, she summed up in her "Minoan Scripts: Fact and Theory"31 all that was known about Cretan writing up to that time. In it, she also advocated the classification which Sir John Myres had established in 1946. She summarized the arguments for and against Linear A and B being identical languages, concluding that the only safe course at that time was to regard them as two distinct languages, as is still the accepted opinion.

Recognizing valuable contributions when she saw them, the following year Miss Kober translated the German article of Johannes Sundwall, entitling it "An Attempt at Assigning Phonetic Values to Certain Signs of Minoan, Linear Class B."32 Then Sir John Myres,

30"Inflection in Linear Class B: I--Declension," AJA, L (1946), 143-151.

31AJA, LII (1948), 82-103.

32AJA, LII (1948), 311-320.
in the process of editing *Scripta Minoa II*, to whose care the work had been entrusted by Sir Arthur Evans, asked Miss Kober to classify the whole mass of 1,722 Linear B documents to be included in the comprehensive work. Miss Kober obliged, Sir John accepted her work, and it remains one of her greatest achievements, the classification being the pioneer step in their ultimate interpretation.33

This was her last work on Minoan writing. Several book reviews, including an adverse criticism of Diringer's *The Alphabet*,34 appeared in the short interval before her death in May, 1950. She was only forty-three years of age.

The contributions of Alice Elizabeth Kober to the decipherment of Linear B were indeed invaluable. "There are those who think that Miss Kober, if she had lived, would have been the first to tear apart the veil."35

But the deciphering of Linear B was reserved for the 1950's. And the spotlight focuses temporarily on Emmett L. Bennett, Jr. In 1950 he published "Fractional Quantities in Minoan Bookkeeping," in which he virtually proved that the two linear scripts widely differ by showing how different were their respective methods of


35Johnson, p. 73.
computing aliquot fractions.\textsuperscript{36}

That summer, Bennett made a grand tour of Greece and Crete, Athens and Oxford, checking readings and inventories, forwarding his observations to Sir John Myres for publication in the forthcoming \textit{Scripta Minoa II}. Early in 1951 he published, under the direction of Carl W. Blegen, \textit{The Pylos Tablets: A Preliminary Transcription}, containing all the tablets found by Blegen during his 1939 excavations at the home of Nestor.\textsuperscript{37} Later on that year he made systematic and elaborate computations of frequencies, with tables, of all important aspects of Linear B script.\textsuperscript{38}

The \textit{Scripta Minoa II} of Sir Arthur Evans and Sir John Myres was published by the Oxford University Press in January, 1952. That summer Blegen discovered 484 more Linear B tablets at Pylos, his first excavation since before the war, while A. J. B. Wace found thirty-nine others at Mycenae. It is important for the present to note that these findings were not published until the script had been deciphered. Ventris's decipherment, when applied to one of them which he had never seen, yielded several Greek words.\textsuperscript{39}

Bennett, in the meantime, was making new indices of Linear B

\textsuperscript{36}AJA, LIV (1950), 204-222.

\textsuperscript{37}(Princeton, 1951).

\textsuperscript{38}Dow, p. 82.

\textsuperscript{39}Ibid., p. 83.
signs, and produced and distributed privately a card bearing on its two faces tables of all the Linear B signs, with variant forms and transcriptions of each.40

Teamwork among scholars is the keynote of all the preliminary groundwork done by the international team of scholars who worked doggedly on the unyielding Linear scripts, hoping that someday their efforts would be rewarded by someone's discovering the key to the decipherment. When Ventris, in the spring of 1952, turned from Etruscan to explore the possibilities of Greek as the language of Linear B, the stage was set for its decipherment.

40 Ibid.
CHAPTER III

THE DECIPHERMENT OF LINEAR B

With the fuller publication of the material found by Blegen at Pylos in 1939, and of all the known writing in Scripta Minoa II, it was at last possible to undertake a systematic study of all the Linear B texts.

Kober and Bennett had expressed their opinions that Linear B contained a new and distinct language from that found on Linear A tablets. But for some years, according to Ventris, the prospect of the tablets being written in an "Aegean" dialect related to Lemnian and Etruscan seemed to be supported by parallels in place-names and certain words. But the linguistic features which appeared in the new material forced him to the conclusion which Wace and Blegen favored on historical grounds: that the main language of the Knossos, Pylos, and Mycenae tablets was not only Indo-European, but specifically Greek.¹

Ventris believed that it was necessary in deciphering an unknown language in an unknown script to extract as much data as possible from a purely internal study of the material before making any assumptions about pronunciation or any assumptions about

¹Ventris and Chadwick, JHS, LXXIII (1953), 84.
language affinities. The wisdom of this procedure is fairly obvious. Without it, one is apt to end up with unpronounceable words and ludicrous meanings far out of context. When both quantities are unknown, nearly anything can result.

Proceeding with utmost care (he passed the remark that if the initial moves are wrong, it should be quite impossible to force any part of the texts into showing the slightest conformity with the vocabulary or grammar of a known language), he derived the following conclusions from internal evidence. Since they are of such importance in the decipherment, and since they present very precisely the nature and content of the Linear B tablets, it seems worthwhile to quote them in full:

(a) The tablets are inventories, accounts, or receipts, which were in all probability written within the last few months before the destruction of the various buildings in which they have been found.
(b) They record the listed commodities by means of ideograms (a kind of commercial shorthand); these are introduced by names, words, and sentences written phonetically (the writing system proper).
(c) The identity of some of the commodities can immediately be recognised from their ideograms (e.g. MEN, WOMEN, CHARIOTS, WHEELS), or from the way they are grouped and differentiated (e.g. HORSES, CATTLE, SHEEP, GOATS, PIGS). In other cases we have an approximate indication in the way they are counted: metals and precious materials by weight; cereals by volume; liquids by fluid measure; and manufactured or packaged articles by units.
(d) About eighty-eight different phonetic signs have been identified in the Linear B material; these are shown ... in the order which has been used by Bennett. Almost com-

2Ibid., 85.
3Ibid., 88.
plete uniformity in the shapes of the signs, and in the spellings of words, is shown between Knossos, Pylos, Mycenae, and Thebes.

(e) The size of the signary makes it certain that we are dealing with a syllabary, probably similar in pattern to the classical Cypriote syllabary, to which it may be distantly related. There is no evidence that ideograms or determinatives occur within sign-groups, as they do in Egyptian or Hittite; but one or two very rare signs may be disyllabic. The spelling appears to be full and regular, within its own rules of orthography, but an internal sign may occasionally be omitted in a longer sign-group.

(f) By means of a statistical count of the whole material one can group the signs as frequent, average, and infrequent, and list those which are predominantly initial or final. One can also discover which pairs of signs occur particularly often together, and note those which are never associated. These statistics are very valuable in comparing the material with the forms of a known language. It is characteristic, for example, that in nearly all languages when syllabically written the pure vowels a-e-i- etc., will be among the most frequent initials.

(g) The language, which is identical for all Linear B inscriptions, shows inflections for at least two genders, three cases, and two numbers of the adjective and noun. The contexts in which these inflectional forms occur can be analysed, some estimate of their functions can be made, and they can begin to be tabulated as paradigms.

(h) In the process of inflection many words show a vowel variation in their final syllabic sign, similar to that which would occur, for example, in Latin bo-NUS, bo-NI, bo-NO, bo-NAE, etc. This gives valuable evidence as to the signs which share the same consonant, and as to the vowels which are characteristic of the different inflectional functions.

(i) Finally, by analysing the occurrences of the individual sign-groups, it is possible to divide them provisionally into four categories:

1. Place-names, and the names of buildings or 'departments'.
2. Men's and women's names.
3. The names of trades or occupations, describing men and women.
4. General vocabulary, describing the commodities and the circumstances in which they are recorded. In comparing the distribution of sign-groups at Knossos, Pylos, and Mycenae, we may expect vocabulary words to recur most frequently (and in related contexts); personal names to be shared less frequently (and in random contexts); and local place-names to
form distinct series.4

By working through internal evidence alone before attempting to allot any phonetic values whatever to the signs, Ventris deduced five vowels and twelve consonants. Ventris's article is highly succinct; we might well wish he had gone into more detail concerning different steps involved in the decipherment. But it seems he deduced these vowels and consonants in this manner:

First, by making parallel lists of signs found on tablets from Knossos, Pylos, Mycenae, and Thebes, and tabulating them according to their locale, he discovered that Linear B was strictly homogeneous; a sign from Knossos resembled most exactly the corresponding sign from Pylos, etc. Since, then, no account had to be taken of where a sign, a word, or a tablet comes from, the next step was to collect evidence of changes in the forms of words due either to varying orthography or to inflection. Then, following Kober before him, he deduced certain stems and endings in incomplete declensions and tabulated the results in relation to the signs.5

The crucial step was to assign the signs involved in the changes to positions on a grid which provides for the five vowels and for each of the consonants in combination with the vowels. His original grid, as printed in his 1953 article, found certain positions for only fifty-eight signs, arranged somewhat irregularly

4Ibid., 85-86.
5Ibid., 88.
along five vertical and thirteen horizontal columns. Since then, he and other scholars, especially Emmett L. Bennett, Jr., have so developed the grid that in its present state it arranges seventy-two signs along eight vertical and thirteen horizontal columns in a more regular fashion. The Archaeological Newsletter published this grid in February, 1955, from an india-ink copy made by the editor from Dr. Bennett's manuscript. This grid, the Linear B grid in its present state, is reproduced on the following page (Table I).

Some explanatory comments on the grid may be found helpful. At the top are listed the five pure vowels; on the left are the consonants. Note that Linear B does not distinguish between t- and th-; between k-, g-, and gh-; between p-, b-, and ph-; or between the unfamiliar sounds kw-, gw- and g-, labiovelars, all but traces of which disappeared by the time of classical Greek. In other words, the Linear B script does not differentiate between voiceless, voiced, and aspirate consonants, or more technically, between surds, sonants, and aspirates. Ventris had made this observation in 1940, and Daniel had denied that it was necessarily true;6 it certainly seems true now. The case is the same with the other Cretan scripts: the same phenomenon was noticed in the classical Cypriote syllabary, as Ventris pointed out years earlier,7

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6 See pages 18 and 19 of this thesis.
Thus, 'Γ' has the phonetic value of 'a'; ῅ the value of 'te' or 'the'; ῃ the value of 'di'; Έ the value of
also in the Cypro-Minoan, and, since Linear B is derived from Linear A, as is the current consensus among scholars, it probably holds true for Linear A also. It is most strange, however, that there is a separate series of signs for \( d - \), the sonant of \( t - \) and \( th - \). This is unparalleled in the Cypriote syllabary, and seems to be inherited from the Linear A.9

Another surprising feature of Linear B differing from the Cypriote syllabary is the single series for \( l \) and \( r \). But as "they cannot be rid of without throwing the whole 'grid' out of joint," sufficient evidence warrants their position.10

In vertical columns six, seven, eight, and nine are placed syllables whose phonetic value and position is established, but whose relation on the grid is not altogether clear.

In addition, there are approximately sixteen symbols for which reasonably certain phonetic values have not been obtained.11

The manner in which Ventris proceeded in particular instances and more in detail in deriving his grid pattern seems to be the following:

Seeing the many abortive attempts to transliterate Linear B through a rigid correspondence with the forms of the classical

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9Ventris and Chadwick, p. 89.
10Ibid., 89.
11Jotham Johnson, Archaeological Newsletter, XXII (February, 10, 1955), 173.
Cypriote syllabary where these forms coincided, Ventris realized that this was not the way. It did seem to him, however, that the conventions of Cypriote spelling could be followed profitably.

Now the Cypriote syllabary did not distinguish between long and short vowels. It omitted m and n when they preceded other consonants. It represented consonants related to one another (e.g., pa, ba, pha) by the same symbol, as mentioned above.12

Following these leads, Ventris began to perceive that a certain vowel, very characteristic of men's names and of masculine names of trades (all of which he had deduced from internal evidence alone), was always preceded by none other than the twelve signs which, on the evidence of the grid (also deduced from internal evidence), belonged to different consonants but shared the same vowel. When he noticed that the same vowel appeared in the nominative plural also, he was reminded of the Greek -eις, plural -η[F]ς. The omission of the final -ς, both in the singular and in the plural, was due probably to rather rudimentary spelling conditions, since it was not true in regard to the Cypriote syllabary.13

Following the premise that each syllable of the pronunciation is normally represented by only one syllabic sign, provided that all stops and diphthongal -u's are recorded, he was able to deduce

13 Ventris and Chadwick, p. 89.
ten postulates which he entitled, "Assumed Rules of Mycenaean Orthography," which are the fundamental rules for all Linear B readings, and therefore should be stated in full:

(1) The syllabary differentiates five vowels -a -e -i -o -u, indifferent as to length.


(3) The second component of diphthongs in -i is regularly omitted (po-me: ποιμῆν), except before another vowel (i-jere-ja: ἵππεια) and in the initial sign ai-. Where -i is occasionally added to endings in -a and -o, these are probably to be interpreted as -αις, -οις.

(4) Vowels following I generally indicate the semi-vowel glide by I (i-ja-te: ἵππα), those following u by w (e-u-wako-ro: Εὐάγρος). These glides will be omitted from the Greek spelling.

(5) Apart from j- and w- (F), the syllabary differentiates at least ten series of consonants: d k m n p q (χ, etc.), r (ρ) s t and z? (γ?). Doubled consonants are not indicated.

(6) There is no sign for the aspirate, nor are aspirated consonants distinguished. ξ, ψ, and χ are spelt ka-sa-, ke-se-, pa-sa-, pe-se-, etc., except when final, where they appear to shed the -a and take the vowel of the preceding syllable (wa-na-ka: Ψῶνα, ai-ti-jo-qo = Αἴθιος).

(7) The consonants λ μ ν ρ σ are omitted from the spelling where they are final or where they precede another consonant (ka-ke-u: χαλκός, i-jo-te: ἄντες, pa-ka-na: φάγονα).

(8) Initial ο- and F- are apparently omitted before a consonant (pe-ma: σπέμα, ri-jo: Ρφίον).

(9) The consonant group -νF- is written nu-w- (ke-se-nu-wi-jα: νεψάθια). ρ before F is more often omitted (ko-wo: κῶρος, we-we-e-a: Φερέα).

(10) All stop consonants which precede another consonant are written with the vowel of the succeeding syllable (ki-tita: κιτίτας, ku-ru-so: κρυσός). But analogy may sometimes cause a spelling to be levelled for a number of related forms (wa-na-KA-te-ro: Ψαῦδτερος 'royal' on the model of wa-na-ka 'king'; ru-KI-to: Λύκτος on the model of the ethnic ru-KI-ti-jo).

14Ibid., p. 91.
The detailed rules on the preceding page lead, for example, to μόρ-Φόσ being written ko-wo, but to the expanded spelling of ννα-φεσ as ka-na-pe-u. This omission of final -ς, noticed also in the genitive singular of certain nouns (since it would not differ from the dative, e.g., in the first declension) would seem to have had an undesirable effect on intelligibility, but in comparison with many modern alphabets and old Hebrew, in which the vowels were not even written, it does not seem too extreme.

Nouns ending in -u formed their genitive singular by adding -wo; those ending in -o formed theirs by adding -jo (j and w are both semi-vowels). In Greek, this gives us the endings -η[F]ος and -οίο acceptable Homeric endings. They would indicate that Homer's language is really based on the old Mycenaean dialect, rather than on the Cypro-Arcadian, as well as on the Doric, Ionic, etc.

After these observations, Ventris was able to fix the identification of the vowels and semi-vowels. It remained to discover a consistent distribution of the consonant series, and to test whether the resulting transliteration, when applied to the texts, would yield complete and comprehensible Greek words.

The identification of pa-te and ma-te as πατήρ and ματήρ opened the series p- and m- and gave te-, characteristic of agent nouns (-τήρ) and of present participles (-οντες). The n- series resulted from the interpretation of the frequent words in me-no and me-na- as middle or passive participles. The series d- and s-
were given by the formula to-so-(de) or to-sa-(de), which Kober had construed as meaning 'total.'\textsuperscript{15} It did, coming out as τοσσοι· (δε), τοσσοι(δε). Finally, the $r$-series was found to represent both the Greek $ρ$ by te-re, nominative plural of the same agent nouns, and the Greek $λ$ by words such as po-ro=παλο: 'coli'.\textsuperscript{16}

Ventris discovered, to his surprise, that it would be necessary to allow a separate consonant series for the labiovelars $x^W$, $γ^W$, and $χ^W$. The sign $ge$ definitely represented an enclitic. It could not be read te (Greek τε), because its alternate $go$ seemed to anticipate Greek forms with πο (e.g., Αi-ti-jo-go = Αθεσπος).\textsuperscript{17}

When this distribution of vowels and consonants was applied to the matter as a whole, a most interesting list of place-names resulted (e.g., Ko-no-so (Κνωσός), Pa-i-to (Φαίστος)).

With no bilingual or other external aids to decipherment available, the validity of a proposed transliteration can only be tested by applying it to the material as a whole. And Ventris found that his proposed transliteration stood the test. A majority of the words "read" turn out in recognizable Greek dress. It seems indeed that the results so far yielded by this transliteration are too numerous to be attributed to pure coincidence. In his article Ventris lists no fewer than 223 Greek words easily recognized.

\textsuperscript{15}See page 21 of this thesis.

\textsuperscript{16}Ventris and Chadwick, p. 89.

\textsuperscript{17}Ibid., p. 90. See pages 93-95 of this thesis for a criticism of this viewpoint.
from the Linear B script. He lists the grammatical variations between masculine and feminine which his readings furnished. Greek declensions were derived from the proper names; occupational names yielded declensions corresponding entirely with the three Greek declensions and their variations for certain stems. Whole sentences appeared on some of the tablets, each word readily intelligible. Indicative and participial forms of the verb, genders and cases of the adjective followed. It would be almost impossible for any system of values, however uncertain in its outlines, to yield a comparable mirage of Greek forms if the language was in fact of a totally different affinity. Someone has computed the mathematical odds as two hundred billion to one.

Some of the more interesting Greek words yielded by Linear B follow:

- i-je-ro-wo-ko (ἱεροφόρος) - priest
- to-ko-so-wo-ko (τοξοφόροι) - bow-makers
- to-ko-do-mo (τοιχοδόμοι) - masons
- da2-ru-to-mo (δρυτόμοι) - woodcutters
- do-e-ro / -jo (δόξελος, -οίο) - bondman
- a-ke-ro (ἄγγελος) - messenger
- wa-na-ka-te-ro (Ρανὰκτέρος) - king's
- ra-wa-ke-si-jo (λαφάγέσιος) - commander's
- e-re-ta (ἐρέται) - oarsmen
- ai-ki-pa-ta (αἰγιπάτας) - goatherd
- ka-ke-u (χαλκεύς) - smith
wo-ne-we  PoινήFei  wine dealer?
1-ja-te  ιατήρ  physician
tu-ka-te-re  θυγατέρες  daughters
po-me  ποιμήν  shepherd
te-ko-to-ne  τέκτονες  carpenters
to-so-de ka-ko  τοσσόδες χαλχός  total in bronze
e-ke  έχει  he has
e-ko-te  έχοντες  having
a-pe-o-te  ἀπεόντες  are absent
o-pe-ro-te  ὀφελοντες  owing
de-do-me-na  δεδομένα  given
o- di-do-si  δ διόνοσι  drutόμοι  what the woodcutters give
da2-ru-to-mo
o- de-ka-sa-to  δ δεχόσατο Α.  which A. has received
A-ko-so-ta
o- a-ke-re-se  δ δικήςε  άγρήσει (άγρήςει)  what he has taken (or will take)

If the preceding transliterations seem a little tenuous from the eccentricities of the Greek, Ventris would add the following observations:18

(1) It is the Greek language at a stage 1,000 years older than Plato's (a difference in time comparable to that between Beowulf and Shakespeare), and separated from classical times by a Dark Age of barbaric invasion. Perhaps, too, it is mixed with some words or forms currently in use in the non-Greek languages

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18 Ibid., p. 90.
with which the people were in contact.

(2) The archives are exceedingly abbreviated accounts, not literature. The names they contain could be pre-Hellenic.

(3) Many of the baffling features of the orthography may be due to Linear B being a script imperfectly adapted to Greek from the conventions of quite a different language.

(4) The tablets examined contain all the passages most crucial as linguistic evidence.

Linear B may be considered "cracked." Eventual complete decipherment seems probable. It is opportune to examine now the consequences which follow upon this decipherment, one of the greatest archaeological feats ever accomplished.
CHAPTER IV

THE CONSEQUENCES OF THE DECIPHERMENT

ON HOMERIC SCHOLARSHIP

The decipherment of Linear B is a discovery whose effects on Homeric scholarship promise to be far-reaching. A careful study of these effects as so far experienced brings a treatment of the deciphering to a fitting conclusion.

A. MYCENAEAN CIVILIZATION

Perhaps the most immediate problem raised by the discovery that the Linear B tablets are written in the Greek language is the problem of how Greek came to the island of Crete and, as all evidence indicates, became the official and commercial language of Crete for a period of approximately fifty years. While Linear A tablets are found throughout the other cities of Crete and date from about 1800 or 1750 B.C.,\(^1\) Linear B tablets are found only at Knossos and only from between about 1450 to 1410 or 1405 B.C. All the official records of the Minoan palace for that period are in the Linear B script.

\(^1\)Dow, "Minoan Writing," p. 113.
Before the decipherment of Linear B, Nilsson advanced the opinion that the language of the tablets originated in Crete and that the tablets found on the Mainland were imported from Crete.2 This view can now be safely ruled out, since the language of the tablets has proved to be Greek, not a Cretan tongue; and the discovery of many more tablets at different places on the Mainland precludes the possibility of importation as well as does the content of the tablets. At the time of Nilsson's writing (1950), the only tablet discoveries of importance on the Mainland were those of Blegen at Pylos. It is expressly because no tablets had been found at other sites that Nilsson proffered his opinion.3 But with the subsequent findings of Linear B tablets at Mycenae and at Thebes, the premises for his conclusion are no longer valid.

Evans was of the opinion that Crete once dominated the Mainland and introduced the linear script there, adapting it to the different exigencies of the Greek tongue.4 This view has been discredited on archaeological grounds. A large body of opinion, including Blegen and Wace, holds that the civilization on the Mainland was a spontaneous adoption of the Cretan culture by the Greeks who had lived there for some time.

3Ibid.
4Ventris and Chadwick, p. 84.
If we accept the latter view, the introduction of Linear B from Crete, or what is much more likely, the adaptation of the Cretan Linear A signary, could have come through the regular commercial dealings between the two locales. Perhaps it is better to hold that a good number of Cretans moved to the Mainland (whether as independent colonists, as slaves, or as merchants) and there made the adaptation themselves. But the Greeks seem to have received the Phoenician alphabet without many people living among them who used it.

Another theory, which would nicely account for the presence of Linear B in Crete claims that the Achaeans, adventurous as their legends have indicated, sought their glory in a series of conquests which included the Aegean isles, Crete, and finally, Troy. Recently discovered Hittite records of wars in Asia Minor refer to a people known, seemingly, as the Achaeans, fighting there during the fourteenth and thirteenth centuries. Now if the Achaeans were a people of conquest, and gained the ascendancy over Crete, say, in the middle of the fifteenth century, and ruled there at Knossos until the city was destroyed fifty or so years later, it is rather likely that the Greeks living in numbers in Knossos would have recognized the value of literacy, adapted the Minoan system to their own language, and brought it home with them.

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6 Dow, pp. 117-118.
This latter opinion seems to agree substantially with the historical account of the beginnings of Greece and the Heroic Age in Bury's *History of Greece.* Abundant evidence of Greek contacts at this period with Crete and with the wealthy East, from historical and archaeological sources, forms the basis for the author's conclusion that "this striking penetration of the East suggests enterprise and power and there is some reason to believe that it was not the work of independent adventurers." Also writing before the decipherment of Linear B (which he thinks might be a language akin to Cretan), the author hazards the guess that the languages of the Mainland tablets and the Knossian tablets are identical. The Achaeans conceived as an adventurous and powerful group of conquistadores brings up the next question to which the deciphering of Linear B has offered an answer, the question of the lives and habits of Homer's Achaeans.

The discovery of so many inscribed tablets in the cities of Mycenae, Pylos, and Thebes seems to disprove very effectively any theories about the state of culture in the late Mycenaean world which picture the Achaeans as a group of illiterate and adventurous warriors who imposed their domination through a series of ruthless, viking raids. Their orderly methods of administration, to which

8Ibid., p. 43.
9Ibid., p. 41.
the tablets testify, do not fit well in such a view. The tablets contain records of grain transactions, livestock transactions, sales of chariots, wheels, and other accessories. They were kept, probably, in wooden chests—the Mycenaean equivalent of a file case.10 Illiterate adventurers do not act in this manner.

When loquacious Nestor set off from Pylos to join the host at Aulis, he must have left a trusty steward in charge back home to handle all the business and keep the accounts up to date. Pylos was the first excavation on the Mainland to yield written tablets, although Mycenae and Tiryns had been excavated long before. But later finds at Mycenae prove that Agamemnon was probably a good administrator, too. Someone, at any rate, was keeping the palace records in the leading city of the age.

But were recordings on tablets the only writing of the Homeric heroes? The only remains, with the exception of a very few inscribed vases, are more or less official records. The lack of other extant material, however, can well be explained by the fact that these Linear B tablets themselves would not have survived the ages had they not been baked in the intense heat of a palace fire, and thus preserved. Other writings in wax or other material which survived the palace fires would have disintegrated long ago. The absence of all Linear B writing besides official accounts, therefore, does not prove that this was the only kind of writing used; still, it does serve to open the

10 Blegen and Kourouniotis, p. 569.
question of whether or not the literacy of the Greek mainland in
the Mycenaean age was what is called Special Literacy, i.e.,
writing invented and used for specific purposes.

There are many factors which seem to indicate that Special
Literacy was the rule. Among these, of course, would be the
difficulty of the eighty-eight signs of the syllabary, and the
lack of facile writing material. Clay seems to have been used
exclusively. Even when clay is soft, it is not the easiest sub-
stance on which to write. Papyrus, the paper of the Egyptians,
seemingly was never imported before classical times.

But there are other, more cogent arguments in favor of a
very restricted literacy. Dow, of Harvard University, in his
thought-provoking "Essay on Literacy,"¹¹ lists three arguments:
the homogeneity, conservatism, and complexity of the signs.¹²

Homogeneity is a cogent argument in this case. For there
is almost complete uniformity between Knossos, Pylos, Mycenae, and
Thebes in the formation of the signs and the spelling of the words.
This has been proved by comparative illustrations.¹³ Since Linear
B was used at Knossos before 1400 and on the Mainland still after
1200, the most exact correspondence in such complex signs is
nothing short of astonishing. Even an introductory book on Greek

¹²Ibid., p. 122.
¹³Ventris and Chadwick, p. 85 (figure 1).
palaeography will indicate and give examples of the variations in Greek script down through the years. A cursory study will suffice to show that Greek writing (i.e., in the Phoenician alphabet, a much simpler method of writing) did not remain as constant for fifty years as the very complex Linear B did for more than two centuries. In addition, the very composition of the tablets is striking in its homogeneity. Ventris writes, "The more one looks at Linear B, the more one is struck by the stereotyped nature of the tablets, going far beyond mere identity of signary or language. Their similarities imply continuous operation of a scribal routine having a common origin and identical milieu, and imply, too, that this routine had already been in operation for some time before the Knossos tablets were written."¹⁴ If literacy had been widespread, such homogeneity could never have been maintained.

It is indeed strange that the inventors of Linear B adopted so many Linear A signs with such exactitude of transcription. The later Greeks did not copy the Phoenician letters so slavishly. This would be fairly well explained, however, if a semi-professional group of merchants or scribes had consciously adapted the Linear A to their own needs, viz., for official records. If official work was all they had to do, a great degree of stereotyped conservatism could be expected.

Another argument against popular literacy arises from the

¹⁴From a letter of Ventris to Dow, quoted by Dow, p. 122.
complexity of the signs. If this signary had ever become widespread among the unprofessional populace, these complicated signs, so difficult to write (anyone who has tried to reproduce them can testify to that), would almost certainly have been simplified. As Dow remarks, "they fairly cry out for simplification."¹⁵ But, as the tablets prove, the Mycenaean Greeks retained the elaborate, delicate, fussy signs to the very end. And, as they gave no indication of an incipient development or simplification, we might well conjecture that if the art of writing had not been wiped out in one fell swoop, to which Blegen claims archaeological evidence points,¹⁶ Linear B writing would have remained just as exact for many more years.

Some indications of writing among the nonprofessional class, however, do appear in some of the excavations. Similar tablets were found in the home of a wine merchant in Mycenae--still a commercial man, certainly, but probably not an official scribe; also, brief inscriptions are painted on vases found at Thebes, Tiryns, Orchomenos, and Mycenae.¹⁷ In addition, there are a couple graffiti (scratchings) on some sherds. Yet, when these inscribed objects are compared in number with the inscribable objects which bear no indication of writing, literacy among the common people

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¹⁵Dow, p. 122.
¹⁶Blegen and Kourouniotis, p. 570.
¹⁷Dow, p. 120.
and lower classes appears to be more the exception than the rule.

Perhaps the truth will, as usual, appear on middle ground. Handwriting, experience proves, changes with familiarity. When we first learn to write, our letters are scrawly, lopsided, very ill-formed. Then, after years of writing, when the art becomes second-nature to us, there is a much greater uniformity and precision in our writing. Then, as we grow older and have to do all kinds of writing—memoranda, lecture notes, etc.—our familiarity with writing tends to breed contempt, and our hand gradually becomes more or less illegible, or at least imperfect. The same pattern can be observed in the writing of any people over a period of centuries. When they first learn the art of writing, their characters are formed with hesitancy and general lack of skill. As they become more acquainted with writing, see it frequently and write more themselves, their style becomes more uniform and precise. Through the course of years, however, their proud and careful uncial writing will become cursive and free.

Applying this analogy to Linear B, we may safely say that we are observing it in its middle stage. Ventris has already testified that it must have been employed long before our first tablets appear.\(^{18}\) And as their writing was still most precise and exact up to the end, and since it was lost not through decay or any natural means, but by destruction and sack, it had not become

\(^{18}\)See page 46 of this thesis.
overfamiliar. Since this overfamiliarity, then, which generally comes after a couple centuries only, is wanting in Linear B, the most plausible explanation is that Linear B never became popular enough to engender such familiarity. We have no cursive Linear B.

So one may with reason hold that the literacy of the Homeric Age was a Special Literacy, reserved for the purpose of accounts and records, for which quite a few scribes seemed to have been employed. Careful palaeographical study of photographs of the tablets reveals many different hands. This is concluded from slight variations in form of the signs, methods of ruling the tablet, spacing of lines, height and width of signs, arrangement of the text on the tablet, depth of incision, and, as the tell-tale clay clearly reveals, the varying sequence of strokes in the formation of different signs. From photographs of the tablets at Knossos, I have been able to distinguish several different hands. Bennett lists six different hands on the Mycenae tablets, and thirty on the Pylos tablets. All palaeographical and archaeological evidence, then, is against the hypothesis that Linear B was used generally for any purposes other than business accounts and documentary records.

The restriction of Linear B to Special Literacy does not imply, however, that none of the common people, or nobles, for that matter, were literate. The mere discovery of a vase with inscriptions among the remains of a private house might indicate that some were literate. I do not think that it would necessarily
demand, however, that the person who kept it in his house was literate, on the grounds that he would have no use for an inscribed object unless he could read it; although this is the opinion of no less an authority than A. J. B. Wace, 19 I do not see the cogency of the argument. A man seemingly might think the writing the equivalent of an interesting design, or like to have an inscribed article around his house as a source of curiosity and pride. But it is equally likely that some, at least, of the nonprofessional class were literate.

So one may conclude that the Homeric heroes certainly knew of writing, and, at least those from the greater centers of the Mycenaean civilization, had the opportunity of learning how to read and write. Many of them probably did learn. Known patrons of the finer arts of poetry and dancing, such as Menelaus, very likely would have made themselves acquainted with the art of writing, unless, of course, that art was looked upon with disdain. But judging from the Homeric view of women, children, slaves, and common workmen and soldiers, a most humanistic view, the art of writing was more probably honored than contemned.

It is likely, too, that the σύματα λυγρά which Proteus gave Bellerophon to bear to his would-be host were actually the syllabic signs of the Linear B script. This passage in the Iliad, 19

as mentioned above, has seen variant interpretations. One old scholiast understood the signs as real writing: "σήματα μὲν τὰ γράμματα, πίνακα δὲ τὸ λεγόμενον πινακίδιον"; another took them to be writing only in the wide sense: "γράμματα κατὰ λόγον φιλοσοφον, ἐπεὶ εἰσὶ σημεῖα φωνῶν ἡ νοημάτων ἡ πραγμάτων. οἱ δὲ κλήρον ἐσημὴντο "δὲ μὴν ἐπιγράφας" [Iliad 7.175]. ἀτοπον γὰρ τοὺς πᾶσαν τέχνην εὑρόντες οὐκ εἰδέναι γράμματα. τινὲς δὲ, ὡς παρ' Ἀιγυπτίως ἰερὰ χρῆσιν, δι' ὅν ὁπλοῦν τὰ πράγματα." His ἰερὰ χρῆσιν refers undoubtedly to the Egyptian hieratic script.

As might be expected, Wolf in his Prolegomena took this passage as one of the anachronisms in Homer which proved that Homer could not have written the entire Iliad, although from the start Doederlein opposed him by maintaining the πόλλα could never refer to many tally symbols, but only to many, say, slanders, as is reported by Paley. Paley's own opinion in the matter is that the signs represented true writing, a position also upheld by Seymour, who claims that the reference to writing is "distinct enough," and Leaf, who goes so far as to postulate a syllabary

20 See page 11 of this thesis.
21 Scholia in Homeri Iliadem, ex recensione Immanuelis Bekkeri, (Berlin, 1825), p. 184 (ad 1.168 VI).
22 Ibid.
24 Thomas Day Seymour, Life in the Homeric Age (New York, 1907), p. 35.
From the analysis of the possibilities of literacy among the Mycenaean Greeks, it seems safe to say that Homer actually, if vaguely, referred to real writing in this passage of the Iliad. That Homer's poetry is not mere fiction, but rests on firm historical foundation, is a fact proved again and again.

Concerning the religion and mythology of the Mycenaean, on the other hand, can anything be learned from the decipherment of Linear B? Professor Nilsson proposed a theory as early as 1933 that the majority of Greek myths were already current in the fifteenth to the thirteenth centuries. It was his opinion that the Mycenaean Greeks incorporated at least some elements of the existing Minoan mythology and cult into their own, so that the resulting religion was a fusion of the two. Some relevant facts are revealed by the decipherment of Linear B.

A great number of names of Greek deities with whom we are familiar occur at Knossos and Pylos on tablets from 1450 to 1200 B.C. This certainly confirms Nilsson's view about the antiquity of Greek mythology. A tablet from Knossos, KN.V52, lists the

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27Nilsson, pp. 3-5.
28See the page immediately preceding the bibliography of this thesis for the manner of identifying tablet references.
following names:

A-ta-na-po-ti-ni-ja  'Αθάνα Πότνια
E-nu-wa-ri-jo  Ενυφλιος
Pa-ja-wo  Παιδών
Po-se-da-(o)  Ποσείδων

The last name recurs on KN.X5560 and on PY.Tn316, and PY.Fn187.18.

PY.Tn316 also contains the following:

Di-we  Διφεί
E-ra  Ερα
Po-ti-ni-ja  Ποτνία
Di-u-ja  Διφιά
E-ma-a2  Εμμα
I-pe-mé-de-ja  Ιψιμηδεία (?)

Other names are found elsewhere:

PY.Xa102:  Di-wo-nu-so-jo  Διπονυσίο
PY.Gg705.1:  E-re-u-ti-ja  Ερεύθια
PY.Gg705.2:  Pa-si-te-o-i  Πασιτεοῖς
PY.Fp13.3:  A-ne-mo-i-je-re-ja  Άνεμων Ἱέρεια

Webster states (December, 1955) that the following names have recently been deciphered: Artemis, Areia, Erinys, Trisheros, Daidalos, Teiresias, Themis, Diuies.29

Some details about the worship these gods received in Mycenaean times are furnished by the Linear B tablets. Some tablets are records of seemingly sacred transactions, as, for instance, lists of contributions for temple worship (perhaps PY.Jn829).

From these various tablets, we can glean the following knowledge about the worship of the Mycenaean; it will bear comparison with corresponding Homeric concepts of the same worship.

Eleuthia is mentioned in connection with pots of honey (?) at Amnisos. This is consistent, as far as location is concerned, with the statement about her in the Odyssey, in which Odysseus tells his unsuspecting wife that he had seen Odysseus on Crete: 31

The winds, too, appear to have received some sort of dulia in Mycenaean times. In the quoted Knossos tablet KN.Fpl3, the phrase ἄνέμων ἱέρεια occurs, meaning either a priestess of the winds or a 'priesthood of the winds.' At Pylos (FY.Tn316), offerings were made to a deity whom some equate with Tripator, a wind god. The tablet is read Ti-ri-se-ro-e, or Τρισηροε; but Heinberg has incorporated this new evidence to bolster his thesis that Triseros and Tripator are identified in Greek mythology. The prayers and offerings to wind-gods among the Mycenaeans reminds one of Homer's pathetic portrayal of Achilles praying and sacrificing to Boreas and Zephyr for wind to fan the pyre of Patroclus: 33

30 Ibid.
31 Odyssey XIX.186-189.
32 E.g., Bengt Hemberg, "ΤΡΙΠΑΤΩΡ und ΤΡΙΣΗΡΩΣ" Eratos, LII (1954), 179.
33 Iliad XXIII.192-198.
The lengthy tablet PY.Tn316 records the following interesting details:

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i-je-to-qe po-si-da-i-jo a-ke-qe wa-tu-de
iéseówn te Posidai̱ph åge te Păstûde

do-ra-qe pe-re- po-re-na-qe a-ke
ôôra te fêre fôroend (? ) te åge

GOLD/CUP 1 WOMEN 2 qo-wî-ja [do-e-ja] ko-ma-we-te-ja

i-je-to-qe pe-re-kú2-jo 1-pe-me-de-ja-qe di-u-ja-jo-qe
iéseówn te pelekuvioi (?) 'Ifeumbeîq te DiFeîq te

do-ra-qe pe-re- po-re-na-qe a-ke pe-re-kú2 GOLD/BOWL 1 WOMAN 1
ôôra te fêre fôroend te åge pelekvun

i-pe-me-de-ja GOLD/BOWL 1 di-u-ja GOLD/BOWL 1 WOMAN 1
'Ifeumbeîq

e-ma-sî2 a-re-ja GOLD/CUP 1 MAN 1
'Ermuq 'Areiq

i-je-to-qe-dí-u-jo do-ra-qe pe-re- po-re-na-qe a-ke
iéseówn te DiFeîq ôôra te fêre fôroend te åge

di-we GOLD/BOWL 1 MAN 1 e-ra GOLD/BOWL 1 MAN 1
DiFeî 'Erq

di-ri-mi-jo di-we-i-je-we GOLD/BOWL 1 MAN 1
Drîmîq (?) DiFeî

(lines 11 to 16 vacant)

po-ro-wî-to-jo
proFîtoîo
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Obviously, the tablet deals with gifts to certain deities, but the exact interpretation is not clear. Since φέρε and ἄγε probably mean 'bring' or 'bear,' it seems likely that the listed articles were either gifts to the deities or persons and commodities in temple use. The latter seems preferable in order to explain the MEN and WOMEN ideograms, unless the meaning is that gifts were received or to be received from e.g. one man, or one woman, or two women. A temple of Poseidon in the city was to receive a golden goblet, perhaps like a chalice; double axes seem to be the contribution to the worship of Iphimedia, if that is how ἱ-πε-με-δε-ja is to be read, as well as a bowl of gold. It seems that

34Furumark ("Agäische Texte in griechischer Sprache," Erana, LII (1954), 51-53) gives a reading of this tablet. I have changed his reading slightly: his qę's I have changed to te's, for reasons offered on pages 93 to 95 of this thesis. Likewise, I have inserted the readings πελεχυοι (?) and πελεχυν in the proper places, as suggested by others, although Furumark was not confident enough of the reading to accept it. I have also divided the word φερε-φορενδ into φέρε and φορενδ, although the meaning of the second is not clear, both because the parallel construction demanded such a verb as φερε right here, and because the new edition of The Pylos Tablets (1955) shows the words divided in transcription, although not in the reproduction of the tablet.
di-u-ja (Zeus?) or di-we received a gold bowl, as well as Hera, mentioned in the same line, as is fitting from their relationship in mythology. A gold chalice was also the lot of Hermes. Whether a-re-ja is a separate deity, perhaps Ares, or merely an epithet of Hermes, is not clear. The identification of di-ri-mi-jo is also uncertain. It seems to be a special title of di-we-i. Furumark reads Δρύμιος, but the change of vowel violates Ventris's Assumed Rule 10,35 although it gives an acceptable reading, viz., "Zeus of the Oak (or Oak Grove)." In the next line, Furumark reads pa-ki-ja-si as Σφαγιασι, a god or goddess (connected with Sphacteria?), but I wonder if it may not be taken as a form of a word related to Σφαγιόν, perhaps Σφαγιασι, 'with sacrifices.' Po-ti-ni-ja was taken by Furumark to refer to Demeter; perhaps it could as well refer to Athena, who is called Αθένα Πότνια in KN.V52. Perhaps the do-po-ta refers to Demeter. In confirmation of Furumark's view, however, is tablet PY.En609 which reads:

pa-ki-ja-ni-ja to-sa da-ma-te  
Σφαγιανία τόσοι Δάματηρ  
to-so-de te-re-ta e-ne-e-si  
tοσοοίδες τελεσται ἐνέσειν;  

Σφαγιανία is probably the priest of Demeter at Sphacteria.

Another tablet recording, one suspects, gifts to certain deities is PYCn3, reading:

jo-i-ji-si me-ta3-na e-re-u-te-re di-wi-je-we qo-o

35See page 34 of this thesis.
Another tablet, PY.Fn187 lists the following temple servants:

ka-ru-ke  καρύκειο herald
o-pi-tu-ra-jo  ὁπιευραῖο doorkeeper (janitor?)
i-je-re-u  ἱερεὺς priest

These tablets, therefore, seem to indicate, at least, what kind of gifts were actually presented to the Mycenaean gods and goddesses. It is not surprising that we find a heifer or a bull offered to Zeus, and that axes are associated with the worship of one or another of the deities. When some idols and axes were found at the Mycenaean sanctuary at Asine, Nilsson gave his opinion that "... it is very tempting to think that this head and this axe are the earliest representations of Zeus, the Greek god of thunder." It is rather likely that they were. Axes, especially, have long been associated with mythology, as many Minoan frescoes indicate.

Chalices and cups of gold, and golden bowls, also seem to have been the objects of offerings. Neither is this strange, in light of the frequent presentation of such articles as gifts from one man to another, or from a host to a guest, in the Iliad and the Odyssey. And the deities who were the object of these recorded offerings, were, it seems, predominantly the gods and goddesses of Homer.

Other tablets dealing with deities seriously tempt one to

hazard other comparisons between Mycenaean mythology as revealed by the tablets and Mycenaean mythology as revealed by Homer. But since the readings of these tablets have not proved satisfactory, their exact interpretation must still remain uncertain. But the occurrence of many familiar names of Greek deities on these tablets seems sufficient to establish the hypothesis that many of the later Greek myths date back at least to 1450 B.C., and perhaps even earlier. But the question of the Greeks fusing their own cults with the existing Minoan ones still remains to be solved. No relevant data is afforded by the decipherment of Linear B except that the fusion must now be dated several centuries earlier than was commonly supposed.

Closely allied to worship of deities in Greek religion and mythology is the honor and commemoration given the great heroes of the past. The decipherment of Linear B gives similar testimony to the great antiquity of the traditional heroes. Striking names occur on many of the tablets:

<table>
<thead>
<tr>
<th>Tablet</th>
<th>Name 1</th>
<th>Name 2</th>
<th>Name 3</th>
<th>Name 4</th>
<th>Name 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PY.Fn79.2:</td>
<td>A-ki-re-we</td>
<td>'Αχιλλές</td>
<td>Achilles</td>
<td></td>
<td></td>
</tr>
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<td>PY.Vn130.4:</td>
<td>Ai-ki-e-we</td>
<td>'Αιγίες</td>
<td>Aegeus</td>
<td></td>
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</tr>
<tr>
<td>PY.Np973:</td>
<td>Ai-wa</td>
<td>Αίτας</td>
<td>Ajax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PY.Fn324.4:</td>
<td>A-ka-ma-jo</td>
<td>Αλκμαίων</td>
<td>Alcmaeon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PY.An192.1</td>
<td>A-pi-s2-ro</td>
<td>Αμφιάλος</td>
<td>Amphialos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KN.As1520.2:</td>
<td>A-ta-no</td>
<td>Αντανωρ</td>
<td>Antenor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PY.Jn320.6:</td>
<td>A-ti-pa-mo</td>
<td>Αντιφάμος</td>
<td>Antiphamus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PY.Ea36:</td>
<td>Wa-tu-o-ko</td>
<td>Ραστύχος</td>
<td>Echemochus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KN.Uo478.18:</td>
<td>E-ke-me-de</td>
<td>Εξεμήδης</td>
<td>Echemedes</td>
<td></td>
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</tr>
<tr>
<td>PY.An39r7:</td>
<td>E-ni-ja-u-si-jo</td>
<td>Ενιαύσιος</td>
<td>Eniausius</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KN.X57:</td>
<td>E-u-da-mo</td>
<td>Ευδαμος</td>
<td>Eudemus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

37Ventris and Chadwick, p. 94.
Before the decipherment of Linear B, it was commonly held that Homer received the majority of his characters from tradition as legendary figures, portraying them, perhaps in a different vein, as only he could do; while some few characters he invented himself.

Such a character was Hector. J. A. Scott has a chapter in The Unity of Homer entitled "Hector," in which he states that both the name and the character of Hector are an invention of Homer.38 Pointing out that the Greeks in their bardic lays gave Greek names to the Trojans because the names of the latter did not always come down to them through tradition,39 he states that "Hector, in name, dress, character, and all, is a Greek loaned to the enemy,"40 and that "Homer was the first poet to draw the portrait of Hector and

38 John A. Scott, The Unity of Homer (Berkeley, Calif., 1921), pp. 205-239.

39 Ibid., p. 225.

40 Ibid., p. 226.
to give him a name, a Greek common noun, and make it a proper name, the name of a hero." The common noun, of course, means a 'prop' or 'stay.'

The Linear B tablets do not offer any solution to the question of whether or not Homer invented the character of Hector, but they do point out one of two things: either Homer received Hector and most of his other characters from tradition, or he gave his invented characters common or historical names. The existing tablets, however, do not give enough information about the persons listed with the familiar names to judge of their social position in most cases, nor is there hope of finding anything other than barest inventories among the tablets. There is no literature in Linear B. The answer to the problem, then, concerning the origin of Homer's heroes remains essentially hidden. The only light thrown on the subject by the Linear B tablets is the fact that such names as those listed above were common names in Knossos in the fifteenth century and at Pylos in the thirteenth.

We learn as much about the social structure of Mycenaean times from the decipherment of Linear B as we do about the religious and mythological habits of the people. The social order of this period, both at Knossos and at Pylos and Mycenae, is one of royalty, as can be deduced from the very frequent occurrence of

41Ibid., pp. 238-239.
the word pаз-si-re-u (βασιλεύς).\textsuperscript{42} Twelve kings are mentioned at Pylos, reminding readers of Homer of the twelve kings of the Phaeacians with Alcinous as the thirteenth:

δώδεκα γὰρ διὰτὰ δίχοις ἀριστερῶς βασιλέας ἄρχον κραίνουσι. τρισεξαδεκατός δ' ἐγὼ αὐτός.\textsuperscript{43}

In a recent BBC talk, Professor L. R. Palmer of Oxford University made the statement that extreme centralization was the keynote of the Mycenaean society mirrored in the Pylos tablets.\textsuperscript{44} From the recurrence of many place names on the Pylos tablets, we can conclude that Pylos was the center of transaction and the administrative center of a large stretch of the Western Peloponnese. But this does not mean that the ruling king was an absolute monarch. Rather, there is a striking analogy between Mycenaean society and the feudal society of medieval Europe, an analogy romantically described a half-century ago by Andrew Lang,\textsuperscript{45} and now substantiated by the Linear B tablets.

Palmer holds that the ἄνδρας and the λαβρυγήσιας have two distinct offices, the former being the true monarch, the latter merely the war-leader. This is of course the distinction between the

\textsuperscript{42}E.g., PY:Fn50.1, AN398, Jn431, Jo438.20, Jn601; KN.As1516.

\textsuperscript{43}Odyssey VIII.390-391.

\textsuperscript{44}Leonard R. Palmer, "The Revelations of Pylos," The Listener (December 1, 1955), 935.

\textsuperscript{45}Andrew Lang, Homer and His Age (London, 1906). The chapter entitled "Loose Feudalism" speaks of Achilles "renouncing his fealty" and Agamemnon demanding gifts of atonement for "surquedry" (pp. 51-72).
Scandinavian king and hird, the Germanic king and his vassal, the duke. Confirming this opinion is the very etymology of the word duke, from the Latin dux, 'leader,' corresponding to the λαβέργεσις of Mycenaean times.

Webster observes that Pylos tablets also record the existence of a council of seniors and a palace. Very likely, this was the very palace of Nestor in which Blegen discovered the tablets. But would the council of seniors be more similar to Priam's trusty advisors at Troy?

οἱ δὲ ἀμφὶ Πρίαμον καὶ Πάνθον ἦδὲ θυμοῖτην Ἀδμον τε Κλυτίον θ' Ἰκετάσονα τ', ὅχιν Ἀρης Οὐκαλέγων τε καὶ Ἀντήμωρ, πεπυμένου ἄμφω. ἢτο δημογέροντες ἐπὶ σχαῖς πύλης, γῆραῖ δὴ πόλεμοιο πεπυμένοι, ἀλλ' ἀγορηταί ἔσθοι. τεττίγεσσιν ὑοίκοτες, οἱ τε καθ' ὅλην δενδρέω ἐφεξῆμενοι ὁπα λεηρίδεσαν ἵσει. τοιοὶ ἄρα Τρῶν ἡγήτορες ἤντ' ἐπὶ πύργῳ. or would they be the typical assembly of the people such as Tele-

machus calls together in the Odyssey?

ἀὖ ψα δὲ κηρύκεσσι λιγυκόγγοις κέλευε κηρύσσειν ἄγορήνδε κάρη κομῶντας Ἀχαιούς.

On certain Pylos tablets, the name of a king, according to the experts, appears between allocations of bronze. This might mean that a king was actually on the spot supervising the collection,

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46 Webster, p. 11.
47 Iliad III.146-153.
48 Odyssey II.6-7.
as Webster suggests,\(^{49}\) or that the transactions took place in his reign, or even merely in his palace, or with his approval. In the \textit{Iliad}^{50} a king stood by while the men brought in their crops:

\[\text{βασιλεὺς ὁ ἐν τοῖσι σιωπῇ σχῆπτρον ἔχων ἔστηκε· ἐπ' ὄγμοι γνησίουνος κηρ.}\]

but there does not seem to be any need to suppose that this was the regular custom, nor that the name of a king between the transactions on the tablets indicates such a supervision. The name of the king might signify that the palace was the beneficiary of the allocation, although the indirect object is specified. Quite likely, the person to whom the amount of bronze was given was a servant of the king.

It seems that the king, as is befitting, was a person of honor among the people. It is interesting to note that at Pylos, the word \textit{ἐλεύθερος} appears on a large number of tablets recording transactions. It does not refer, as one might at first suppose, to any freedom that might have been enjoyed by the populace, but merely records that the king or some other person of importance ordered some work done for him, \textit{e.g.}, by a bronze-smith, and did not have to pay for it. Perhaps the bronze-smiths did not care to charge their king for services rendered. This is shown by a typical example in a tablet from Pylos, \textit{PY.Na334}, reading:

\[^{49}\text{Webster, p. 11.}\]

\[^{50}\text{Iliad XVIII.556-557.}\]
Some remarkable revelations concerning royal households appear on the tablets. One recalls that in the Odyssey, both Odysseus and Alcinous have fifty slave-women each. But at Pylos, according to the tablets, Nestor seems to have had as many as 1500 women, boys, and girls in his employ. This fact is gathered from the number of names listed in classes Aa and Ab (MEN and WOMEN tablets according to the Bennett classification). That they are slaves in royal service is deduced by Webster51 from the ethnics which follow their names: women of Knidos, Crete, Cythera. One might compare the similar ethnics occurring in the Iliad and Odyssey. Besides these ethnics, the women are described and classified according to their handiwork, as spindle-women, carding-women, flour-women, bath attendants. If this deduction is correct, namely, that these women, mostly slave women, are on the staff of the royal palace, then the reality of the Mycenaean age is even more heroic in its proportions than it is portrayed in the epics of Homer. It is easy to see how the palace of Knossos, over in Crete, with its labyrinthine passageways, would require great numbers of slaves for its maintenance, but this is not the case with Pylos. The palace of Nestor, if that is the building in which the majority of the Pylos tablets were found, is rather moderate in size, so much so, in fact, that it would hardly contain a hundred people,

51Webster, p. 12.
much less fifteen hundred. So at Pylos, either our calculation about these men and women being slave labor at the palace is entirely wrong, or they are merely field laborers in the king's or someone else's employ. Additional data must be forthcoming before anything more definite can be pronounced concerning this question.

Interesting questions are also posed by the decipherment of Linear B concerning the subject of private ownership among the Mycenaean Greeks. It has been suggested that the Greeks at this time lived in a sort of communistic society. A tablet from Pylos would seem to support this opinion (PY.Eb846):

\[\text{ai-to-jo-qo e-ke-qe o-na-ta ke-ke-me-na ko-to-na pa-ro da-mo ko-to-no-o-ko to-so-de pe-mo} \]
\[\text{Αἴθιος ἔχει τε ὁνατον κεκειμένας κτοινάς παρὸ δήμῳ κτοινοχοξ ἐς τοσσόνδε σπερμόν} \]

The word κτοινάς, occurring frequently on the tablets, seems to be a 'plot of land,' while ὁνατον, if that is the correct reading, might mean a 'lease.' Ventris translates the nearly identical PY.Epl46.9:52

\[\text{I-do-me-ne-ja te-o-jo do-e-ra o-na-to e-ke ke-ke-me-na ko-to-na pa-ro da-mo to-so pe-ma} \]

Idomeneia, servant of the god, has the lease of a fixed portion of ground on the community's land. So much sowing: ...

Very similar is the tablet PY.Eb297 which reads:

\[\text{I-je-re-ja e-ke-qe e-u-ke-to-qe e-to-ni-jo e-ke-e te-o ko-to-no-o-ko de to-to-na-o Ἡ-ke-me-na-o o-na-ta e-ke-e} \]

52 Ventris and Chadwick, p. 98.
which Ventris translates:53

This the priestess holds, and declares that the god has the true ownership, but that the plot-holders have the leases of the plots in which it is laid out.

These ἀρχαία are also held by common people: a ποιμήν in PY.Eo278, a συβώτας in PY.Eq59.

What are we to conclude from these tablets? Was the society truly communistic, or did the tablets merely record the belief of the people, that a god or honored king was the true lord of the land, while they, his humble servants, owned it "by his grace and favor." It seems that the society was in a true sense communistic as far as private ownership of land was concerned, if the tablets are the only means of judging. The fact that the tablets are in no sense literary, that they record merely the barest facts, that they do so in the most abbreviated manner possible, seems to preclude any reference to the belief or pious fancy of the people.

The question of communism among the Mycenaean Greeks has always been hotly debated, but because of the lack of evidence on either side, no compelling conclusion has been reached. Leaf always advocated a communal land-tenure among the Homeric heroes;54 Seymour held that there was much land in common, with grain land and fruit land in severalty, with absolutely no selling of land;55

54Leaf, I, 176, 366.
55Seymour, pp. 235-246.
Ridgeway argued persuasively for the existence of an "open-field" or "common-field" system of agriculture among the Mycenaeans; 56 while in modern times George Thomson, an avowed Communist, hopes to show by etymological and linguistic legerdemain, among other means, that communistic land tenure is the most fundamental social principle. 57 But Keller, realizing the lack of cogent evidence, claimed that trying to arrive at any conclusions in this matter was mere "intellectual exercise." 58

Nilsson points out, however, that we know from Homer that land was divided two ways, into κληροι and into τέμενη. 59 The κληροι were parcels of land allotted to individuals as their own personal property. The τέμενη were reservations set aside for the exclusive use of the king or a god. In the case of the king, the τέμενος was distinct from his own personal property. It was the remainder of what had been apportioned to individual owners; it was, in fact, undivided common land. Often in Homer 60 one reads that a grant of land was given to some particular hero in reward for outstanding services. Nilsson observes that this grant

60 E.g., Iliad IX.574; XX.184; VI.194.
was always made, not by the king, but by the people\(^6\) (cf. παρὸς ἀμφοτέρων of the tablets cited above). In the case of a god possessing the landed τέμενος, individuals could use parts of the land as their own by paying tithes. And that is precisely the meaning of PY.Eb297:

This the priestess holds, and declares that the god has the true ownership, but that the plot-holders have the leases of the plots in which it is laid out.

The evidence furnished by the Linear B tablets on the subject of private ownership among the Mycenaean Greeks is restricted thus far to land held in common. The tablets speak of τέμενος, of κτοίνα and ὑπάτα, but there is no mention of the κληρον, the parcels of land allotted to individuals as private property. Hence, since the argument from absence has little force in Linear B evidence due to the general scarcity of all such evidence, the only conclusion substantiated beyond a doubt by the tablets is that some land was held as community property, or that some τέμενος was the reservation of a god or king and let to individuals in leased plots. Although no evidence has yet appeared that there was true private ownership in Mycenaean times, this possibility is certainly not ruled out. But it is now definite from incontrovertible evidence that some land, at least, was common holdings.

It seems that Palmer makes too much of the use of the word ὑπάτα to express the holdings of leasers of community property

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\(^6\) Nilsson, Homer and Mycenae, p. 243.
when he emphasises the similarity of this word, meaning 'burden,' with the English word baron, likewise meaning 'a man of the burden.' It may well be true, as Palmer claims, however, that some of these leaders of land were warriors holding fiefs under obligation to render military service, except that a woman seems to have merited one. The ἱτοίναι, then, were probably the holdings of the common people, like the ποιμήν and the συβώτας mentioned.

It might be of interest to note the geographical location of the property of the Greeks. Many of the cities named on the tablets are cities and towns occurring in the Homeric epics; others with typical names can well be imagined as Homeric settlements. From the discovery at Knossos, besides the name of that city itself, the following place-names appear: Amnisos, the port of Knossos, reminding one of: στῆς ἐν 'Ἀμνισῷ δῆτε σπέος Εἰλέιθωίς; Phaistos, where the famous disc was found and where a palace comparable to that of Knossos was found, recalling:

κρητῶν δ' Ἰδομενεὺς δουρικλωτὸς ἤγεμόνευεν, ὁ Κνωσόν τ' ἔχον Γρύτυνδ τε τειχίσεσαν, Δόκτουν Μίλητον τε καὶ ἄργινόεντα Δύκαστον

62 Palmer, p. 935.
63 FY Ep#46.9. See page 67 of this thesis.
64 See Ventris and Chadwick, p. 89.
65 Odyssey XIX.188. See page 54 of this thesis.
near the spot where part of the fleet of Menelaus was wrecked:

ἔνθα Νότος μέγα κόμα ποτὲ σκιάσσων βίον ἤθεῖ
ἐς παστόν, μικρὸς δὲ λίθος μέγα κόμμα ἀποθεῖ. 67

Luctos, above mentioned; Tylisos, Itanus, Kudonia,

κοτή τ' ἐστιν, μέσῳ ἐν οἴνωπι πόντῳ
ἐν οἵ 'πετῶμεν τι μεγάλητορες, ἐν ὀὶ Κύδωνες 68

Over on the Mainland in Pylos, the following cities were named: Sphagia, Charadros, Rhion (probably Asine), Euripos, Hyperacria, Leuctron, Lousoi, Metapa, and Erchomenus (Orchomenus?), with only the last one mentioned by Homer. 69

Reading the Linear B tablets is like reading Homer's sources. Not only are many of the cities and towns familiar from Homer, but so are the commodities mentioned in the accounts. Bronze is perhaps the commonest commodity mentioned. It is used, among other things, for armor and chariots. Concerning armor, the word φόσσαβα occurs frequently, ἵνα is used at least once (KN.R0481), while a Knossian tablet (KN.J693) seems to indicate a corselet or bronze shirt. 70

66Iliad II.645-648.
67Odyssey III.275-276.
68Odyssey XIX.172, 176.
69Iliad II.605.
Chariots are frequently mentioned on the tablets:

Horse-chariots, painted crimson and with joinery work complete, supplied with reins. The rail is of fig-wood, with fittings of horn . . . (KN.Sd0405)

Chariots with joinery work complete, but no reins (KN.Sd0422)

Chariots of Kydonia, painted red and with joinery work complete. The tongue is of oak, and the rail of fig-wood with fittings of horn (KN.Sd0404.1)

It may be noted that there are no less than three hundred chariots mentioned at Knossos. Would this indicate, as Webster suggests,71 that the Mycenaeans used massed chariots in war as did the Hittites and Egyptians, although in Homer (with one possible exception72) chariots were used only for transportation or in single combat? Such a conclusion does not seem to be demanded by the facts at hand. Perhaps there were more chariots in use among the Mycenaeans than some may have thought, without their having been used in massed battle array.

The tablets reveal some details about the daily life in Mycenaean times. There are several references to the people's clothing. \(χιτών\) is a common word on the tablets, as is \(\phiόπελα\) also. These garments are variously described as white, crimson, embroidered, linen, woolen.73

71Webster, p. 14.
72Iliad IV.301.
73Perhaps the best archaeological treatment of dress in Mycenaean times is again in Lorimer, Homer and the Monuments, pp. 336-405.
There are a few details in the tablets concerning Mycenaean banquets. Readers of Homer will remember Nestor's four-handled cup. Carl W. Blegen, excavating at Pylos in 1952, uncovered a tablet (PY.Ta641) bearing several ideograms suggesting cups or goblets. After Ventris published his method of decipherment of Linear B in 1953, Blegen applied the former's norms and rules to the tablet and derived a very satisfactory reading from it:

Two tripods; Aigeus the Cretan brings them: one tripod; it is not sound as regards one foot: one tripod, the Cretan brings it; charred around the legs . . . wine-jars; one larger cup with four handles: two larger cups with three handles; one smaller cup with four handles: one smaller cup with three handles: one smaller cup with no handle.

Other Homeric vessels mentioned are amphorae (KN.Am819) and (KN.K740, K875).

A final conclusion to be drawn from this study of Mycenaean civilization is that Homer used the Mycenaean language, objects, gods, names, land terms, and social structure in his portrayal of epic heroes. Even his methods of expression are rather similar. The tablets quoted above in regard to chariots are strikingly like to Homeric descriptions of Nausicaa's wagon, for instance, or Calypso's axe. This would seem to indicate that there was a

74Iliad XI.632.
75For a complete account, see Blegen, "An Inscribed Tablet from Pylos," ΑΡΧΑΙΟΛΟΓΙΚΗ, 1953.
76Odyssey VI.69.
77Odyssey V.234.
very strong epic tradition handing down all these terms and names and events from Mycenaean times until the time of Homer. This conclusion may seem hazardous to many who are accustomed to erect a screen, an absolutely dark age, between the Mycenaean Age and the beginning of the Historical Ages. But as Nilsson so well puts it:

This screen is in reality only our ignorance of what happened in the intervening centuries. There must be a continuity between the Mycenaean and the Historical Ages; the population remained essentially the same, although it was dislocated by the supervening of the Dorians. The separation of the two ages is absolutely unhistorical; instead of erecting a screen between them we ought to try to find the connecting links and to recognize such as are probable.78

It is hoped that the following section will lend support to this conclusion through an analysis of the Mycenaean dialect.79

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73 Nilsson, Homer and Mycenae, p. 178.

79 With the striking similarities found in the above comparisons of the descriptions of Mycenaean Age civilization with the poems of Homer, it seems difficult to agree with any claim to the effect that the "first tentative readings (of Linear B tablets by Michael Ventris and John Chadwick), published in the Journal of Hellenic Studies for 1953, reveal (if they are right) a world altogether unlike the Homeric, one that was materially far more advanced, as we already knew from the archaeology; and institutionally more complex and reminiscent of the ancient Near East," as was made by M. I. Finley in The World of Odysseus (New York, 1954), p. 43. The majority of Ventris and Chadwick's data derived from the Linear B tablets and included in this chapter reflects a Homeric world or a world very much akin to that described in the epics. It was likewise the opinion of Michael Ventris, the author of the article quoted in confirmation, that his findings revealed a striking replica of the Homeric Age.
B. THE MYCENAEAN DIALECT

The decipherment of Linear B has yielded a relatively large Mycenaean dialect vocabulary. Such a vocabulary, with its phonological, morphological, and other differences from classical Greek makes an important contribution to historical Greek grammar, to etymology, and to our knowledge of the Homeric text and grammar.

Many scholars, among them Stanford, Nilsson, Ridgeway, and others, hold that the language of Homer incorporates many Aeolic, Arcado-Cyprian, and Ionian forms. In a sense, this is amply substantiated by the decipherment of Linear B, because this Mycenaean dialect also makes use of many of the same forms which the authors call Aeolic, Arcado-Cyprian, and Ionian. On the other hand, the Mycenaean dialect is at least the hypothetical ancestor of all these other dialects as well as of the Homeric dialect. The reflections of Dr. Chadwick are enlightening on this point:

In historical times Arcadia in the mountainous center of the Peloponnese formed a linguistic enclave with an East Greek dialect, completely surrounded by West Greek (or Doric) dialects. As the Dorians were the last arrivals in Southern Greece, it seemed reasonable to suppose that Arcadian had at one time covered most of the Peloponnese, and confirmation that it reached the coast was provided by the existence of a very similar dialect in Cyprus. Since Cyprus was colonized in Mycenaean times, it seemed likely that Arcadian and Cyprian were the descendents of the Mycenaean Greek dialect, and this can now be regarded as certain. The Mycenaean dialect seems to have varied very little over a period of two hundred years and as between Knossos, Pylos, and Mycenae. The vase inscriptions are not by any means clear; but it is certain that they show Greek words of a similar type to that of the tablets.

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80 John Chadwick, "Greek Records in the Linear Script," p. 197
Hence, it is plausible to suppose that the Aeolic substratum which underlies the text of Homer is not the Aeolic of Lesbos, which is, as Ventris remarks,81 a much later dialect, but the much older Mycenaean form, in which bardic lays were probably recited for many centuries. The forms of the Aeolic and of many of the other dialects will appear in the following discussion of the Mycenaean dialect. In procedure, the vocabulary, syntax, morphology, and phonology of the Mycenaean dialect will be examined in turn.

As regards vocabulary, quite a few new words have been added to our knowledge of Greek by the decipherment of Linear B. Often their meaning is not clear, except in the case of compound words, one or both of whose parts are known words. The list of these new words (which probably will make succeeding editions of the lexicons even longer!) is here presented:

<table>
<thead>
<tr>
<th>Code</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>PY,Ab210:</td>
<td>a-pu-kwo-ko</td>
<td>headband makers?</td>
</tr>
<tr>
<td>PY,An39.5:</td>
<td>e-to-wo-ko</td>
<td>armorers</td>
</tr>
<tr>
<td>PY,En609.5:</td>
<td>e-te-do-mo</td>
<td>armorer</td>
</tr>
<tr>
<td>KN,B101:</td>
<td>ko-wi-ro-wo-ko</td>
<td>armorers</td>
</tr>
<tr>
<td>PY,Na568.2:</td>
<td>na-u-do-mo</td>
<td>shipbuilders</td>
</tr>
<tr>
<td>PY,Ep617.6:</td>
<td>si-to-po-ko</td>
<td>cook</td>
</tr>
<tr>
<td>PY,Ab553:</td>
<td>re-wo-to-ro-ko-wo</td>
<td>bath attendants</td>
</tr>
<tr>
<td>PY,Fn50.6:</td>
<td>si-to-ko-wo</td>
<td>grain keepers</td>
</tr>
<tr>
<td>PY,Ep617.11:</td>
<td>ko-to-no-o-ko</td>
<td>property-owner</td>
</tr>
<tr>
<td>PY,An594.1:</td>
<td>pu-ka-wo</td>
<td>stokers</td>
</tr>
<tr>
<td>PY,An292.1:</td>
<td>di-pte-ra-po-ro</td>
<td>tanners</td>
</tr>
<tr>
<td>PY,Ea52:</td>
<td>e-pi-we-ti-ri-jo</td>
<td>close-woven</td>
</tr>
<tr>
<td>KN,Ch902.3:</td>
<td>wa-to</td>
<td>citizen</td>
</tr>
<tr>
<td>PY,Ep617:</td>
<td>po-ti-ni-ja-we-jo</td>
<td>of Magna Mater?</td>
</tr>
<tr>
<td>PY,Ae264:</td>
<td>ai-ki-pa-ta</td>
<td>goatherd</td>
</tr>
</tbody>
</table>

81Ventris and Chadwick, p. 103.
The above listed names comprise those words not already in our lexicons whose readings are well substantiated. Undoubtedly, the Mycenaean dialect includes many other new words, but because of readings which are not above doubt, they seem too tenuous for inclusion. Those included were taken, in the main, on the authority of Ventris. 82

Besides new words introduced into our Greek vocabulary for the first time, Linear B shows us more familiar words in a somewhat different light, or confirms accepted interpretations of certain words. Thus the word for 'baker,' ἄρτοχόπος, appears in the form ἄρτοξισσώς, proving that Curtius was right in doubting its etymology from ἄρτος and κόπτω. δούλος, 'slave,' appears δούλος, an unknown form which serves to explain the circumflexed diphthong in the classical word τέμενος, a word used for a piece of land cut off and allotted for a special purpose, is always used

82 Ventris and Chadwick, pp. 96-97.
in the tablets with Φάνδακτερον or λαΦαγέσιον, meaning, therefore, the king's land, or the commander's land. Compare Nausicaa's reference to her father's τέμενος "Daddy's garden" in Book VI:

οδείς δ' ἄγλαδν ἀλοκοτ' Ἀθήνης ἂγχι κελεύθουν αἰγείρων. ἐν δὲ κρήνη νάει, ἄμφι δὲ λειμῶν.
ἐνθα δὲ πατρὸς ἐμοὶ τέμενος τεθαλαίδ καὶ ἄλωθ',
tόσσον ἀπὸ πτόλιος δοσον τε γέγωνε βοήσας. 83

Χρυσός is usually assumed to be a word borrowed from West Semitic84 and introduced by the Phoenicians between 1100 and 900 B.C. But the word appears on a Knossos tablet describing a goblet similar to the Vaphio cups and also in the compound form χρυσο­

Forpoj. The conjunction ὡς is written ἰό, i.e., ἰως (Sanskrit yad), confirming Boisacq's etymology.85 A classic word for 'cust-
dodian,' κλειδοθές, is written ka-ra-wi-po-ro, i.e., κλατόφτερος.
The Doric word for clothes, Φέστρα (Latin vesta) appears as we-te-
re-u, i.e., Φεστρεύς. The classic τάλαντον is written ta-ra-si-ja
hence, ταλαίδα, and seems to be taken in its root sense of a weight, bearing comparison with the corresponding Latin pensum.

PY. Ep539.7 gives wo-z?-e, Φόρξει, perhaps the Mycenaean form of the common verb ρέξω. The typical Φάναξ has the adjectival form Φάνδακτερος, while the word μείξων, although appearing once as

83Odyssey VI.291-294.
84Ventris and Chadwick, p. 93.
me-ζό, appears elsewhere as me-u-jo (μεύω) and me-wi-jo (μεωνες).

Many of these older words in different dress and other words not a part of our Greek vocabulary show familiar Homeric construction. The frequent use of agent nouns ending in -τηρ shows why Homer uses more of them than later Greek writers. It was the words πατηρ and μάτηρ on Ανόητο which gave Ventris his first readings.86 Likewise, many agent nouns end in -τα, which could be transliterated either -τάς (the original form, as in Attic later on; in Homer usually -της), or -τα, corresponding to the distinctly Homeric -τα-μετέτα, ἴπποτα, ἵππηλατα, ἴπποτα, αἴχινητα, κυανοχαῖτα, ἀκαίητα, νεφεληγερέτα.

Hardly less significant are the omissions of words which one might reasonably expect to be present. One of the most striking is the complete absence of our old friend καί. When a conjunctive particle is needed, it is τα.87 Another notable absence is that of any definite article, thus confirming the theory that the definite article was just beginning to be so used in Homer.

Regarding syntax in the Mycenaean dialect as revealed on the tablets, one must remember that in such inventories of bare facts and commodities expressed in most unliterary language, little can be learned concerning syntax except what is almost obvious, as,

86Ventris and Chadwick, p. 89.
87See pages 93 to 95 of this thesis.
for instance, that adjectives agree with their nouns. Nevertheless, a few notable syntactical constructions have been found on the Linear B tablets.

It is not surprising to find the instrumental case, ending in -φι, used frequently. This would indicate, as has been held by the majority of scholars, that its preservation in Homer reflects an ancient usage.

The familiar Greek construction of opposition indicated by the particle δέ is found on the tablets, e.g., on An607, where we find two halves of the formula contrasted by that particle. Its frequent occurrence in cases of obvious opposition served to convince many that the Linear B syllabary was actually Greek.

The verbal negative is οὔ (there would hardly be any occasion in these writings for the use of μή, whether or not that negative existed). This appears in οὔ διδοντος in PY.Ma225.2 and as οὔ διδοντο in PY.Ng319. It is likewise used in the negative conjunction οὔτε, as in PY.Sn64 οὔτε ἄγρησε.

The demonstrative δός, ἦ, δ is amply attested to by the frequent use of the neuter accusative singular as a direct object (the Latin id quod): δ ἄγρησε (PY.Sn64), ο-ο-πε-ρο-σι, i.e., δ ὀφέλοντος (PY.Nn228.1), δ ὀποιατο (PY.Pn30.1), δ Φίδε (PY.Eq213.1), δ διδοντο (PY.Vn10.1), δ δῆκε Α. (PY.Un267.1), δ Πόρζει (PY.Eb338).

Enlightening observations on the use of the participle can be offered. Every student of Greek literature is familiar with the future participle expressing purpose. This seems to be a con-
struction of old standing in the Greek language, for it is found even on Linear B tablets. Two of them, rosters of men appointed to certain jobs, show the future participle used to express the jobs assigned. Thus we find τοιχοθόμοι δεμέοντες 'masons for building work,' and ἑρέται Πλευρώναξ ἱόντες 'oarsmen to go to Pleuron.' (Perhaps this is the Homeric Pleuron, a city in Aetolia if so, it is interesting to remember the tradition that the Dorian invasion crossed the Gulf of Corinth by way of Naupactus, a bare twenty miles along the coast from Pleuron. There may be an allusion to this invasion in this tablet written, as archaeologists have decided, immediately before the destruction of Pylos.)

Another use of the participle in Mycenaean Greek, a middle participle used of a shepherd guarding his flocks, reminded Ventris of two lines of Book XIV of the Odyssey, which he quotes in comparison. The tablet entry reads:

Κε-ρο-ω, πο-με Α-σι-ja-ti-ja ο-πι Τα-ra-ma-ta-o
qe-to-ro-po-pi ο-ro-me-no:

Κ., ποιμὴν 'Ασιατίας ὀπὶ θαλαμάταο
τετρόπο[δ]φι ὁρόμενος·

Κ., a shepherd of the place A., looking after the animals of T., recalling:

89 Ventris and Chadwick, p. 100.
90 Odyssey XIV.103-104.
In the line of morphology, the declensions of Mycenaean Greek seem to present a basis for certain Homeric uses. The declensions can be determined only by different words appearing here and there in undoubted construction as such or such a case. Even when this is done, the results are not always what one might desire. Thus, a word ending in -ta could be either nominative singular (-ta or -tāς), dative singular (-q), accusative singular (-āν), vocative singular (-α), nominative, accusative, and vocative dual (-α), nominative and vocative plural (-αι), or accusative plural (-άς).

Nevertheless, through the observation of certain words appearing in a certain form in an unmistakable syntactical construction, it has been possible to deduce surprisingly complete declensions. Thus, in the first declension, te-re-ta appears as nominative singular and nominative plural one time each, and another time in the genitive plural, written te-re-ta-ο.

Notes on the first declension:91

It is to be noted that there is an absence of an inflectional change to an -η in feminines of this declension, although this would not prove conclusively that such a vowel change was entirely lacking. The majority of the words from which the declension was deduced were agent nouns, and inflection in -α throughout is the rule in these. But many non-agent nouns such as κτοίνεας 'property

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appear inflected with -a throughout. It seems that the -a is the older form.

The instrumental case is shown by κεραία and ὀπίσθια, each appearing in this case only and each on KN.Sd0405.1 and KN.Sd0404, and by τετρόπο[δ]φι appearing on PY.Ae134.

Notes on the second declension:92

Again, the lack of complete material to give evidence of all the cases and genders is lacking; it is not to be inferred necessarily that such were not used. Evidence to the contrary is afforded by the appearance of ὑψωτον and ὑψατα (of uncertain meaning) in the accusative of both numbers, as well as σπέρμον and σπέρμα in the same cases.

Concerning the morphology of adjectives of the first and second declensions, λαμψειος has the genitive masculine λαμψειοι in PY.Ea421, as ποτνιαφειος has ποτνιαφείοι in PY.Eq213.5 Ρανάκτερος shows the neuter plural nominative in -a with Ρανάκτερα in KN.Lc525.

The third declension needs little amplification.93

A few more observations on the inflection of nouns and adjectives in general may be made. A genitive singular in -δο appears for masculine nouns in -α, as well as in most proper names, e.g., Ἁρεύτας, Ἁρεύτας. It seems to be a rule that the -οιο ending of the genitive singular is used in -ο stems, and the -δο ending in

92See Table III on the following page.

93See Tables IV and V on pages 87 and 88.
### TABLE III

**THE SECOND DECLENSION**

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<td>FY.An129.7</td>
<td>FY.An607</td>
<td></td>
</tr>
</tbody>
</table>
-a stems. Hence, the basis for the use of these genitive singulars in Homer.

Likewise, many consonant stems have a dative in -ει, seemingly the original dative ending (as appearing in the Homeric μὴδει and ἄχιλῆι) of the third declension, which came to be replaced in later Greek by -ι, of locative origin. Thus, we find Δι[φ]ει, κλέφει, μὴδει, Δαμοκλέφει, Πίκηρφει.

Certain nouns appear to be declined according to two declensions, or to admit of heteroclite endings. Such would be the two accusative singulars, χοριαδόνων and χοριαδόνα, 'coriander.' Also, ὀφτος has an accusative singular in σιτα, while χύκλος has two plural nominatives, viz., χύκλοι and χύκλα.

In inventories of this sort, the dearth of verbs which exists is to be expected. Hence, no elaborate conjugations can be deduced. A sporadic use here or there, however, gives a basis for conjecture.

In the common irregular verb εἰμί, the third person plural is e-e-si written in Linear B, which Ventris has transliterated ἐυνόι, introducing the ν on comparative grammar grounds (there is no way of determining by the rules of orthography whether a ν is present or not). Homer seems to replace this form by ἕασι, perhaps borrowing the ending, as Ventris suggests, from the perfect. But more likely, it is the original uncontracted form of the familiar εἰσί. It is noteworthy even in this earliest Greek we have that the σ is found, giving credence to the hypothesis that all the original
present forms of this verb contained a σ, viz., ἐσμι', ἐσ(σ)'i, and the regular ἐστι', ἐσμέν, ἐστε (Sanskrit asmi, asi, asti).

Another very interesting verb form is the present infinitive of thematic verbs as exemplified by that of ἔχω, written as ἔχειν. This serves to substantiate the general opinion that the classical infinitive ending in -ειν is a contraction of -ειν.

Only in the participles is a representative selection of readings obtainable. The present active participles are represented by the following:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Present Active Participle</th>
<th>Boccaccio</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>PY.Eb236:</td>
<td>e-ko-te</td>
<td>ἔχοντες</td>
<td>-</td>
</tr>
<tr>
<td>PY.Na513:</td>
<td>pe-re-wo-te</td>
<td>πλέοντες</td>
<td>-</td>
</tr>
<tr>
<td>PY.An724.11:</td>
<td>e-qo-te</td>
<td>ἐποιεῖτος</td>
<td>-</td>
</tr>
<tr>
<td>PY.Vn493.1:</td>
<td>a-ke-ra2-te</td>
<td>ἀγγειλαντες</td>
<td>-</td>
</tr>
<tr>
<td>PY.Eb338.2:</td>
<td>o-pe-ro-sa-de</td>
<td>ὁφέλλο(ν;)σα δε</td>
<td>-</td>
</tr>
<tr>
<td>KN.B823:</td>
<td>ta-pa-e-o-te</td>
<td>ταρπεόντες</td>
<td>-</td>
</tr>
<tr>
<td>KN.B823:</td>
<td>a-pe-o-te</td>
<td>ἀπέοντες</td>
<td>-</td>
</tr>
<tr>
<td>PY.An18.6:</td>
<td>a-pe-o</td>
<td>ἀπέων</td>
<td>-</td>
</tr>
<tr>
<td>PY.Ep617.11:</td>
<td>e-o</td>
<td>ἐόν</td>
<td>-</td>
</tr>
<tr>
<td>PY.An218.1:</td>
<td>o-pe-ro-te</td>
<td>ὁφέλλοντες</td>
<td>-</td>
</tr>
</tbody>
</table>

It is again to be noted that it is impossible to tell from the orthography whether or not a ν is to be written here or not. Quite possibly, each of these could be written -οτες.

Present passive participles are represented by doubtful words such as qi-jo-me-no: τιόμενο- (PY.Un2.1), re-qo-me-no: λειπόμενο- (KN.As1517.1), to-ro-qe-jo-me-no: τροπεόμενο- (PY.Eq213.1), z?e-so-me-no: ?? (PY.Un267.4), wo-z?qo-me-no: ?? (KN.So0429), and e-we-pe-se-so-me-na: ?? (MY.106). Future participles, as well as one present middle participle, have already been mentioned in regard to syntax.
The following reduplicated perfect participles have been read:

<table>
<thead>
<tr>
<th>Code</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>KN.0440</td>
<td>de-do-me-na</td>
<td>δεδόμενα</td>
</tr>
<tr>
<td>PY.0482</td>
<td>qe-qi?-no-me-no</td>
<td>??</td>
</tr>
<tr>
<td>PY.287</td>
<td>de-de-me-no</td>
<td>δεδήμενον</td>
</tr>
<tr>
<td>KN.051</td>
<td>a-ra-ru-ja</td>
<td>άραρυφα</td>
</tr>
<tr>
<td>KN.0541</td>
<td>a-ra-ru-wo-a</td>
<td>άραρυφόα</td>
</tr>
<tr>
<td>KN.087</td>
<td>te-tu-ko-wo-a</td>
<td>τετυχόα</td>
</tr>
</tbody>
</table>

The latter two forms seem to be archaic neuter plurals of the perfect participle, while the former has the usual άραρυφα as the feminine form. Notice the "Attic" reduplication, more common in Homer than in Attic itself. Without a doubt, therefore, this form was not an invention of Homer, but a traditional form he inherited from past centuries.

It would be interesting to investigate the use of the augment, but due to the scarcity of material for such an investigation, no conclusion can be reached concerning it. Certainly it is not something demanded by rule in Homer as it is in later Attic. Quite possibly, its use, like that of the article, began in the Homeric Age.

Likewise, it is impossible to investigate other matters of great interest concerning morphology in the present state of the decipherment of the Linear B tablets. It seems probable, for instance, that several of the words ending in -me-na, understood to be neuter passive participles, may well be infinitives in the supposedly Aeolic ending of -μενα, so familiar to Homer's readers.

Many Homeric forms, so long attributed to the Aeolic or the Cyprian and Arcadian dialects, derive from the Greek dialect of
the Mycenaean heroes. The word Πάνας, traditionally held to come from the Cyprian dialect, has already been seen in context in the Mycenaean.

Finally, some comments in the field of phonology follow.

First, we find that uncontracted forms in Mycenaean phonology are the rule. This confirms the theory that the later the Greek, the more contracted the forms. Homer uses many more uncontracted forms than Aeschylus; Agamemnon's steward used more than Homer. In fact, contraction seems unknown.

Another phenomenon of Mycenaean phonology is the retention of the digamma in seemingly every case except initially before ρ. Its absence in a few words where our etymologies demand its presence (e.g., ἄνεα, ἱέρεια, ὀρόμενος, Ἡρα) may be due to unexplained circumstances, but perhaps we will have to revise our etymologies in these cases. On the other hand, its use in πέρποτις may account for the Homeric lengthening of this suffix (e.g., ὑνωρῖν, Iliad V.5).

The remark was made that the digamma was omitted when initial This also happens to an original ο (e.g., πε-μο = σπέρμο(ν), just as ρί-ιο = ὑπίον). But a final ο is also omitted. Whether this is due to Mycenaean orthography or whether the ο was actually omitted in speech cannot as yet be determined.

One is very surprised to find the following peculiarity in the Linear B syllabary. For the palatals χ, γ, χ and a given vowel, there is but one symbol. For the labials π, β, φ and a
given vowel, there is but one symbol. Yet there is a separate symbol for ő while τ and θ are represented by another. One would hesitate to draw any conclusion from this phenomenon, unless Ventris is right in saying that it makes it possible to show that the Indo-European dh has already become voiceless.

But the most striking feature of Mycenaean phonology is the use of separate signs to distinguish the labiovelars. Ventris mentions that these labiovelar sounds were present in the pronunciation of Koine Greek. But no more exact interpretation of their use, according to him, can be deduced.94

His difficulty with the labiovelars does not seem intelligible. For instance, he is surprised at the lack of any usual conjunctive, finding only ge used. This he transliterates xWc, and presumes it is identical with the Homeric and Aeolic xe, which must, therefore, have had a much wider usage than in classical or even Homeric times. It seems obvious, however, that the word comes into historical Greek not as xe, but as the usual conjunctive τε; while the original form in ge is the regular Indo-European conjunctive, appearing as -que in Latin.

Ridgeway95 long ago noticed that the Indo-European languages fall into two distinct groups, according as they modify or retain

94Ventris and Chadwick, p. 102.

95William Ridgeway, The Early Age of Greece (Cambridge, 1901) I, 672.
the g. Thus, the labiovelar is represented in Sanskrit by ḳ and ṛ, in Balto-Slavic by k, in Latin by qu and c, but in Greek by π, τ, and δ. Likewise, the voiced labiovelar comes into Sanskrit as g or j, into Balto-Slavic as g or zh, into Latin as g or x, but into Greek as β, δ, and υ. The aspirated labiovelar appears in Sanskrit as gh or h, in Balto-Slavic as zh, in Latin as f, v, or g, but in Greek as φ, θ, and χ.

It may be added that Greek dialects can also be distinguished among other means, by their modification of the Indo-European labiovelar. In elegaic and iambic Ionic, the labiovelar appears in adverbs and pronominal adjectives as a x (κότε, κότερος, κῶς, διωκες); in Aeolic, it appears as π (πήσυρες, πέμπε, πήλυι) or ϕ (ϕηρο); in Boeotian likewise as π (πέτταρες), while in Attic as π before α, ο, or a consonant (πότε, πῶς, διωκες), τ before an ε or ι (τις) if unvoiced; as β before α, ο, or a consonant (βαίνος), δ before an ε or ι (δελφος) if voiced; and as φ before α, ο, or a consonant (φόνος), θ before an ε or ι (φερμός, θηρ) if aspirate.

In the Mycenaean dialect, however, the dialect of the Linear B tablets, the primitive Indo-European labiovelar is still undifferentiated. This is useful in proving that this Mycenaean dialect is the substratum, not only of the Homeric epic dialect, but of all other Greek dialects as well. The following words written with labiovelar consonants appear on the tablets; appended is the more familiar form of the same word in literary Greek:

PY.Eq213.1:   to-ro-qe-jo-me-no   τροπεομενο-
PY.Un2.1:     qi-jo-me-no           = τιομενο-?
If the Mycenaean dialect, however, is not yet differentiated into other dialects as far as consonants are concerned, the same cannot be said of vowel changes. The Mycenaean dialect shows very few patterns of vowel changes differing from the Homeric language. Several of these vowel changes appear in other historic Greek dialects; undoubtedly it can now be said that they were the ones which preserved the original forms in these instances. Thus, there is evidence of the finalo of the Homeric and Attic dialects being a u (ἀπό for ἀπό, ἀπώδοςις for ἀπώδοςις); likewise, of occasional alterations in a final or medial a (παρό for παρδ, τετράποι for τετράπο([δ]ψις) as in Thessalian; and the change of an initial ε in some instances (ὄπι'), although ἐπί is written more than once. ὧπι is not found as a simple preposition in later Greek, but it survives in such words as ὧπῳ and ὧπειεν.

These considerations in phonology point to the following conclusions. Nilsson has shown that varying forms in Homer (which
he called Cyprian, Arcadian, Aeolic) forced one to place the beginning of epic tradition with its formulae of oral composition in the "Aeolic" period. But then he was faced with the dilemma of assuming either that the Arcado-Cyprian dialect had influenced the Aeolic poets, or that the words in question were once common to the Aeolic dialect. He was unwilling to admit the very hypothetical first horn of the dilemma, while the second came very near to saying that the Arcado-Cyprian dialect and the historically known Aeolic dialects are derived from a common origin from which they were later developed separately, but geographical and linguistic considerations seemed against such a view. But, he adds, "if this conclusion is right, the results are important." It seems now, in the light of Linear B, that the conclusion is right, because the Mycenaean dialect has those precise forms which had been attributed to the Arcado-Cyprian and the Aeolic dialects. Mycenaean Greek gives all indications of being the common origin hoped for and postulated as an explanation of the Homeric dialect. This was the chief conclusion of Michael Ventris and John Chadwick in their epoch-making article, "Evidence for Greek Dialect in the Mycenaean Archives." They wrote at the end of their article:

If our Greek transliteration is justified, it points inescapably to an archaic dialect of the 'Achaean' type; which is precisely what, on historical grounds, we should expect the

96 Nilsson, Homer and Mycenae, p. 176.
97 Ibid.
inhabitants of Pylos and of Mycenae to have spoken. The name 'Achaean' has been used to denote a hypothetical an-
ccestor of the Arcado-Cyprian and of the Aeolic dialects, and it therefore seems the most appropriate term to use for this new dialect . . .

If this was the language of Nestor and of Agamemnon, then it was presumably also that of Demodokos and the poets of the time. Should we not conclude that the 'Aeolic' stratum, which so obviously underlies the text of Homer, is not the Aeolic of Lesbos, but a much older Achaean form, which had already set the conventions of epic verse within the 2nd millenium B.C.? Attention has been drawn to similarities, especially in vocabulary, between Cyprian and Homer; but to suppose two transpositions, first from Achaean to Aeolic, and then from Aeolic to Ionic, is stretching credulity rather far. If the original stratum was of this archaic Mycenaean type, many of the difficulties disappear. Certainly the similarities outlines above seem a powerful argument in favour of such a hypothesis.

What are the important results of which Nilsson speaks? They are that the beginnings of epic poetry must be earlier than the Dorian invasion, i.e., they must belong to the end of the Mycenaean Age, and that they must belong to the Mainland where the geographical contiguity of the Achaean or Mycenaean dialects has been found.

The Homeric epics, then, or the epic tradition predating the Homeric epics, must have transmitted itself in this manner. Starting in the Mycenaean Age and on the Mainland for reasons given above, the tradition of oral epic poetry dates from the thirteenth or twelfth century at the latest (Ventris: second millenium B.C.)

98 Ventris and Chadwick, p. 103.
99 Nilsson, Homer and Mycenae, p. 177.
100 Ventris and Chadwick, p. 103.
When the Mycenaeans were dispersed by the Dorians and took refuge across the Aegean, they brought with them their epics and transmitted them to the Ionians. The possibility of advancing and consolidating this theory through the decipherment of Linear B serves as an illustration of how its decipherment contributes to our understanding of the literature as well as of the history and religion of early Greece.

The decipherment of Linear B has proved an outstanding contribution to Homeric scholarship. For Homeric scholarship consists in as deep an understanding as possible of two things: the thought of Homer and the language of Homer. The thought of Homer is easily appreciated; but the key to a more intimate knowledge of and a further understanding of the people of whom Homer wrote--of their location and civilization, their wars, their religion and mythology, their social structure, their literacy, their daily life and customs--which is afforded by the Linear B tablets is of the greatest value. It not only helps us to visualize more accurately and appreciate more deeply the moving Homeric descriptions of town and country, but to penetrate more deeply and to fathom with greater insight the immortal characters of Homer, through our increased knowledge of their culture and our proportionately increased ability to esteem their spirit. And the result of the decipherment of Linear B upon our knowledge of the

101Nilsson, Homer and Mycenae, p. 177.
language of the Mycenaeans can give us a more profound knowledge and appreciation of the language of the epics. When a person senses something of the flavor behind such words pregnant with connotation as ἐδώµεν and λαός, of καλχός and χρυσός; something of the antiquity of ὅμοιος and ἀγγελος, of Ποτνία and Δίφος, he can experience a sensation akin to that he feels when coming upon actual remains of the cities of the heroes of Homer--Argos, Mycenae, Troy. The decipherment of Mycenaean Greek in the Linear B script has provided the reader of Homer with another overtone in his appreciation of the world's greatest literature.
NOTE ON TABLET REFERENCES

The various Linear B tablets are referred to in the following manner. First appears the place where the tablet was found. This is capitalized and abbreviated, e.g., KN for Knossos, PY for Pylos, MY for Mycenae, TH for Thebes. After the capitals and a period, the specific classification of the tablet follows, according to the classification of Bennett in The Pylos Tablets (1951) as slightly revised in his A Minoan Linear B Index and The Pylos Tablets (1955). Following this classification, expressed by a capital letter plus a small letter in the majority of instances, appears the inventory number of the tablet, the number under which a given tablet can be found in the museum. This method of numbering, an improvement over the former method of numeration within a given classification, was worked out in the 1955 edition of The Pylos Tablets.

Only readings which are generally accepted are used without qualification. Less certain readings are queried: (?).
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B. ARTICLES


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APPENDIX

AN ATTEMPT AT DECIPHERING

These final pages, constituting an attempt at further decipherment of the Linear B script, have been undertaken for two reasons: first, to gain a humanistic, vicarious understanding of the difficulties undergone by those who have failed and by those who have succeeded in this great archaeological venture of our day; secondly, to try to make some additional contribution to the cause.

As to the first purpose, the difficulties encountered in the decipherment of a script as complicated as Linear B are sufficient to be discouraging. Even when one is now able to work from well-established principles and interpretations of individual symbols, allowing always for a margin of error, nothing can be accomplished without difficulties. When a satisfactory transcription (which is rarely verifiable) from the Linear B syllabic symbols into Greek or Latin script has been made, the nature of the Linear B syllabary still acts as a hindrance. For since there is often but one symbol for as many as three consonants with any given vowel, it is rather often that a single word in preliminary transliteration could just as easily be as many as ten other Greek words. Context is the only refuge. But when the context is made up entirely or for the most part of other such words, its value is negligible.
As a result, no matter what utilitarian value comes of an effort at decipherment, there has at least resulted a deep and lasting appreciation of the difficulties involved in the process.

As to the second purpose, that of contributing some little decipherment to the cause, if possible, the undertaking is rather hazardous. No discovery of the kind can be made without mistakes. But it is a question of values. Although the attempt is apt to lead to error, it should also be remembered that even a wrong conjecture has often led to a right one, whereas nothing is gained by sitting still. It is with caution mingled with hope, therefore, that the following suggested readings are advanced.

A short, interesting tablet is the Pylos tablet PY.Va482, from which Ventris quotes for evidences of inflection, but no words of which can he make out. The tablet is classified Va, i.e., V signifies that it is a tablet without ideograms, a signifies that it concerns men or women. The tablet reads, according to the Bennett grid on page 31 of this thesis:

\[
\begin{align*}
\text{qe-qi-no-me-no} \\
\text{e-re-pa a-no-po a-ko-so-ta} & \text{ z?e e-wi-su-z?-ko 2 ro-i-ko 3}
\end{align*}
\]

The first word, set off to the upper right hand corner of the tablet as if introducing it, looks very much like a perfect middle or passive participle, with the reduplication in qe-qi, and the participial ending me-no (\(-\mu\varepsilon\nu\varepsilon\sigma\)). One would be severely tempted

\[^1\text{Ventris and Chadwick, p. 88.}\]
to think it a form of τινω, 'to pay a debt,' 'to make compensation,' were it not for the fact that the perfect middle of τινω seems to be τετίωμα: without any known exceptions. Besides, it would seem that such a common term for payment, if such was its Mycenaean use, would be of frequent appearance in tablets recording commodities and business transactions; but it is found on no other tablet, either on the Mainland or at Knossos. Yet, according to all rules of comparative phonemics, the labiovelar sounds, here before e and i, ought to come into later Greek as ί's, i.e., τετίνωμένον, meaning 'paid,' a very acceptable reading at the top of a tablet of this kind.

The following word, e-re-pa, appears in this form only on this tablet as far as the Mainland goes, although similar words like e-re-mo and e-re-e-wu appear on other tablets (PY.Er312,7 and PY.Na284 respectively). At Knossos, however, e-re-pa-to appears on KN.V684.1, while e-re-pa-te appears on four others, e-re-pa-te-o on KN.Se1007.2 and e-re-pa-te-wo on KN.Sd0403.1 and KN.Sc1006.1. This word escapes interpretation, but from the related forms observed elsewhere, it would seem to be a noun capable of declension through the addition of a te ending. One thinks of the word δμαρ on PY.An192, declined exactly that way (da2-ma-δμαρ, da2-ma-te=δμαρτες, da2-ma-te-ο=δμαρτέων; thus perhaps e-re-pa-ερεφαρ, e-re-pa-te=ερεφατες, e-re-pa-te-ο=ερεφατεων?).

a-no-po, the following word, appears also on PY.Cn131.6, which reads:
ma-ro-pi to-ro-wi CATTLE 13 pa-ro a-no-po CATTLE 13
where, although the meaning is not clear, the word is found to
follow pa-ro (παρό=παρά) whose meaning, 'from,' is established.

The following word, a-ko-so-ta, is a proper name, appearing
on six other Pylos tablets. In Greek transliteration, it would be
perhaps Ἄργοςτας, as Ventris suggests elsewhere, or perhaps Ἀργότας.
Note that the ko-so equals kso (χο, ξο).

E-wi-su-z?-ko is likewise of doubtful transcription, since
Bennett reads the third symbol su, while both Ventris and Furumark
read go2. The following symbol is too infrequent to be of estab-
lished phonology; but Ventris and Furumark again prefer some z
syllable. I believe that z syllable should be written go2', be-
cause this word, while not appearing at Pylos again, occurs two
times on Knossos tablets (KN.Sel007.1 and 1008.1), each time being
spelled e-wi-su-zo1-ko, i.e., with the already established sign
for zo. On the latter of these two tablets, thought to be lists
of names, it is the only word still legible on the tablet; on the
other tablet, however, it is followed by the significant word:
e-re-pa-te-o o. Is there a connection between e-wi-su-zo1-ko and
e-re-pa-(te)?

The following and last word, ro-i-ko, is surrounded by
numerals, viz., preceded by the number 2, and followed by the number 3. More likely, the preceding 2 goes with the preceding word. The word ro-i-ko appears on no other Linear B tablets, and the appearance of an i in the middle of the word is surprising. It does not seem to occur elsewhere, and when it occurs at the end of a word, e.g., do-e-ro-i (δοκόι) on PY.Ae26, it is the -οι diphthongal ending. This, however, is in conformity with Assumed Rule 3, which states that the second component of diphthongs in οι is generally omitted except before another vowel and in noun endings. No other reading of ro-i-ko seems possible, however, and it will be noticed that frequent exceptions and variations in spelling are found, due, quite likely, to the rather restricted literacy of the time.

The reading of the tablet, however, remains unintelligible. The single syllable z?e is particularly puzzling. As a one syllable word it makes no sense in its present transliteration. One might think of a suffix -ζε, used occasionally (more properly for -σέ), but since this suffix in Linear B is never found separated from the preceding word of which it is enclitic, it should not be presumed that a questionable -ζε can be.

Is the solution to question the transliteration of z?e? One finds the following: at Pylos, this symbol appears as a part of several other sign groups. In PY.Fn187, it is found in the word z?e-u-ke-u-si, which, when one remembers that ke is read ge or che as well, transliterates into Greek as ζευγεσί, dative plural
of τευγές, 'harness maker.' In PY.Xa70, it appears in the word z?e-i-ja-ka-ra-na, which is transliterated ζείακράνα (κράνα=Doric for κράνη), 'head of wheat' (note that η is never found in the first declension in Mycenaean). Again, the word appears z?e-po-ro e-ke pa-ro I. ... followed by the ideogram for grain, which transliterates into ζε'πορόν ζέτι παρό 'I. (ζε'πορόν being 'grain'; this is the classical ζεί- or ζεό-πορόν, due to the change from ο to υ). Whatever the exact determination of these examples, the transliteration of z?e seems to be well founded.

Can any plausible reading of PY.Va482 be given, then? One prefers not to venture too far afield when the only word certain is a proper noun; still, a conjecture can invite constructive criticism. Ano-po can well be a proper noun, too, since it is preceded by pa-ro in PY.Cn131.6. If e-re-pa is read έρεφα, substantive of έρέφω, it would mean 'roof.' The last word seems to be ροίχω; 'slanted,' 'curved.' E-wi-su-zo-ko, which appears with e-re-pa in KN.Se1007.1, reminds one of the Homeric εἰςοκ, probably written originally with a digamma: έψιςοκο, although the latter component of the word is unknown. If the z?e word-syllable could be read δέ, one would derive a reading:

τετινομένον:
έρεφα Ἀνοπό· Ἀξότα δέ ἐψιςοκοι 2, ροίχοι 3.

But if, as evidence indicates, the z?e must be read ζε or ζεί, the interpretation remains obscure. Hence, it might be better to read:

τετινομένον:
έρεφα Ἀνοπό· Ἀξότα ?? ἐψιςοκοι 2, ροίχοι 3.
Paids:
Anops's roof. For Axotas, ??, two even all around, three curved.

Another tablet which offers material for decipherment is PY. Un267, which reads:

```
c-do-ke a-ko-so-ta
tu-we-ta-a-re-pa-zo-o
tu-we-a a-re-pa-te
ze-so-me-no
ko-ri-a2-da-na UNKNOWN IDEOGRAPH #1 6
ku-pa-ro2 UNKNOWN IDEOGRAPH #1 6 UNKNOWN IDEOGRAPH #2 6
two more lines of unknown ideograms with numerals following three lines erased
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The meaning of the first line is obvious: _c-do-ke a-ko-so-ta_ is nothing else than δ δῶξε Ἅγοτᾶς. It is encouraging to find our friend Axotas mentioned in an intelligible context for a change.

The following line of the tablet is not so easy to interpret. The meaning of _tu-we-a_ is not immediately clear. Perhaps its meaning can be arrived at, when ingenuity is lacking, by a scientific process of elimination. One finds by examining the lexicon that the only known classical Greek words which it could be are the following: τῦρος, θυεία, θυέστας, θυήςς, θῦςς, θύρα, θυρεός.

Which one is the proper word in this context? Furumark suggested a hypothetical form θυφία, 'spices,' for both this and the following line. But there does not seem to be any declension which would account for a variation between _ta_ and _a_ in the ending. One would like to construe one of the words as an adjective, the other as a noun, but since the word modified by the adjective will be shown to be neuter singular, the likelihood of its being an adjective is diminished, because the neuter singular form would not
end in ta. However, if the first word were a noun, there would be no need for agreement between it and the following word. Now the first word in the second line, tu-we-ta, transliterates regularly into θυευςτάς, when one remembers that the ο is omitted before a following consonant. θυευςτάς, 'a pestle,' might be found to fit the context.

The following word, a-re-pa-zo-o, begins in all probability with the word ἀλειφαρ, 'unguent,' 'oil,' and in a slightly applied sense, 'pitch.' There does not seem to be another known Greek word which fits this spelling. The second component of the word is not clear, however. The obvious conjecture is that it is ζυόν, but its exact interpretation is doubtful. Perhaps ἀλειφαρ ζυόν might indicate 'fluid' pitch or oil.

The first word in the third line, tu-we-a, followed by a-re-pa-te, an oblique form of the ἀλειφαρ of the preceding line, can be transliterated into two words: 1) the accusative singular of θυός, 'an offering'; 2) θυεία, 'a mortar,' 'cup.' The connection between pestle and mortar is apparent. Yet neither of these readings is grammatically satisfactory. For θυός to have an accusative singular θυεδ, it would be a heteroclite, very rare for neuter nouns; while the classical word for mortar or cup is feminine in gender. The inconsistency in its being feminine is found in the next two words. A-re-pa-te can be nothing else than ἀλειφάτει, the dative singular of ἀλειφαρ of the preceding line; while ze-so-me-no is an obvious future participial form of ζώω,
'to boil,' 'to seethe,' although its signification in context is not clear. But the ending me-no, being either -μενος or -μενον, indicates either a masculine or neuter, while it proves to be the modifier of tu-we-a. The easiest solution, but one which should be the last resorted to, is the hypothesis that θυσία, like οὐτόν and χύκλος, had alternate genders in Mycenaean Greek.

The ko-ri-a2-da-na of the following line is interpreted by Furumark to be an alternate form for the classical κυριάννων, and Ventris uses the same reading, κυριάννω, as another example of a heteroclitic declension.

The ku-pa-ro2 of the next line seems to be κύριαρος, the Doric (and Mycenaean, due to their use of a in the first declension) form of κύριαρος. The ideogram which follows ku-pa-ro2, followed itself by the numeral 6, is the same as that following ko-ri-a2-da-na. It has been suggested that it should be interpreted as 'grain.' Since it follows two words, though, which both indicate a type of herb or grass, it seems more likely a measure of the commodity mentioned. Perhaps bale (which the ideogram resembles) is too large a quantity for herbs; the generic "bundles" may suffice. The other ideogram must remain uncertain until a sufficient context throws more light on the subject.

In view of the above, therefore, one might venture to pro-

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2Furumark, p. 53.
3Ventris and Chadwick, p. 92.
pose the following reading:

δ δῶκε Ἀξώτας;
θυέστας ἀλειφάρ χρων;
θυείας ἀλειφάτει;
ζεύμενος;
χοριάδια * 6
κυπαιρος * 6

two lines of unknown ideograms
three lines erased

Given by Axotas:
A pestle. Liquid oil.
A cup to boil oil in.
Six bundles of coriander.
Six bundles of galingal.
...

Any transliterations and conjectures must remain necessarily tentative. The decipherment of Linear B is still in its early stages. Many of the proposed values may have to be reconsidered, and the rules of orthography may not yet be fully understood; many of the most baffling features may be due to Linear B being a script imperfectly adapted to Greek from the conventions of a quite different language. But it is the belief of Michael Ventris and of many others well versed in the field that prolonged study will eventually enable the whole Mycenaean material to be interpreted in detail.
NOTE: Since the writing of this appendix, Professor L. R. Palmer, in a broadcast over BBC, as reported in the Listener for November, 24, 1955 (p. 892), gave a tentative translation of the very tablet last mentioned, FY.Un267. Taking the tu-we-ta of the second line as a proper name, Palmer derived the plausible reading: "How Axotas gave to Thyestes the unguent boiler aromatic herbs for boiling in the unguent."

His translation compared with the suggestions of the appendix shows that he confirmed many of the suggestions and showed greater insight in translating other words. Examining his translation in more detail, we can attribute his "How Axotas gave . . . " to his effort to popularize it for a radio audience. The δ δῶκε Ἀξότας is clear enough.

It is interesting to find that Palmer arrived at the same conclusion as we did in regard to the best spelling of the proper name A-ko-so-ta.

Making Θυέστας a proper noun is a stroke of ingenuity, of that ingenuity which was admittedly lacking and in whose stead a scientific process of elimination was substituted. Palmer undoubtedly takes the name in the dative case: Θυέστα.

It is not at all clear to what Greek word Palmer reduces the following a-re-pa-zo-o to obtain the epithet 'unguent boiler.' The first component of the word is undoubtedly from ἀλειφάρ; the second part must be a derived form of ζέω, 'to boil.' Perhaps he would read the Greek word as ἀλειφάζως, as the proper transliteration
seems to demand, but there are no comparisons in other words of this composition.

Palmer understands tu-we-a of the following line as 'aromatic herbs,' taking it as the accusative plural of θυόκ, viz., θυΦα. This certainly seems the correct reading, but it is fraught with a grammatical difficulty. The ze-so-me-no of the following line, which Palmer agrees with me in taking as a future participle of purpose, must be masculine or neuter singular. The no is definitely of that phonetic quality; it cannot be read na. My suggested reading as 'a cup to boil oil in' is hardly more satisfactory, however, for, besides the non-Greek construction, I also have a grammatical difficulty in that the classical form of the word for cup is generally feminine.

All in all, Palmer's translation, while plausible, can hardly be classified as more than tentative. Yet, it will be readily seen that he derived a much more satisfactory reading of the tablet than that presented in this appendix.
APPROVAL SHEET

The thesis submitted by Francis T. Signac, S.J., has been read and approved by three members of the Department of Classics.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

Sept. 15, 1956
Date

Raymond V. Schoder, S.J.
Signature of Adviser