Codebreakers and Groundbreakers
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edited by

Yannis Galanakis, Anastasia Christophilopoulou and James Grime
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The Decipherment: People, Process, Challenges

Anna P. Judson

Linear B before the decipherment: facts and theories

When Linear B tablets were first discovered – at the palace of Knossos on Crete, excavated initially by Minos Kalokairinos in 1878 and then by Sir Arthur Evans from 1900 onwards – archaeologists and classicists were confronted with a double mystery: inscriptions written in a script no one knew how to read, recording an unknown language (see chapter 1). Previous decipherments of unknown scripts had generally relied on identifying the language they recorded and/or the existence of bilingual inscriptions giving the same text in two languages: the decipherment of Egyptian hieroglyphs, for example, had famously made use of the Rosetta Stone, a text written in hieroglyphs, demotic Egyptian and Greek. Similarly, the Cypriot Syllabary, used on Cyprus during the first millennium BC, had been deciphered via an inscription written in both Cypriot and the ancient Semitic language Phoenician, and was consequently shown to be recording the Greek language (see chapter 4).

Without any bilingual texts, and without knowing what language the tablets were written in, attempting a decipherment of Linear B would be much more difficult, but some basic facts could be established even without being able to read the script. First, its signs could be divided into two types: phonetic signs, standing for sounds and used to spell out words; and signs which stood for items or commodities. It was clear that the latter, known as ‘ideograms’ (i.e. signs standing for concepts rather than sounds or words), were used when counting the objects they stood for, since the numerals were also identifiable (the numbers one to nine were represented by vertical strokes, and tens by horizontal strokes), and some of these ideograms were also clearly pictorial in origin. Thus, 𐀫 𐀬 could be ‘read’ as ‘two horses’, 𐀭 𐀬 as ‘twenty men’, and 𐀭 𐀫 as ‘fifteen women’. Although this gave no information about the language concerned, nonetheless it enabled the basic subject matter of many of the tablets to be understood, and showed that their function was administrative: the palace had used these tablets to record a wide range of goods, livestock and personnel. Even the likely meanings of a few words could be deduced: the terms 𐀫 𐀭 and 𐀫 𐀦, which frequently appeared at the ends of lists alongside the sum of all the numerical entries, were clearly two different forms of the
word for ‘total’; a number of tablets listed women followed by two further entries, 𐀒 𐀺 and 𐀒 𐀷, which were assumed to mean ‘boys’ and ‘girls’ (although it was uncertain which was which).

Second, the number of different phonetic signs, around ninety, enabled the script’s structure to be deduced. An alphabetic script, in which each sign stands for a single sound, would have far fewer signs (the Roman alphabet used for English has twenty-six signs, the classical and modern Greek alphabet twenty-four); on the other hand a system like the Chinese script, in which signs may stand for whole words as well as individual syllables, would have thousands of signs. Linear B therefore had to be a syllabary, with each sign standing for a syllable, that is, either a vowel (e.g. a, e) or a combination of consonants and vowels such as pa or te. Further evidence that this inference was correct was provided by the Cypriot Syllabary mentioned above, a syllabic script containing fifty-five different signs, which was used during a later period to write Greek on Cyprus: some of the signs of this script appeared similar enough to those of Linear B to show that the scripts were related. In principle this could have provided a way into deciphering the Cretan scripts, since the values of the Cypriot signs were already known; however, it was difficult to find more than a handful of signs that might correspond closely enough to make reading the Cretan signs with the Cypriot values unproblematic. Linear B 𐀙 and Cypriot уницип, for instance, looked very similar, making it plausible that they could have the same value; but many more Cypriot signs simply had no clear Linear B correspondences at all. A further complication was introduced by Evans, who, based on the existence of the ideograms, suggested that some of the signs occurring in word sequences also had a pictorial origin: he thought the sign 𐀃, for instance, looked like a ‘throne and sceptre’, and was therefore a ‘determinative’ sign acting as an indicator that the words with which it appeared referred to royalty (see chapter 1).

Without knowing the language the texts were written in, this was very far from being enough information to produce a decipherment. Of course, there was no shortage of suggestions as to what the language of the Linear B tablets might be: theories ranged from an Anatolian language, related to those spoken in the area that is now Turkey, to Etruscan, a pre-Roman language of Italy. The one language that was generally ruled out as a possibility was Greek: the ‘Minoan’ Cretan culture Evans had discovered seemed entirely unlike anything known from classical Greece. Evans himself was convinced – and he convinced many others – that the ‘Minoan’ language of the tablets could not be Greek.

Progress was initially also hampered by a lack of wider access to the inscriptions. Texts of a small number of Linear B tablets were made available in Evans’s publication of the Knossos excavations, The Palace of Minos, in 1935, but at the time of his death in 1941 the vast majority of the tablets were still unpublished; they finally appeared in 1952 in Scripta Minoa volume II, prepared by the Oxford historian and archaeologist Sir John Myres with considerable help from other scholars, in particular the American classicist Alice E. Kober (see below). In the meantime, more
Linear B tablets had been found at Pylos on the Greek mainland, beginning in 1939; but work on these texts was delayed by the Second World War, and they were only fully published in 1951. Thus, the amount of material that was publicly available before the early 1950s was very limited. This did not, however, prevent the publication of several claimed 'decipherments' of the tablets, interpreting them as being in various languages including Greek, Hittite and even Basque, none of which was founded on a rigorous enough methodology to gain widespread acceptance.\footnote{\textsuperscript{4}}

Most of the crucial work leading to the eventual successful decipherment of Linear B took place in a relatively short period in the late 1940s and early 1950s, and this chapter will focus on the four people who made the most important contributions to the decipherment during this period: two American classicists, Emmett L. Bennett Junior and Alice E. Kober; one British classicist, John Chadwick; and the British architect who actually achieved the decipherment, Michael Ventris.

**Decipherment in progress: Bennett, Kober, Ventris and Chadwick**

Emmett L. Bennett Junior (1918–2011, figure 1)\footnote{\textsuperscript{5}} was a postgraduate student working on the Pylos Linear B tablets with Carl Blegen, the excavator of Pylos, at the University of Cincinnati during the 1940s.

After spending the Second World War working as a cryptographer
breaking Japanese codes, he returned to Cincinnati to write his PhD thesis. Completed in 1947, this included the first systematic classification of the Linear B signs, establishing the definitive list of signs and their variant forms (which he published in 1951 along with the texts of the Pylos tablets). Just as in English the same letter can look different in different handwriting or fonts (compare ‘a’ and ‘a’), so too in Linear B the form of a single sign can vary; in other cases, forms that appeared superficially similar might in fact be separate signs. Consider, for instance, the following two pairs of Linear B signs: |_| and ++; || and ||. The first pair differs only in whether the horizontal stroke crosses the vertical, the second only in the number of horizontal strokes near the top of the signs. Only a close analysis of all the occurrences of these four forms can show that || and || are in fact variant forms of a single sign – they occur in the same position in what are clearly instances of the same word – while |_| and ++ are different signs. Through his analysis, Bennett also demonstrated that Evans’s ‘determinative’ theory was wrong: signs such as || were phonetic signs, just like the rest of the syllabary. By establishing the Linear B sign list in this way, Bennett enabled accurate analyses of the script and the occurrences of each sign to be carried out for the first time, laying the foundation for the later decipherment.

After graduating with a PhD from Columbia University, Alice E. Kober (1906–50, figure 2) became an assistant professor of classics at Brooklyn College in New York, but devoted what little spare time she had from her full-time teaching position to tackling Linear B.

As well as being instrumental in the eventual publication of the Knossos Linear B tablets in the second volume of Scripta Minoa, Kober undertook a painstaking analysis of the patterns of occurrences of different signs in the available Linear B texts, producing two breakthroughs which would be key to the script’s later decipherment. In a series of articles published in the late 1940s, she demonstrated that, whatever the language of the Linear B tablets was, it must be an inflected one: that is, the endings of its words changed to reflect their grammatical function (as in, for example, English plurals: sign vs. signs). Kober identified various examples of inflection, in which instances of what seemed to be the same word appeared with different endings in different contexts, for example:

In each column a single word appears in three different forms; two of these forms consistently end with the same signs ([] and []) regardless of what signs precede the ending. Kober therefore suggested that these signs represented case endings, distinguishing different grammatical functions of nouns. She also showed that the language of the Linear B tablets distinguished words of different genders, by demonstrating that of
the two different forms of the word identified as 'total', 十 and 十十, the first appeared alongside 'man' ideograms and the second with 'woman' ideograms, but never vice versa: the different final signs in this instance, at least, therefore represented word endings signifying masculine and feminine gender.

Crucially, Kober then took her identification of patterns of inflection a step further to show how this information could also be used to establish a relationship between different signs’ sound values. To take a modern example, the Italian word 'good' is buono (masculine), buona (feminine): written in syllabic form these would be written as bu-o-no, bu-o-na. The final syllables would be written with different syllabic signs, no and na – but these two signs would share the same consonant, n-. In the same way, the final sign of 十十十十 is likely to share the same consonant as the third sign of 十十十 and 十十十十. Moreover, it was likely that the inflected endings shared by all these words in fact consisted of the vowel of the penultimate sign plus -十 or -十, and therefore these penultimate signs would also share the same vowel (e.g. the third sign of 十十十十 would have the same vowel as the third sign of 十十十十和 十十十十). Kober was therefore able to construct the following grid showing the relationships between these signs:

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Vowel 1</th>
<th>Vowel 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>十</td>
<td>十</td>
</tr>
<tr>
<td>2</td>
<td>十</td>
<td>十</td>
</tr>
<tr>
<td>3</td>
<td>十</td>
<td>十</td>
</tr>
<tr>
<td>4</td>
<td>十</td>
<td>十</td>
</tr>
<tr>
<td>5</td>
<td>十</td>
<td>十</td>
</tr>
</tbody>
</table>
Part 1: The Decipherment of Linear B

That is, whatever the phonetic value of ꞛ turned out to be, Ꞙ would have the same consonant as it, and ꞛ, Ꞛ, ꞛ and ꞛ the same vowel: establishing the sound value of even one sign would therefore immediately provide evidence for the values of other related signs. Kober did not, however, attempt to assign sound values to any of these signs, which she felt there was currently insufficient evidence to do. She concluded the article in which she established this grid by stating that 'when we have the facts, certain conclusions will be almost inevitable. Until we have them, no conclusions are possible.' This grid would ultimately be key to Michael Ventris’s subsequent decipherment of Linear B. Sadly, Kober herself would not live to see the decipherment: she died in 1950, probably of cancer, aged just forty-three.

Michael Ventris (1922–56, figure 3) famously became interested in the problem of Linear B after a chance encounter with Sir Arthur Evans on a school trip to a museum exhibition when Ventris was just fourteen. Unlike Bennett and Kober, Ventris was not a classicist, although he had studied Latin and Greek at school. He trained as an architect, and from 1949 to 1950 worked for the Ministry of Education designing new school buildings. Even in his lunch breaks, however, he continued to tackle the problem of Linear B. His work was carried out in close contact with others working on the script worldwide: in late 1949 he conceived the idea of a survey of the different views among scholars currently working on Linear B about the script’s structure, decipherment prospects, and probable language. A questionnaire was circulated to twelve scholars around the
world, and the responses, together with his own views, were collected and circulated in 1950 to form what became known as the ‘Mid-Century Report’. Kober was one of the few who declined to reply, stating briefly that she considered the questionnaire a waste of time – probably because of its focus on the language of Linear B, which she regarded, with some justification, as at best unhelpful speculation. ‘It is possible to prove, quite logically, that the Cretans spoke any language whatever known to have existed at that time – provided only that one disregards the fact that half a dozen other possibilities are equally logical and equally likely,’ Kober said in a lecture delivered to the Yale Linguistics Club in 1948.

Although Ventris wrote in the Mid-Century Report that he was ‘forced by pressure of other work [i.e. his architectural job] to make this my last small contribution to the problem’, giving up his work on the decipherment proved easier said than done; rather, within a year he had given up his job to work full time on Linear B. His methodology was fundamentally based on Kober’s identification of groups of inflected words, which Ventris dubbed her ‘triplets’, and her construction of a grid of related signs: through further detailed analysis, and after the publication of the Pylos tablets increased the amount of material available, Ventris was able to identify many more inflection patterns and other related words, and thus to expand the grid significantly – as well as to begin testing possible sound values for the signs. As he had done with the Mid-Century Report, he recorded and circulated his working in the form of twenty ‘Work Notes’, detailing the establishment and testing of each hypothesis (figure 4 overleaf). Most of these hypotheses, of course, met with little success – relatively few of the values shown in the grid from Work Note 17 were later proven to be correct. In fact, Ventris was convinced that Etruscan, or a related language, was the most likely candidate for the language of Linear B, and many of his Work Notes are devoted to (unsuccessfully) exploring this hypothesis.

The advantage of the grid system, however, was that it allowed for the testing of any given decipherment hypothesis independent of any suggestion as to the language of the Linear B texts; and eventually, in early 1952, Ventris made a breakthrough with one particular series of hypotheses. It was clear that the sign represented a vowel, rather than a consonant–vowel sign, because of its very high frequency at the beginnings of words (vowels in the middle of words will usually follow a consonant, and so in a syllabic script will be written with a consonant–vowel sign: signs for pure vowels will therefore occur most often at the start of words); he assumed that it might represent . He also assumed, based on similarities with signs in the Cypriot Syllabic script (see above), that  was and  was ; if those were correct, then the use of the grid meant that he could assign the consonant  to any sign in the same row as  and the vowel  to any sign in the same column;  and  could likewise be assigned to signs in the same row or column as . Thus, the sign , which shares a row with  and a column with , would have the value , as in the example grid below:
Figure 4
An example of the syllabic grid from Ventris’s Work Note 17, the last version of the grid to be circulated before the actual decipherment (Mycenaean Epigraphy Group, Faculty of Classics, University of Cambridge)
At this point, Ventris made an inspired guess: that the words which featured in Kober’s ‘triplets’, which often appeared in headings on the Knossos tablets, might be place names – and if so, they might correspond to Cretan place names known from later Greek sources. For instance, the harbour of Knossos was called Amnisos during the classical period; in syllabic form, this would be spelt \textit{a-mi-ni-so} (since a syllabic script would have no signs representing single consonants, these would be represented either with a ‘dummy vowel’, as in \textit{mi} for \textit{m}, or simply omitted, as in the final -\textit{s}). If he had correctly identified the signs for \textit{a} and \textit{ni}, then the word would be \textit{t-mi-ni-so}. One word among the group of possible place names seemed to fit: \textit{t-mi-ni-so}; if this really was Amnisos, then \textit{t} would be \textit{mi} and \textit{so}, and the fact that the sign \textit{t} had already been identified in the grid as having the vowel -\textit{i} helped to support this. Another possible place name was \textit{t-mi-ni-so}, ending in the sign now identified as \textit{so}. Since the other two signs were in the same column of the grid as \textit{so}, they must share the vowel \textit{o}; the second sign was in the same row as \textit{ni}, so must share its consonant, making it \textit{no}. A place name \textit{o-no-so} was surely \textit{ko-no-so}: the palace of Knossos itself.

<table>
<thead>
<tr>
<th>Consonant</th>
<th>I</th>
<th>Vowel 2</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>ti</td>
<td>t-</td>
<td>ta</td>
</tr>
<tr>
<td>2</td>
<td>-i</td>
<td></td>
<td>-a</td>
</tr>
<tr>
<td>N</td>
<td>ni</td>
<td>n-</td>
<td>na</td>
</tr>
<tr>
<td>4</td>
<td>-i</td>
<td></td>
<td>-a</td>
</tr>
<tr>
<td>5</td>
<td>-i</td>
<td></td>
<td>-a</td>
</tr>
</tbody>
</table>

Of course, identifying place names proved nothing about the language itself, since place names are frequently passed on from one language to another – but Kober’s ‘triplets’ provided one further clue. The group headed by \textit{t-mi-ni-so}, for instance, could now be read \textit{ko-no-so}, \textit{ko-no-si-ja}, \textit{ko-no-si-jo}, interpretable as \textit{Knossos, Knossia, Knossios}, with the last two words containing the Greek adjectival endings -\textit{ia} and -\textit{ios} and meaning ‘woman from Knossos’ and ‘man from Knossos’. As Ventris continued using the grid to fill in more values and read more of the texts, everything pointed towards a result that he had never expected: the language of the Linear B tablets was Greek. His Work Note 20, dated 1 June 1952 and headed ‘Are the Knossos and Pylos tablets written in Greek?’, introduced this possibility as a ‘frivolous digression’, suggesting a few identifications of Greek vocabulary: the words for ‘total’, for instance, would be \textit{to-so}.
(probably pronounced *tosoi*) and *to-sa* (*tossai*), corresponding to the masculine and feminine forms of the classical Greek word meaning 'so many'; the words previously identified as 'boy' and 'girl' would be *ko-wo* (*korwos* = classical *koros/kouros*) and *ko-wa* (*korwā* = classical *korē*). Although at this stage he still thought that these Greek words 'may well turn out to be a hallucination', this view changed quickly. Just a month later, in a radio broadcast about 'The Cretan Tablets' that he had been invited to present for the BBC (see p. 11), he felt confident enough to announce:

> During the last few weeks, I've suddenly come to the conclusion that the Knossos and Pylos tablets must, after all, be written in Greek – a difficult and archaic Greek, seeing that it's 500 years older than Homer and written in a rather abbreviated form, but Greek nevertheless.\(^{13}\)

One of those listening to this broadcast was John Chadwick (1920–88, figure 5),\(^{14}\) a classicist who was just about to start his first lectureship in classical linguistics at Cambridge.

Chadwick had long been interested in Linear B himself, but had not been actively studying it for some time (prior to obtaining his lectureship he had been working on the *Oxford Latin Dictionary*) and so was not among those to whom Ventris had circulated his Work Notes. After listening to the broadcast, however, he obtained a copy of Ventris's work from Sir John Myres, and after just a few days of studying it, he was entirely convinced. Chadwick's knowledge of the history of the Greek language (he was working on a set of lectures on the Greek dialects at
the time), combined with his cryptographic experience (like Bennett, he had worked as a cryptographer during the Second World War, breaking Italian and Japanese codes in Alexandria and Bletchley Park; see chapter 6), enabled him to see that Ventris had indeed ‘cracked the code’ of Linear B. He wrote to Ventris:

Let me first offer you my congratulations on having solved the Minoan problem, it is a magnificent achievement and you are yet only at the beginning of your triumph . . . if there is anything a mere philologist can do please let me know.

_Chadwick to Ventris, letter of 13 July 1952_

Ventris wrote back straight away:

It is very encouraging to hear from someone who has been working on the Minoan problem that they agree with the Greek approach; because frankly at the moment I feel rather in need of moral support . . . I’ve been feeling the need of a ‘mere philologist’ to keep me on the right lines.

_Ventris to Chadwick, letter of 13 July 1952_

As a classical linguist Chadwick was able to explain many of the linguistic features of the Linear B texts which were puzzling Ventris, but which were exactly what Chadwick expected for a dialect of Greek that was hundreds of years older than classical Greek. Even in his first letter Chadwick was already able to provide suggestions for interpretations of particular words and identifications of signs to which Ventris had not yet assigned a value: most notably, he (correctly) suggested that the sign 𐀢 had the value _pu_ and identified the name of Pylos itself in the tablets from that site.

Thus began a four-year collaboration between Ventris and Chadwick. The following year, 1953, they jointly published the decipherment in an article modestly entitled ‘Evidence for Greek Dialect in the Mycenaean Archives’ – but after all, the decipherment was so far only a theory. To prove whether it was correct, more evidence would be needed: this was fortuitously provided just a short time later by Carl Blegen, the excavator of Pylos, who was examining a group of tablets which had been discovered the previous year but which had only recently been cleaned to make them legible. Blegen decided to try reading some of the tablets using Ventris and Chadwick’s values for the signs. On studying one tablet in particular (now numbered PY Ta 641), he found a remarkable correspondence between the ideograms representing different types of vessels and the undeniably Greek words describing them (figure 6 overleaf): the words _ti-ri-po_ and _ti-ri-po-de_, followed by an ideogram representing a three-legged vessel 𐀢, were clearly _tripos/tripodes_ ‘tripod(s)’; ideograms showing four, three, or no handles (e.g. 𐀢, the three-handled pot) were described as _qe-to-ro-we_ (κ_ετρόωες_, literally ‘four-eared’, i.e. ‘four-handled’; _ti-ri-jo-we_ (τρι_όωες_) ‘three-handled’; and _a-no-we_ (α_ν_όωες_) ‘no-handled’. As an astonished Blegen wrote to Ventris, ‘All this seems too good to be true. Is coincidence
Dear Sir John,

I had a letter from Blagen this afternoon. He has been beginning to get ready his tablets of last year from Pylos for photography, and has tried out our experimental values on one or two. He wrote with some excitement to give me the text of his No 641, which seems to him to contain the clinching evidence from numbers that we have long prayed for. He says "all this seems too good to be true: is coincidence emulated ?". Here's a copy of his drawing of it:-

The first line isn't easy to make out, apart from an unmistakable ti-ri-po τρυπός / plural: ti-ri-po-de τρυπόεις, but lines 2 and 3 are very exciting:—

<table>
<thead>
<tr>
<th>Line</th>
<th>Text</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>di-pa me-so-e ge-to-ro-me</td>
<td>&quot;with 4 ears&quot; of our Pylos</td>
</tr>
<tr>
<td></td>
<td>dέτερα μέτσων κτερόφνης</td>
<td>quadrupeds</td>
</tr>
<tr>
<td>2</td>
<td>di-pa-e me-ze-o ti-ri-o-wre-e</td>
<td>&quot;with 3 ears&quot;</td>
</tr>
<tr>
<td></td>
<td>dέτερα μέτσες τρυπόεις</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>di-pa me-wi-jo ge-to-ro-me</td>
<td>&quot;with no ears&quot;</td>
</tr>
<tr>
<td></td>
<td>dέτερα μεφιου κτερόφνης</td>
<td></td>
</tr>
</tbody>
</table>

The masculine dέτερα (for classical plural dέτερα) is odd. Note the alternative spellings of the "3-handled" adjective. The last entry immediately reminds one of the phrase "ἀνοφελής" on Knossos tablet 675b.1-5, which also has its ideogram as a "handle-less" jug in the last line. This presumably resolves itself into:

<table>
<thead>
<tr>
<th>Line</th>
<th>Text</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>di-pa a-no-wo-to dέτερα ἀνόφελος</td>
<td>&quot;with no ears&quot;</td>
</tr>
</tbody>
</table>

The masculine dέτερα (for classical plural dέτερα) is odd. Note the alternative spellings of the "3-handled" adjective. The last entry immediately reminds one of the phrase "ἀνοφελής" on Knossos tablet 675b.1-5, which also has its ideogram as a "handle-less" jug in the last line. This presumably resolves itself into:

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<tbody>
<tr>
<td>4</td>
<td>di-pa a-no-wo-to dέτερα ἀνόφελος</td>
<td>&quot;with no ears&quot;</td>
</tr>
</tbody>
</table>

The variation in the adjectival compound is the same as that shown in the Greek for "2-handled":

<table>
<thead>
<tr>
<th>Line</th>
<th>Text</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ἄμφωνος from -ώνος</td>
<td>-ων-</td>
</tr>
<tr>
<td></td>
<td>ἀμφωτος from -οτος</td>
<td>-οτε-</td>
</tr>
</tbody>
</table>

All we want now is for Blagen to discover "5-handled", "2-handled" and "1-handled": *τέχνων, *τέφρων, *τετράφρων [567A in line 1 27].

Yours,
Michael Ventris
excluded?’ (letter of 16 May 1953). It was; the correspondences were simply too close to be due to anything other than a correct identification of Linear B as representing Greek, and the decipherment was, effectively, proven to all but the most sceptical.

Ventris and Chadwick continued their close collaboration, this time on a book entitled *Documents in Mycenaean Greek*: an ambitious project to publish interpretations of 300 Linear B texts, together with explanations of the decipherment process, the structure of the script, and the evidence it provided for Mycenaean society, which they remarkably completed just three years later in 1956. Both made trips to Greece during this period to study newly discovered tablets: on one such trip to Heraklion in April 1955, Chadwick famously joined two fragments of tablets from Knossos to produce a text reading 𐀂 𐀦  𐂃 – the ideogram for ‘horse’ following the word *i-qo*, clearly Greek *(h)ikkwos* (classical *hippos*) ‘horse’ – a discovery which went a long way towards convincing the previously sceptical director of the Heraklion Museum, Nikolaos Platon, of the decipherment’s correctness. The following year both Ventris and Chadwick attended the first ever international conference on Linear B, held at Gif-sur-Yvette near Paris; a few months later, during one of Ventris’s trips to Greece, Chadwick sent him a postcard – written in Linear B – telling him that the manuscript of *Documents* had been sent to the printer. The book would appear in the autumn of 1956, but Ventris never saw it published: a few weeks earlier, while driving late at night, he had been killed when his car collided with a lorry parked in a lay-by. Like Kober, he died tragically young – aged just thirty-four.

**After the decipherment: further challenges**

Ventris’s decipherment and his publications with John Chadwick in 1953 and 1956 were just the beginning: suddenly an entirely new field of ‘Mycenaean studies’ was opened up, as the Linear B texts provided linguists with the earliest attested stage of any European language, and archaeologists with written evidence of a society previously known only through its material remains. Both Chadwick and Bennett were at the forefront of the development of this new academic discipline, and were instrumental in producing new editions of Linear B texts, in addition to a vast range of other publications relating to the script and the tablets’ interpretation. Bennett held posts in classics at Yale, the University of Texas and the University of Wisconsin; Chadwick remained in Cambridge for his whole career, and it is thanks to him that the Faculty of Classics still possesses a large collection of reference and archival materials relating to Linear B, including the letters he and Ventris exchanged between 1952 and 1956. Chadwick also produced a second edition of *Documents in Mycenaean Greek* in 1973, as well as the best-known, and still extremely popular, account of Ventris’s achievement, *The Decipherment of Linear B*.17

Over the sixty-five years since Ventris’s decipherment, intensive study of the Knossos and Pylos tablets, and of those discovered more recently at sites such as Mycenae, Thebes and Chania, has vastly increased our
understanding of the Linear B tablets and the Mycenaean society by which they were produced (see chapter 3), but of course many questions remain. Perhaps the greatest challenges are the other undeciphered Cretan and Cypriot scripts: even the best-understood of these, Linear A – whose close relationship to Linear B means that we may be able to infer the approximate sound values of many of its signs – is still largely obscure and records an unknown language, while even less is known about other related scripts such as Cretan Hieroglyphic and Cypro-Minoan (see chapter 4). But even the ‘deciphered’ Linear B is very far from being wholly understood. When Ventris made his announcement on the radio, he had actually assigned sound values only to around two-thirds of the script’s syllabic signs, and although this number was increased significantly by his, Chadwick’s, and others’ subsequent work, fourteen Linear B signs – around a sixth of the syllabary – still remain ‘undeciphered’, their sound values unknown or uncertain. In most cases, the status of these (generally rare) signs is unlikely to change unless further examples are found to provide evidence as to their values.

Even when a tablet can be read in its entirety, its content may still remain obscure if its terms cannot be identified with known Greek words; and even where texts can be fully translated, their laconic nature makes them likely to raise as many questions as they answer. Consider this entry in lines 5 and 6 of a land-holding tablet at Pylos (PY Ep 704, figure 7), one of the relatively few complete sentences attested in the Linear B texts:

\[
\begin{align*}
\text{𐀁𐀪 𐀲 𐄀 𐀂 𐀋𐀩𐀊} & \quad \text{𐄀 𐀁𐀐 𐄀 𐀁 𐀄𐀐 𐀵 𐀤 𐄀} & \quad \text{𐀁𐀵 𐀛𐀍 𐄀 𐀁𐀐 𐀁 𐄀 𐀳𐀃} & \quad \text{𐀅𐀗𐀆𐀖 𐄀 𐀞𐀯 𐄀 𐀒 𐀵 𐀙𐀃} & \quad \text{𐄀 𐀐 𐀐 𐀕𐀙𐀃} & \quad \text{𐄀 𐀃𐀙𐀵} & \quad \text{𐄀 𐀁𐀐 𐀁} \\
\text{e-ri-ta} & \quad \text{i-je-re-ja} & \quad \text{e-ke} & \quad \text{e-u-ke-to-qe} & \quad \text{e-to-ni-jo} & \quad \text{e-ke-e} & \quad \text{te-o} & \quad \text{da-mo-de-mi} & \quad \text{pa-si} & \quad \text{ko-to-na-o} & \quad \text{ke-ke-me-na-o} & \quad \text{o-na-to} & \quad \text{e-ke-e}
\end{align*}
\]

\[\text{Eritha (h)iereia (h)ek\'e}i\ \text{euk\'e}toi\-\text{k\'e}\ \text{etônion (h)ek\'e}\text{hen\ }\text{\textquotesingle}e(h)\text{\'oi\ }\text{dâm}os\ \text{de}\ \text{min\ }\text{p\'äsi\ ktoinähôn\ k\'e}k\'\text{emenähôn\ onâton\ (h)ek\'e}\text{hen}}\]

Eritha the priestess has and claims to have an *etônion* [landholding] for the god, but the local authority says she has a lease of public[?] land.

Clearly, a ‘legal’ dispute of some kind is going on: Eritha has been allocated some land to use, but she and the local administrative body (the *dâmōs*) who assigned it to her now disagree on the nature of her allocation – she claims it to be an *etônion*, a term whose precise meaning is unclear but which obviously refers to a more advantageous landholding arrangement than the ‘lease’ (*onâton*, literally ‘benefit’) the *dâmōs* claims she has. From this entry, and other similar entries recording land allocations, we can extract a good deal of information about Mycenaean Pylos: the people and authorities who controlled the allocation of land, and the people who received it from them; the economic position of religious personnel (Eritha holds her land ‘for the god’ in her capacity as priestess); even the
social position of women, who rarely appear as high-status individuals in the tablets except in religious roles, as here. And yet there are so many questions that this text, which is ultimately concerned mainly with recording the quantity of land in question, does not answer: why did the dispute arise? Was it all a misunderstanding, was the dāmos trying to cheat the priestess, or was Eritha out to get a better deal for herself? Who was responsible for resolving such disputes, and how did they do so in this case – or was the issue still ongoing when the destruction of the palace preserved this tablet for archaeologists to find three millennia later? Such questions may never be answered, but that we can even begin to ask them is due to the work of all those who contributed towards Linear B’s decipherment and subsequent study. The decipherment of Linear B not only ‘cracked the code’ of the script, but in doing so turned the tablets into a unique – and tantalizing – window into the Mycenaean world.
Notes

Chapter 2
1 Davies 1987.
2 Evans 1935.
3 Evans 1952.
4 Chadwick 1992, 26–32.
5 Briggs 2011.
6 Fox 2013.
7 E.g. Kober 1946 and 1948.
8 Kober 1948, 103.
9 Robinson 2002.
11 Quoted in Fox 2013, 103.
13 Ventris 1952.
14 Killen and Morpurgo Davies 2002.
15 Ventris and Chadwick 1953.
16 Ventris and Chadwick 1956.

Chapter 3
1 For those interested in finding more, beyond this exhibition catalogue, the excellent three-volume companion of Duhoux and Morpurgo Davies (2008–14) offers the most detailed treatment of Mycenaean Greek texts and their world; see also Del Freo and Perna (2016).
2 Haskell et al. 2011.
3 The equivalent transport container in the eastern Mediterranean was a vessel called the Canaanite jar, similar in concept to later Graeco-Roman amphoras; their capacities ranged from seven to twenty-seven litres (Aruz et al. 2008, 317–20).
4 Judson 2013.
5 E.g. Jones 2015.
6 Killen 1964.
7 Nosch 2014.
8 Halstead 1993.
9 It is worth noting that the texts only distinguish two forms of grain, almost certainly wheat and barley, while the archaeobotanical record not only documents different types of wheat, but also a broad range of pulse crops (Halstead 1995).
11 A fragmentary marble table top with indentations for inlays was found in Carl Blegen’s excavations at the palace at Pylos in 1954 (Blegen 1955, 34).
12 On Mycenaean feasting in general, see Wright 2004.
13 There are several others, but uncertainties remain about their identification with specific later sites (McArthur 1993).
15 Finley 1957, 159.
16 Postgate 2013.

Chapter 4
1 See, for example, the chapter by Roeland P.-J. Decorte in Steele 2017.
2 Steele and Meißner in Steele 2017.
3 See for example the chapter by Miguel Valério in Steele 2017.
5 Steele 2013, chapter 2.
6 Steele 2017.

Chapter 5
2 http://people.ku.edu/~jyounger/AegeaNet/.
4 https://www2.hf.uio.no/damos/Dāmos, a word mentioned in Mycenaean Greek, translates as ‘district’, ‘community’ or ‘people’.
5 http://liber.isma.cnr.it/.
6 http://sirarthurevans.ashmus.ox.ac.uk/collection/linearb/images.php.
7 Freely available from its developer, the nonprofit organization Cultural Heritage Imaging (CHI): http://culturalheritageimaging.org/What_We_Offer/Downloads/View/.
8 http://calibra.classics.cam.ac.uk/.
9 https://arachne.dainst.org/.
12 http://www.palaeolexicon.com/Languages/Index.
13 http://www.people.ku.edu/~jyounger/.
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Chapter 4