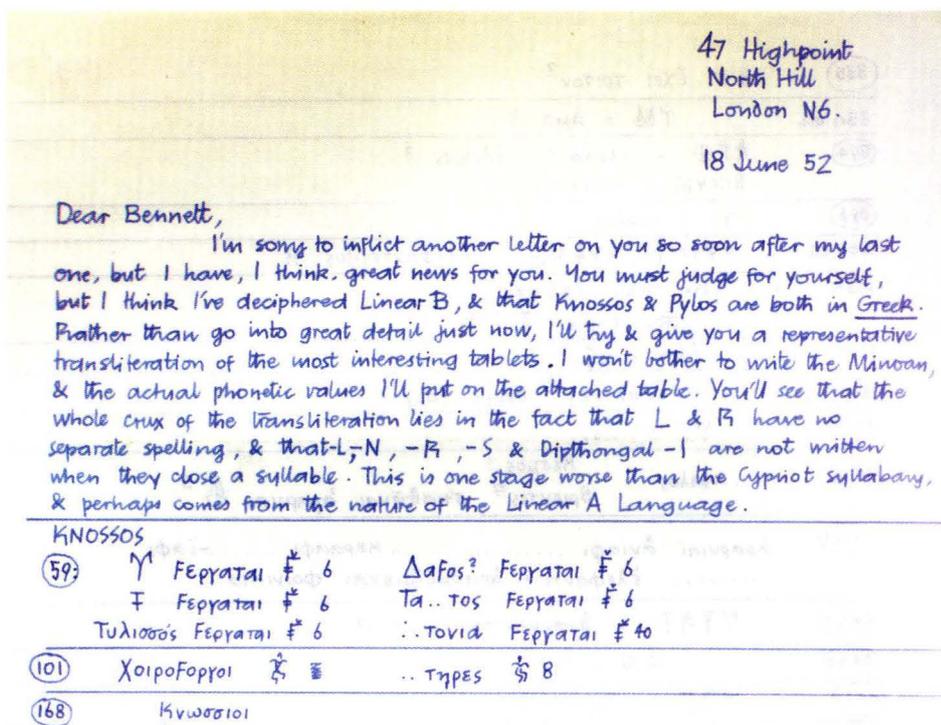


Michael Ventris's Blueprint

Letters reveal how a British architect and two American scholars worked to decipher a Bronze Age script and read the earliest writings in western civilization

Dear Bennett,

I'm sorry to inflict another letter on you so soon after my last one, but I have, I think, great news for you. You must judge for yourself, but I think I've deciphered Linear B, & that Knossos and Pylos are both in Greek. Rather than go into great detail just now, I'll try & give you a representative transliteration of the most interesting tablets. I won't bother to write the Minoan, & the actual phonetic values I'll put on the attached table. You'll see that the whole crux of the transliteration lies in the fact that L & R have no separate spelling, & that -L, -N, -R, -S & Diphthongal -I are not written when they close a syllable. This is one stage worse than the Cypriot syllabary, & perhaps comes from the nature of the Linear A language.



Opening of the letter from the British architect Michael Ventris to the American Classicist Emmett L. Bennett, Jr., announcing the decipherment of Linear B as *Greek*. Ventris explains that, as is typical for open-syllabic scripts, certain related sounds are represented by the same sign. For example, in Linear B one sign stands for *ra* and *la*, another for *re* and *le*, and so on. Also some sounds are not represented when they close a syllable. Ventris then presents a series of texts interpreted in Greek according to his deciphered values, beginning with tablet Ce 59 from the major Cretan palatial site of Knossos.

The original of this transatlantic (London-to-New Haven) letter, dated 18 June 1952, is treated as a sacred artifact, and looked upon with commensurate awe, by those who understand the meaning of its technical discussion and the significance of its stunningly understated

announcement. The manuscript is stored in the archives of the Program in Aegean Scripts and Prehistory (PASP) at The University of Texas at Austin among selected letters of Michael Ventris to two Americans, Alice E. Kober and Emmett L. Bennett, Jr. Forty years ago these two

scholars shared Ventris's passionate interest in the inscriptions, mainly clay tablets, belonging to the three then undeciphered systems of writing (Minoan pictographic, Linear A and Linear B) used on the island of Crete and the Greek mainland during the second millennium B.C.



Michael Ventris (1922-1956).

In the remaining pages of this letter and in the next of June 26, 1952, Ventris explained to Bennett some of the key details and dramatic results of his decipherment of Linear B. He did not have to describe to Bennett the general significance of this breakthrough. They both well understood. Greek of the Homeric Age (1400-1200 B.C.) could now be read for the first time. The features of Bronze Age society, as it then was known to exist through archaeological investigation, beginning in the late 1860s, at palatial centers like Mycenae, Tiryns, and Pylos in the southern Balkan peninsula and Knossos in north central Crete, could now be reconstructed from contemporary records. Ventris did

send in the second letter a list entitled "*Names of professions at Knossos and Pylos With tentative Greek readings.*" It contained sixty entries divided by Greek noun classes. These were drawn primarily from tablets which contained lists in which the Linear B ideogram or object-sign for "MAN" followed each phonetically written entry. This provided a fairly secure context for Ventris's preliminary conjectures and made him feel that "the whole thing isn't a hallucination." Despite any doubts Ventris had about the validity of his decipherment—he confesses in his second letter to "a rather painful reaction from [his initial] optimism"—80 percent to 90 percent of his interpretations of the items in this list are still generally accepted today. "Priest, fuller, potter, smith, granary workers, cooks, bakers, bow-makers, goldsmiths, armourer?, commander, goatherd, priestess, shepherd, carpenter, heralds, king, messenger." The very names of prehistoric slaves, skilled workers and craftsmen, religious and political officials, and even of Greek and pre-Greek gods and goddesses could be read and compared with those in the Homeric poems and later historical sources.

These are exciting particulars. The most surprising and important general result of the decipherment is emphasized by Ventris in his letter, again with characteristic simplicity. He underlines the word "Greek." A serious, often vicious—and in that sense all too scholarly—controversy about the relationship between Cretan (Minoan) and mainland (Mycenaean) culture had divided archaeologists and linguists since the 1920s. Sir Arthur Evans, who excavated the major Cretan palatial site of Knossos, believed that Minoan civilization was predominant in the Aegean throughout the second millennium and that mainland Mycenaean society was simply a provincial offshoot, which would have used the Minoan script and language for its administrative affairs. The opposing school emphasized the original and independent aspects of mainland society. Its adherents did not have any better way of explaining the embarrassing presence of *Minoan* Linear B tablets and painted pottery at the mainland sites of Pylos, Thebes, and Eleusis. Like them, Ventris himself

MYCENAEAN SYLLABARY

A etc	a	ɛ	A	i	o	u
z ² T Δ Θ	ta	te	ti	to	tu	
K Γ X	ka	ke	ki	ko		
Π Β Φ	pa	pe	pi			
	ja	je		jo		
F	wa	we	wi	wo		
Σ	sa		si	so		
Λ Ρ	la/ra	le/re	li/ri	lo/ro	lu/ru	
M	ma	me	mi	mo		
N	na	ne	ni	no		

The homophones are distinguished by having a fixed use in different words & endings.

-λ, -p, -σ, -v, -i not written when they close a syllable, except rarely. -i written everywhere it is original, never where it is compensatory only (in -ov).

MV. 18 June 52

The main phonetic signs of the Mycenaean script and their values, as Ventris understood them in mid-June, 1952. Ventris uses Greek characters along the left side of the grid to indicate the precise value or values he thought the signs in the corresponding rows had. Signs in the first row stood for pure vowels, long or short. Signs in the third row stood for *k*, *g*, and *kh*, plus the appropriate vowel; those in the sixth row for *w* plus vowels. Ventris had still not figured out that Linear B distinguished *t*-signs from *d*-signs and also had special signs for the labiovelar sounds, absent in later Greek, but preserved as *q* in the related Latin language and alphabet. Hence the number of signs in the grids of the second and fourth rows. Annotations to the grid by Emmett L. Bennett, Jr.

had never entertained the notion that Linear B could be Greek, and he long thought that Linear A and Linear B would turn out to represent the same language. A single fine stroke of his pen is his simple way of revealing his shock upon discovering a fact that would call for a radical new vision of Aegean prehistory. Homerists, archaeologists, and historians alike would soon be grappling with the notion of a late Greek Bronze Age.

On the fortieth anniversary of this tremendous intellectual feat, which literally created the field in which I work, I wanted to understand better how and why it was accomplished and what its legacy has been. I turned again to the letters and to the historical collection of offprints of articles in *PASP*, the core of which was donated by Bennett himself—from what he called his *ARTHROTHEKE*—and by Frank Stubbings of Cambridge University, an expert in the connections of the Mycenaean

world with contemporary Cyprus and the Levant and with the later Homeric epics. Almost everything ever written, and even informally circulated, about Minoan, Mycenaean, or Cypriote inscriptions can be found in our file drawers, often with personal annotations by the authors or recipients. I also turned once more to an account of Ventris's work, *The Decipherment of Linear B*, written by John Chadwick. In 1952 Chadwick had just been appointed to a lectureship in philology at Cambridge. He immediately grasped the correctness of Ventris's decipherment and volunteered his help in a letter of July 13, 1952: "Anyway, if there is anything a mere philologist can do, please let me know." Chadwick collaborated with Ventris on writing the first scholarly and technical explanation of the decipherment in the *Journal of Hellenic Studies* for 1953. Their

work together continued until Ventris's untimely death in a car crash on September 6, 1956.

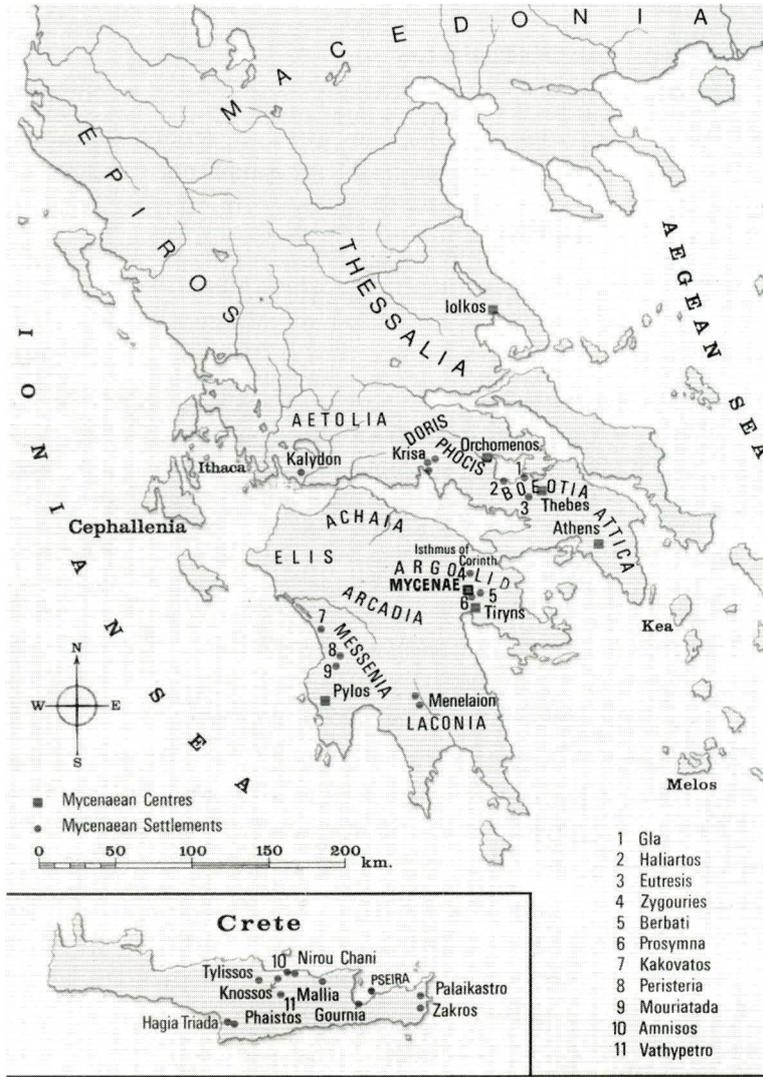
At the outset (1948-49) of the preserved correspondence, Bennett, Kober, and Ventris were all young and exceptionally gifted, with talents that complemented one another's. Kober had just turned forty-two, when Ventris wrote to her on 22 February 1949—enclosing a copy to be forwarded to Bennett—about problems in compiling standard indices, based on frequency of occurrence, of the 90-100 phonetic signs in the closely related scripts A and B. He was then concentrating on the earlier Linear A and kiddingly urged her in a postscript to "hurry up & decipher the thing [Linear B] for us." In retrospect, these words take on a fatally ironic tone. Alice Kober died of cancer on May 16, 1950. The University of Texas has her meticulously hand-

written, i.e., pre-computerized, indices of Linear A, Linear B, Lycian, and other miscellaneous inscriptions. These are composed in fountain pen on minute slips of brittle pink and brownish paper stored in cartons of the Lucky Strike and Fleetwood cigarettes which brought on her early death.

Kober had become interested in the Minoan scripts as an undergraduate Latin major with a Greek minor, but for her Ph.D. degree at Columbia (1932) she wrote a conventional dissertation on *Color Terms in the Greek Poets*. In 1935 Sir Arthur Evans finally published a sizable selection of the Linear B tablets from Knossos that he had discovered at the turn of the century. In the same year, Kober was appointed an assistant professor at newly founded Brooklyn College. She thus had motive and opportunity to make a proper assault on Linear A and B. She began by retooling herself in statistics, in the

principles of the hard sciences of physics and chemistry, and in a wide range of ancient scripts and languages. By so doing, she was able to devise and employ scrupulously sound methods for analyzing the Minoan texts. She thereby identified, in an article published in *American Journal of Archaeology* or *AJA* in 1948, patterns of variation at the ends of sign-groups in the B script ("Kober's triplets") which eventually suggested to Ventris possible test values for signs in the course of his decipherment. In turn, his decipherment of Linear B proved that "Kober's triplets" were inflected endings of words written in an open-syllabic version of early Greek. As we have seen, this confirmation of the soundness of her scholarship came just over two years too late for her own appreciation.

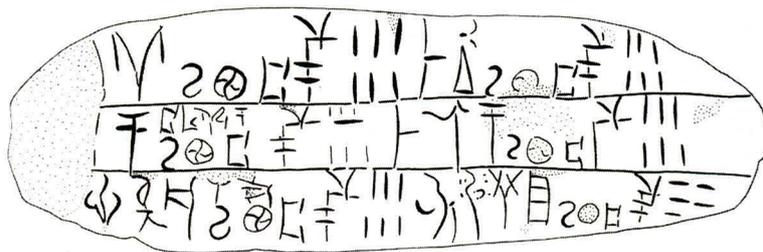
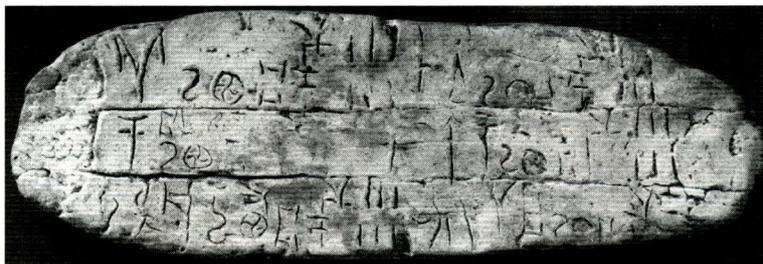
Emmett L. Bennett, Jr. was thirty and an instructor in the Depart-



Map of the principal sites of Minoan (Cretan) and Mycenaean (Greek) civilizations.

ment of Classics at Yale University when he received the first (April 20, 1949) of his preserved letters from Ventris. In this letter Ventris expresses his "great confidence in your [i.e., Bennett's] and Dr [sic] Kober's handling of the Pylos and Knossos 'B' material" and again declares his intention to concentrate on the earlier Linear A texts: "I thought it would not queer your [Bennett's] pitch too much to confine myself to a study of the 'A' material." He also speaks of himself modestly, and redundantly, as being "only a 'spare time scholar'." I have now read an assortment of letters from and to all the principal researchers in Aegean scripts in the late 1940s and 1950s. American, Austrian, British, Bulgarian, Czech, French, German, Greek, Italian, Spanish, and Swedish all complain about their lack of time to work on their main scholarly passion, and all assume that their plight is peculiar to themselves.

Bennett perhaps came closest to being the one "specialist" in this international group. For his dissertation, completed in 1947 at the University of Cincinnati, he had studied the palaeographical features of the Linear B tablets that had been discovered in 1939 on the Greek mainland at Pylos. During World War II, he had worked at breaking Japanese codes. He thus had a firsthand familiarity with the tablets and the nature of writing upon them. He also had an uncompromising appreciation of those methods of cryptanalysis that could be applied to the problems posed by the brief, almost shorthand Linear A and Linear B inscriptions. These specialist virtues produced a brilliant article, still unsurpassed, on the Minoan Linear A fractional system in the 1950 *A/A*, followed by careful signaries and textual transcriptions, the absence of which had long limited the chances of a valid decipherment. Ventris



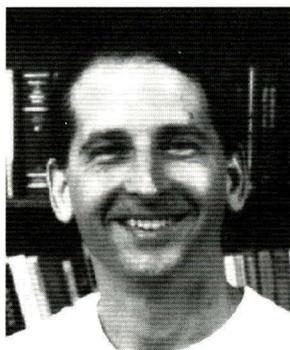
Original photograph (ca. 1904 by the photographer for Sir Arthur Evans) and current drawing of tablet Ce 59 from Knossos, illustrating the difficulty of establishing correct texts upon which to base a decipherment. The photograph comes from the study collection of Emmett L. Bennett, Jr., who inherited it from Alice E. Kober and donated it to the PASP archives. The writing surface of the tablet is damaged and broken at its left edge, and the extant line .3 is over an erasure. In his transcription of 18 June 1952, Ventris did not notice, because of the direction of light in the photograph, that the first numerical entry in line .2 had been erased and the number "6" replaced by "10." He also did not transcribe or interpret the sign groups written above the descriptive term *we-ka-ta* "workers" that precedes and describes the ideogram for bovid in each line. We should also note that Ventris transcribed the male version of the sign for bovid in all six entries. In fact, the second entry in line .2 lacks the two horizontal cross-strokes that distinguish male animals from generic animals. Fortunately, none of these particularities was important for Ventris's purposes.

remarked in a letter to the great Swedish prehistorian Arne Furumark, which I was permitted to read in 1992 while lecturing at the University of Uppsala, that Bennett's model study of the Minoan fractions had encouraged him to continue working on Minoan scripts, since it demonstrated an approach by which hard facts about the scripts could be established beyond all doubt.

Many of the letters from Ventris

to Bennett deal specifically with the characters of the scripts, how they are formed, how their shapes might suggest relationships in phonetic values, how their frequencies can best be determined and analyzed (by sheer numbers of occurrences or by the numbers of sign groups in which they are used), and even the significance of their resemblance to the characters of a distantly related syllabary used on the island of Cyprus during the first millennium B.C. to write Greek and a still unknown, indigenous language. It is no easy task to establish the repertory of signs in a script which contains about 100 characters of unknown values. We now know that about 70-100 scribes wrote the tablets from Knossos and about 25-35 scribes worked on the tablets

from Pylos. Each scribe has peculiarities. Each can write his signs simply or elaborately, with casual haste or special care. When the phonetic values of the individual signs were not yet known, one could not be sure whether an alteration of shape was meaningful or accidental. Does that vertical stroke in that letter you wrote represent "l" or an uncrossed "t"? Are you giving someone a "tip" or some "lip"? One could also not be



Dr. Thomas G. Palaima is the Dickson Centennial Professor of Classics and Director of the Program in Aegean Scripts and Prehistory at The University of Texas at Austin. He is an expert in the earliest form of Greek writing, Linear B. The recipient of a MacArthur fellowship, Dr. Palaima is particularly interested in the development of writing and administrative systems in the eastern Mediterranean in the second millennium B.C. He is the author or editor of five books and two dozen articles and has received Fulbright research awards to Greece and Austria. In 1986 he founded a research center at UT Austin for the study of Bronze Age inscriptions and civilizations, the Program in Aegean Scripts and Prehistory, which has become the best place in the world to study this material. Dr. Palaima received his B.A. from Boston College and his Ph.D. from the University of Wisconsin.

sure that an added embellishment did not impart a different value to a sign, for example, as in German "ü" versus "u" or French "ê" versus "é". All of this had to be figured out in linguistic darkness by paying careful attention to individual and common features of writing and to the patterns of sign occurrence within words. Bennett and Kober paid attention to these. Ventris paid attention to these and to them. In the month of his decipherment, on June 5, 1952, Ventris officially adopted for his sign-group index the signary order for the Linear B script DESIGNED BY DR. BENNETT FOR 'THE PYLOS TABLETS.'

Ventris himself was the most precocious of the trio. He would only turn thirty a month after he proposed his decipherment: specifically on July 12, a birthday he shared, by remarkable coincidence, with Emmett Bennett. An architect by rich natural talent, personal choice, and training—he received the first *Architects' Journal* Research Fellowship in 1956—Ventris had become fascinated with the Aegean scripts while still a school-boy doing "a bit of Greek." In 1936 at the age of fourteen he had attended an exhibition in London at which Sir Arthur Evans was speaking about the palatial civilization of Minoan Crete. Evans was also the first serious student and classifier of Aegean writing and devoted a good portion of his lecture to the three systems of writing that had been used at various stages of cultural development on the island. Ventris was fascinated. From then on, he dedicated his 'spare-time' self to deciphering these scripts. His first article on the subject, "Introducing the Minoan Language," was published in *AJA* in 1940. He concealed from the editors the irrelevant information that he was just eighteen years old.

It is no exaggeration to say that



Two of Alice Kober's cigarette-carton files. The carton of Lucky Strikes contains, according to Kober's label, Mycenaean words in "alphabetical" order, specifically sign-groups beginning with the Linear B sign now known to represent *e* through those beginning with *a*. Kober was following the numerical order of the signs established by Sir Arthur Evans. The Fleetwood carton contains hand-drawn texts of the Pylos tablets filed according to the series classification scheme proposed by Bennett. Individual sign groups are circled in red.

Ventris brought together the dozen or so scholars who were seriously working worldwide on the scripts. He did this in the critical period from 1948 until June 1952, through his letters to them and through a series of his own mimeographed work notes which he circulated openly. Best known is his *Mid-Century Report* on the languages of the Minoan and Mycenaean civilizations, distributed on March 7, 1950. This contained responses by eleven scholars—his own being the last and fullest—to twenty-one questions which he had formulated about the scripts. Most of the questions have multiple parts or suggest a number of possible options. Their range of subjects and clarity of expression indicate how deeply and broadly—Appendix 5 of Ventris's reply contained a "short" bibliography of 100 books and articles pertaining to "Aegean linguistics"—he was then thinking about the problem of decipherment. They also reveal a change in his focus during the year 1949, away from Linear A

and toward Linear B, which was becoming more promising. Kober, in cooperation with Sir John Myres, had begun to classify, catalogue, and index the approximately 1,400 unpublished Linear B tablets from Knossos and their contents, tracing meticulously in her own hand the original drawings of Sir Arthur Evans. Bennett was editing the 600 or so tablets from Pylos and, as we have seen, establishing a clear signary or standard list of Linear B signs.

The questionnaire moves from general questions about the likely linguistic and cultural picture of the Aegean area during the second millennium B.C. to specific questions about the structure and operating principles of the Linear A and B writing systems. Among other things, Ventris was worried about the probability that the inhabitants of the Mycenaean mainland and Minoan Crete had used different languages and how that would affect the relationship of the two scripts to each other. He was also interested in the degree to which the language or languages represented by Linear A and B would have been 'contaminated' by loan words from contemporary or pre-existing cultures. These could throw off researchers who made lucky guesses about the meanings of certain textually controlled sign-groups on the basis of preconceived theories about the underlying languages. Such problems plague the undeciphered Minoan Linear A script even today. Unlike Bennett and perhaps unlike Kober, Ventris himself still believed that Linear A and Linear B were forms of the same language; and he persisted in thinking, as he had in his 1940 *AJA* article, that this language would prove to be some non-Indo-European 'Aegean' dialect related to the language found in inscriptions of the

Etruscans in northern Italy and perhaps also on the island of Lemnos in the northeast Aegean. However, he shared Bennett's and Kober's absolute conviction that the script and its texts had to be analyzed thoroughly in abstract, as elements of a code and encoded messages, before one could apply values to the signs and begin to interpret the texts. It was this conviction that made it possible for Ventris both to conclude and to accept that the language of the Linear B texts was Greek, despite his long-standing personal belief in the likelihood of an "Etruscan solution." I know from long personal acquaintance and suspect from scholarly familiarity that Bennett and Kober shared with Ventris these fundamental characteristics of the true scholar: love of truth and a detached and unembarrassed appreciation that one's own opinions can at any moment be proved false—or true. Ventris's questionnaire can and should still be used by would-be decipherers as a model of the kinds of honest questions they should ask about the historical context, internal structure, and working principles of an undeciphered script.

Besides creating an informal international community of scholars of Aegean scripts, Ventris's role was critical in shaping the direction of their work and, I think, even more importantly in setting a universal tone or spirit. In the last five years, the discipline of Classics and particularly those Classicists who are interested in the formative stages of Greek culture, i.e., prehistorians, have been criticized, most openly by Martin Bernal in two volumes entitled *Black Athena*, for being elitist, culturally imperialistic, anti-Semitic, or 'Aryanist' in interpreting Greek history and prehistory. Thus Mycenologists like myself no longer can claim a kind of professional immunity from contemporary political or social issues by virtue of abstruse specialization, as did Indo-European linguists in Stalinist Russia. Have we wittingly or unwittingly distorted the past, through a Hellenocentric bias that attributes to Greek civilization unique qualities that determined the fundamental nature of modern Western culture? Have we ignored the contribution of Semitic, Egyptian, and African cultures to the society that eventually became the

birthplace of democracy and of Western modes of thought and artistic expression? These are serious accusations, especially in a period when our ethnically and racially diverse society seems to be coming apart and when universities and colleges are debating how to make courses of study more multicultural and interdisciplinary. If such charges do not stick to the subdiscipline of Aegean studies, it is because of the forthright honesty with which Ventris proposed to eradicate such tendencies at the outset. He included them among those casual assumptions that were "further confusing our vague knowledge"; and he knew that no such assumptions could be tolerated if real progress was to be made toward learning the language or languages represented by Minoan and Mycenaean writing.

His clearest criticism is to be found in his own reply to the first question of the mid-century questionnaire concerning the position of the language of the Linear B texts:

Our researches have been prejudiced by conscious or unconscious acceptance of the official Nazi doctrine, according to which all admirable civilizations are due to Nordic blood (or at least to the speakers of I/E [i.e., Indo-European] languages), and which incidentally saw in the Etruscans an earlier prototype of all those non-Aryan vices of luxury, obscenity, cruelty, necromancy and usury for which the Jews were later to be scapegoats.

However, Ventris also had a lesson for extremists of the "if not A, then Z" type, currently represented by Bernal and his followers:

The diametrically opposite view, crudely stated, ascribes the early cultures of the Aegean and of the western Mediterranean to the peculiar genius of the Mediterranean race (and to the languages native to it from Neolithic times); and dates the flowering of Classical civilization from the assimilation into this local population of the ponderous influx of slow-witted I/E-speaking barbarians.

It is not a convenient or "soft" intellectual compromise when

Ventris concludes: "Both points of view involve too rigid an identification of culture, race and language, and the truth probably lies somewhere between the two." Rather it is a conclusion based on a careful consideration of all factors and data connected with this particular scholarly problem.

John Chadwick uses the following words and phrases in describing Michael Ventris: "a man whom nothing but superlatives fitted"; "modesty"; "he advanced his claims with suitable caution and hesitancy"; "simple and unassuming, always ready to listen, to help, to understand." These are the qualities of personality that enabled Ventris to draw together gradually and almost unintentionally a small group of scholars who were then, in a dozen different countries and quite unknowingly, taking part in the creation of a new field of study. Of his intellectual qualities, Chadwick remarks:

[W]e can point to his capacity for infinite pains, his powers of concentration, his meticulous accuracy, his beautiful draughtsmanship....He had a keen appreciation of the realities of a situation; the Mycenaeans were to him no vague abstractions, but living people whose thoughts he could penetrate. He himself laid stress on the visual approach to the problem; he made himself so familiar with the visual aspect of the texts that large sections were imprinted on his mind simply as visual patterns, long before the decipherment gave them meaning.

If we take a look at the pages of Ventris's letters, we can see all of these qualities represented, graphically and visually, in the precision and detail of his hand, the clear simplicity of his style, the honest descriptions and illustrations of the current state of his thinking. However, to my mind, one thing in these letters best typifies Michael Ventris. Ventris was free to decide which Linear B text his American friend and colleague Emmett Bennett would ever read and understand in *Greek*. Bennett had and continues to have the reputation of being highly skeptical, or as John Chadwick puts it, "studiously non-committal." Most scholars in Ventris's position would aim for the

tour de force. I would probably have presented first a text that I could interpret in all details, as a demonstration of the validity of my work, and then moved on to more problematical texts. Or I would have chosen a text that contained impressive items of vocabulary, like the rather rare Mycenaean and Homeric word for exalted king (*wanna-ka*) or the chief god of the Greeks Zeus (*di-we*). That is, I would have followed the biblical practice: "Use the best wine first."

What did Ventris do? Ventris offers Knossos 59 as the first fruit of his labors, and then proceeds with a numerically ordered selection of tablets from Knossos and Pylos. Knossos 59 is the kind of text that in, of, and for itself, only a true Texan could love. It deals with the mundane subject of cattle management. In Ventris's version, 70 oxen (𐀓) are listed and briefly identified in five groups of 6 and one group of 40. Applying his newly discovered sign values, Ventris could read correctly the descriptive term *we-ka-ta* = **Φεργῆται** = *wergatai* = "workers" that described the oxen in all six entries. Beyond this, the text mostly raised problems for Ventris and his proposed decipherment. The first two entries in the first column are fragmentary, so Ventris could only draw the single remaining legible Linear B character in each line. The third entry contains the Cretan place name *tu-ri-so* = Tyliisos, which Ventris transcribes in Greek. The second column contains one doubtfully identified and two fragmentary place names. The latter Ventris has partially misrepresented. As his grid shows, at this stage he had not figured out that Linear B had separate signs for the t- and d-series of syllables. As evidentiary proof, Knossos 59 offered one descriptive term and one known Cretan place name, i.e., a total of six sign values (*we, ka, ta, tu, ri, so*)

that, when applied, made reasonably good sense of two out of seven words on the tablet. But on June 18, 1952 Ventris was issuing an open and genuinely polite invitation that has been repeated constantly among Mycenologists for the next forty years: "You must judge for yourself."

This spirit of international cooperation and honest inquiry among Mycenologists has continued during the last forty years. The tablets are studied and used by specialists in palaeography, archival studies, field archaeology, art history, anthropology, and technical sciences such as geomorphology, palaeobotany, and zooarchaeology. Scholars of Egyptian, Near Eastern, Mesopotamian, Northern European, and New World cultures offer insights from their own perspectives. As a result, we now know: (1) that Knossos 59 refers to groups of oxen located in various regions of central and western Crete; (2) that cattle and oxen were bred and tended in special areas within Mycenaean palatial territories; (3) that some cattle were eventually sacrificed and consumed at great ceremonial banquets during state religious festivals; (4) that worker oxen were assigned in groups to be used for hauling and pulling in building projects, or in pairs to privileged land-holders for plowing; and (5) that Cretan cattle could be identified by their breed colors and bear corresponding names: Wine Face, White Foot, White Mouth, Blackie, Dapple. Because the Mycenaean, like Texas Hill Country settlers in the 1800s, were so adept at making use of every available resource, I have attended a seminar on traditional cattle slaughtering given by a butcher from Indiana to find out how sinews, horns, and other parts of the animal are used. And I have visited the ranch of Jacquie and Nathan Allen outside Graham,

Texas to see how cattle are raised, tended, used, and identified in an environment none too different from that of the southern Aegean. The Texas hospitality I experienced mirrors Greek *xenia* as one of the enduring "realities of the situation" that the decipherer of Linear B so appreciated.

Michael Ventris in the December 1953 number of the journal *Antiquity* produced a retrospective note on his decipherment methods:

Each operation needs to be planned in three phases: an exhaustive *analysis* of the signs, words and contexts in all the available inscriptions, designed to extract every possible clue as to the spelling system, meaning and language structure; an experimental *substitution* of phonetic values to give possible words and inflections in a known or postulated language; and a decisive *check*, preferably with the aid of virgin material, to ensure that the apparent results are not due to fantasy, coincidence or circular reasoning.

On the practical side, I believe he undoubtedly would have added:

Consult and listen to other scholars who have a different slant on the problem than you do. Always test your ideas and make it clear that you invite and appreciate the criticisms of others. Never proceed on the basis of unproved assumptions. Investigate all possibilities. And never invest your own ego in an idea to the extent that you will not be willing to abandon it when a better idea comes along.

This would complete the blueprint that a British architect had forty years ago for the decipherment and continuing study of the earliest written records in European civilization. **D**