

Linear B

LING 106, Sept. 26, 2007

Note: quotations, transcriptions, translations, characters, etc. etc., taken from *The Decipherment of Linear B*, John Chadwick. Strongly recommended reading.

1. THE IDEAL: A ROSETTA STONE

In a best-case scenario, one has two identical texts in different writing systems, which can serve as a key. e.g., the Cypriot script, used to write Greek from the 6th to 3rd centuries BCE. Deciphered (1870s) with help from inscriptions in Cypriot and Phoenician, and in the Cypriot and Greek alphabets.

- Cypriot: syllabic, i.e. each symbol represents either a vowel or a consonant-vowel.
- Ill-suited to Greek (but used anyway)
 - k sound = γ, κ, χ (g, k, k^h); p sound = β, π, φ (b, p, p^h); t sound = δ, τ, θ (d, t, t^h)
 - Can't distinguish long and short vowels
 - Consonant clusters represented via "dead" vowels (cf. English to Japanese)
 - etc.

For example:

$\alpha \nu \theta \rho \omega \pi \omicron \varsigma$	=	✱ F Q S' P'
a n t ^h r o p o s	=	a to ro po se

- With enough correspondences, possible to equate the alphabets completely.

2. HOW TO SUCCEED IN TRANSLATION (BY REALLY, REALLY TRYING)

- Have a native speaker teach you the language
- Have some fairly small amount of bilingual inscription
- Have some fairly large amount of sufficiently varied inscription (e.g., the problem with Etruscan: lots of text, but it's all funerary inscriptions, and thus contains the same phrases repeatedly)
- Given two methods...
 - Careful analysis
 - Pure guesswork
 - ...choose the former.
- When making informed guesses:
 - Keep one's guesses conservative
 - Have another text to check one's theory

3. THE LINEAR B TABLETS

- Sir Arthur Evans, 1900: excavation at Knossos, Crete reveals tablets with three kinds of writing.
 - 2000 – 1650 BCE: Pictorial (symbols for head, hand, star, arrow...)
 - 1750 – 1450 BCE: Linear A
 - 1450 – 1375 BCE: Linear B
- How to succeed in translation?
 - No speakers (of course)
 - No parallel texts

3.1. *A few starting facts*

- Part I of approach: comparisons to Cypriot writing (for which we know syllabic values).

Linear B	Cypriot	Value in Cypriot
┆	┆	<i>ta</i>
┆+	┆+	<i>lo</i>
┆┐	┆┐	<i>to</i>
μ	μ	<i>se</i>
┆±	┆±	<i>pa</i>
┆┐ ┆	┆┐ ┆	<i>na</i>
^	^	<i>ti</i>

- Some facts...
 - *se* ends many words in Cypriot-written Greek: *s* is a common word ending (and *e* is the “dead” vowel)
 - The corresponding Linear B character is rare as a word ending; nor does any other symbol show that kind of distribution.
 - Thus: Linear B is not used to write Greek.

(The latter fact matches archaeological conclusions: culture of Minoan civilization on Crete is wholly different from Mycenaean Greece.)

3.2. *The guesswork approach*

Ways to guess:

- Guess the language involved, e.g.
 - Greek (even though your results aren't very good)
 - Something hard to verify because of imperfect knowledge of the language or its connections (Basque, Etruscan)
- Make up your own language

3.2.1. *Some particularly bad results*

- Bedřich Hrozný (Hittite expert): draw comparisons between Linear B and Cypriot, Egyptian, Hittite, the Indus valley script, Cuneiform, Phoenician... Assume language is related to Hittite.

Result:

Place of administration Hatahuâ: the palace has consumed all (?)
 Place of administration Sahur(i)ta (is) a bad (?) field (?): this
 (delivers in) tribute 22 (?) (measures), 6 T-measures of saffron
 capsules

Correct translation turns out to be:

Thus the priestess and the key-bearers and the Followers and
 Westreus (hold) leases: so much wheat 21.6 units

The judgment of Chadwick:

“It is a sad story which recurs too often in the world of scholarship: an old and respected figure produces in his dotage work unworthy of his maturity, and his friends and pupils have not the courage to tell him so.”

- F.G. Gordon: assign Basque values to the characters, assign to each sign a pictographic value based on some rough resemblance, hope for the best.

Result: poetry.

...the lord walking on wings the breathless path, the star-smiter,
 the foaming gulf of waters, dogfish smiter on the creeping flower;
 the lord, smiter of the horse-hide...., the dog climbing the path, the
 dog emptying with the foot the water-pitchers, climbing the circling
 path, parching the wine-skin...

- And so on, and so on:
 - Assume the language is Greek, even though you don't know anything about the archaic forms of Greek
 - Assume the language is something Semitic
 - Ignore the tablets and translate the inscription on the rim of a jar (Ventris's judgment: the marks are just decorative doodling)
 - Georgiev: take the language to be archaic Greek with pre-Hellenic influence, and thus translate as Greek those things which work, and if it doesn't work, call it an unknown earlier language.

3.2.2. *Some much better educated guesswork and methodology*

- Ernst Sittig: Compare non-Greek Cypriot inscriptions to Linear B, speculate they are the same language, and correspond symbols based on frequency patterns.

Incorrect assumption that the languages were the same—but it's a method that would have worked if they were.

- Arthur Evans: Find certain “determinatives”, the equivalent of capital letters in English, which mark the next word as “religious” or “royal” or “place name”, etc.

One result: on a tablet with horsehead symbols, there is twice a smaller, maneless head preceded by the same two-sign word each time. Compare the signs to similar Cypriot symbols, the result is **po-lo**, much like the Greek *pōlos* ‘foal’.

Problem: since the language isn't Greek, that's not very helpful.

- Dr. Alice E. Kober: ask basic questions about the grammar, e.g.
 - Does it use different endings to express grammatical forms?
 - Is there a consistent “plural” inflection?
 - Does it distinguish genders?

Kober's results:

- Distinction between MALE and one class of animals vs. FEMALE, another class of animals, swords, etc. Thus, grammatical gender (and marks added to animals to indicate sex)
- “Kober's triplets”: many sets of words of the form
(**sign₁**+...+**sign_n**) + **X** + **ending₁**/**ending₂**/**()**

Evidence of inflection...?

4. MICHAEL VENTRIS

Michael Ventris (1922-1956), British architect, developed a full set of statistical tables of symbols, including frequency overall, initially, finally, etc. (Bennett's numbering will be used henceforth.)

4.1. Locational frequency

Some symbols common at the starts of words: **08** (previously, "royal" determinative), **61** (previously, "religious" determinative), **38**. These had previously been taken to be unpronounced determinatives.

- However: all three could occur word-internally, and **61** was also common word-finally, making it look unlikely that they were determinatives. More likely conclusion: vowel-only symbols in a syllabary.

Recall that a syllabary will have mostly CV symbols and a few V symbols. Thus: word-internal vowels will usually be represented by a CV syllable, but word-initial vowels must be represented by a V syllable. Examples—

<i>alphabetical</i>	a-l(a)-fa-be-ti-ca-l(a) = V-CV-CV-CV-CV-CV-CV
<i>individual</i>	i-n(i)-di-vi-du-a-l(a) = V-CV-CV-CV-CV-V-CV

So V *can* appear word-internally, but will appear much more commonly word-initially.

Conclusion: **08**, **38**, maybe also **61**, are V syllables in a syllabary.

78 a common final sign, e.g.

36-14-12-41 70-27-04-27 51-80-04-78
11-02-70-27-04-27-78 77-60-40-11-02-78 61-39-58-70-78...

Additional evidence of its independence:

- Appears often as a final sign in lists
- Seems separable: compare **70-27-04-27** with **11-02-[70-27-04-27]-78**

Speculation: **-78** corresponds to *and* (cf Latin suffix *-que*).

(Other prefixes and suffixes similarly identifiable.)

4.2. *Correlating sounds of syllables*

Suppose that roots end in consonants, inflectional suffixes start with vowels, e.g. Latin

MASCULINE	FEMININE
domin+us	domin+a
bon+us	bon+a
serv+us	serv+a

Then these would be written syllabically as **do-mi-nu-s(e)** and **do-mi-na**: that is, they would look like Kober triplets, with the roots the same and the final consonant plus suffix differing.

More importantly: if these were written syllabically as X-Y-P-Q and X-Y-Z, and another word is J-K-L-Q, then we might have:

do	mi	nu	s(e)	do	mi	na	se	r(e)	vu	s(e)
X	Y	P	Q	X	Y	Z	J	K	L	Q

Thus, even without knowing the actual syllabic values, we can guess that P and Z start with the same consonant, and P and L end with the same vowel.

Conclusion: A chart can be made of syllable correspondences.

Vowel:	I = <i>i</i> ?	II = <i>o</i> ?	III = <i>e</i> ?	IV	V = <i>a</i> ?
Pure vowel	61	—	—	—	08
Consonant I	—	—	59	—	57
II	40	10	75	42	54
III	39	—	(39)	—	03
IV	46	36	(46)	—	(57)

...and so on.

4.3. *The final step: guessing at some words*

Suppose that certain common nouns are the names of major nearby towns: Amnisos, Knossos, Tulissos, and variants of those with suffixes are adjectival forms, etc. etc. Then line up the syllables this gives with other syllables, translate certain other words, etc. etc.

Conclusion: Linear B really *is* Greek!

Only it happens to be archaic Greek, with certain final letters omitted—including the *s* that supported the initial conclusion that it wasn't Greek.