1 The Linear B tablets

- In 1900, Sir Arthur Evans uncovers the remains of a palace in Crete and finds tablets containing inscriptions in unknown writing systems:
  - Second set of tablets: 1750-1450 B.C. Linear A.

- First cues:
  Left to right writing system.
  Syllabic, with approx. 90 characters.
  Probably not Greek, since the most common ending in Greek is /s/, but what looks like the corresponding character rarely appear word final in the Linear B script.

- The problem:
  Sequences of signs forming words are easy to identify, given that the texts are mostly inventories or by recurrence. We want to find out what symbol corresponds to what phonetic syllable (and from there uncover the meaning of the text, since there is no parallel translation nor speaker to ask).

  The problem is that there is no initial crib: there is no sequence of symbols for which we know the phonetic correspondance beforehand, so we cannot start cracking the code directly.

  Still, something can be done. As in lexical analysis, we can take our units (the 90 syllabic symbols) and group them into classes by some distributional criteria. Once a grid of relations is worked out, phonetic hypotheses can take over and we can start cracking the code.

2 Alice Kobler and bridging syllables

- Declension word endings:
  
  (1) Case inflection in pronouns:
      he
      him
      his
• Kobler notices that some words form triplets, following the schema:

\[ s_1 + s_2 + \ldots + X + \text{ending 1} / \text{ending 2} / \text{nothing} \]

Syllable X varies from the two first cases to the third. Kobler compares that to case declension in other ancient languages, as in (3). Syllable X—the bridging syllable—is the syllable where the root and the case ending meet.

(3) Akkadian:
    sad-amu
    sad-ani
    sad-u

• Distributional properties of bridging syllables:

  – The syllables X in a noun share one distributional property: their symbol must encode the final consonant of the root followed by a vowel. That means that the two bridging syllable symbols for a given noun stand for phonetic syllables with the same consonant.

  – The syllables X in two different nouns in the same case share another distributional property: since the case ending must be the same, the vowel in the bridging syllable must be the same. This means that two bridging syllable symbols from different nouns in the same case stand for phonetic syllables with the same vowel.

3 Michael Ventris: continuing the distributional method and finding a crib

• Michael Ventris continued Kobler’s distributional method:

  – Phonetic CCV must be resolved by epenthesis of a default vowel to render the script purely syllabic: Cv+CV.

  – Phonetic initial vowel at the beginning of the word does not form a CV sequence. There must be some symbols—occurring only/predominantly at the beginning of words—that are not syllabic, but merely vocalic: 61 and 08.

  – Expanded grid of relations: Table 22.

• The crib:

  Ventris attempted the first phonetic pairings as an educated guess: the three most common nouns in the texts must be names of important towns.
(4)  
\[
\begin{array}{cccc}
08 & 73 & 30 & 12 \\
V & CV_1 & CV_1 & CV_2 \\
\end{array}
\]

(5)  
\[
\begin{array}{ccc}
70 & 52 & 12 \\
CV_2 & CV_2 & CV_2 \\
\end{array}
\]

(6)  
\[
\begin{array}{ccc}
69 & 53 & 12 \\
CV & CV_1 & CV_2 \\
\end{array}
\]

- Ventris and Chadwick continued finding phonetic correspondences until the scripts were completely deciphered. The language of the script turned out to be Greek, with omission of final /s/ that the reader could easily recover.