Linear B
Carl Seaquist

(Slide 1) Welcome to Carl Seaquist's lecture on Linear B. The decipherment of ancient languages is an exciting topic, and the Linear B documents have proven invaluable to our understanding of Bronze Age Greece. This lecture begins with a little background from general linguistics, then moves to consider the four different types of writing in Bronze Age Crete, including Linear A and Linear B. It concludes with a description of how Linear B works. I don't say much in this lecture about the language of the Mycenaeans, and as a result, I won't say too much about how the syllabograms work, focusing instead on the ideograms.

Linguistics Terminology

(Slide 2) Languages might be written down, but they are primarily oral entities: we think and speak in sounds, and written representations cannot possibly include the subtlety of information contained in spoken language. Think just of intonation: one reason it's hard to read emails and text messages is because you have to supply the way that you need to read them, because the script we use to indicate sounds (the so-called "Latin" alphabet) doesn't include indications of intonation. Dialects are varieties of a given language: Australians and Englishmen speak the same English as Americans, but with a difference. They use words that Americans don't (Scottish "lass" for "girl"), or use them in different ways (English "rubber" for "pencil eraser"), they pronounce words differently, and they sometimes string words together differently.

Now, we might be clear on the fact that Australians and Englishmen and Americans speak the same language (English), but according to linguists (people who study language for a living) there is no principled distinction between languages and dialects. So while it might sound odd to call English and German dialects of the same language, sometimes linguists do precisely this.

Scripts, however, are quite different. Scripts are means of writing languages. Typically Greek is written in Greek letters, Russian in what's known as Cyrillic, and English in Latin letters. But it's easy enough to write Greek or Russian in Latin letters, and English could be written in Greek characters or Cyrillic. There's no necessary connection between language and script.

Scripts

(Slide 3) The language of Greek that we find in Mycenaean documents is an early dialect of classical Greek, which is to say that it is Greek, though not exactly the Greek of Homer much less of Plato. Let's call it Mycenaean Greek. The script in which it was written is called, not very originally, Linear B. Linear B is not an alphabet, but rather a syllabary augmented by ideograms and other symbols. Here's the difference: in an alphabet, there is (more or less) one character for each sound in the language. In syllabaries, on the other hand, there is a character for (more or less) every syllable, where as symbol is composed either of a vowel or a vowel and one or more consonants. Different languages have different numbers of possible sounds, but it's not uncommon for an alphabet to have 20-25 basic characters (or letters) along with symbols like the comma or the dollar sign as well as characters for numbers. Of the letters, maybe five are used for vowels, so syllabaries might have 80-120 basic symbols (if there are five vowels, there will be five characters for each consonant in the language, plus one for the vowel by itself).

It's important to know the difference between languages and scripts, but often scholars refer to Mycenaean Greek as Linear B – when they do this, they are referring to the language by the name of the script in which it was originally written. They know this, of course, so it's just a careless use of language when they do it. Thus, for example, the main reference for Bronze Age Greek is Ventris' and Chadwick's *Documents in Mycenaean Greek*, but if you want a more textbook approach, you should buy James Hooker's *Linear B: An Introduction*. Both works address both the script and the language.

(Slide 4) Four scripts were used in Bronze Age Crete, all of them syllabaries. The earliest is called Cretan Hieroglyphic. The word "hieroglyphic" implies etymologically that it is a priestly or sacred script, but that's not what's meant here; on analogy to Egyptian hieroglyphic writing, the word "hieroglyphic" can be used to describe any script that has characters that look like simple pictures. Linear A derived from Hieroglyphic early, and is basically a modified version of Hieroglyphic. Linear B derived from Linear A, as did a script known also from Cyprus and therefore called Cypro-Minoan. A script derived from Cypro-Minoan continued in use on Cyprus into the classical period, and it is known as the "Cypriot syllabary." Knowledge of the Cypriot syllabary played in a role in helping scholars decipher Linear B.

(Slide 5) Just over half of the signs in Linear B are more or less the same as those found in Linear A, whereas 1/3 are new, though these tend to be of more rare occurrence. The rest are, as Ventris and Chadwick describe them, "doubtful parallels". Different languages have different sounds, so it would be reasonable to guess that the new signs used in Linear B represented sounds found in Greek but not in the language of the Cretans. However, there is some evidence that some of the signs common to both scripts had different phonetic (or sound) values in the two scripts.

(Slide 6) Since we don't know the language of Linear A, it's hard to say how to pronounce any given sound – and even with Linear B, we aren't sure the exact sound value of some signs. Let me give one example. Proto-Indo-European, the language from which Greek derives, had a set of sounds known as labiovelars. A labiovelar is a sound pronounced by moving lips and the soft palate simultaneously. The Proto-Indo-European labiovelars had changed into other sounds, labials or velars, in classical Greek, but it's unclear from the evidence what the exact sounds were in Mycenaean Greek at the time of the tablets that have survived – how far this change had progressed. Thus different scholars transcribe (or write in Roman letters) the Mycenaean word that means "king" in classical Greek (*basileus* in classical Greek) differently: as pa-si-re-u or g^{w}a-si-re-u, for example. In part this is just uncertainty about how to write the word in Roman letters, but it also indicates uncertainty as to the exact sound in the thirteenth century B.C.

(Slide 7) Now, as for Linear A, we have a rough idea about how a lot of the sounds were pronounced, but there's some uncertainty with all of them, and more with some than others. And there's always the danger that we want to pronounce the language as Greek-speakers would have, rather than as Cretan-speakers would have. Even though we probably know how to read (in the sense of pronounce) some Linear A, we still don't know the language. Despite that, some of Linear A has been deciphered: in particular, some of the signs for numbers and units of measure. The only words written with syllabograms that we can read are place names that we also know from Linear B and some personal names when we think we know the values of the signs that spell them, and where can tell from context that they are names. So without knowing the language, we can read the texts to some extent – just like scholars could read a little bit of Linear B even before it was known to be Greek.

We have relatively few texts in Cretan scripts – if you were to write them all in single spaced format in a book, we'd have maybe a page and a half of Hieroglyphic Cretan and maybe six pages of Linear A. We

have a lot more Linear B, mostly from mainland Greece – about 50,000 separate documents, from at least seven different sites.

Linear B

(Slide 8) Let's now move to Linear B: the script, and the language it was used to represent. Linear B is composed of several different types of signs: ideograms, syllabograms, units, and numerals. Ideographic signs represent things; syllabographic signs represent syllables, and units represent weights and measures. The numerals are based on a decimal system. A syllable generally contains one vowel sound or one consonant plus one vowel.

(Slide 9) Ideograms are easier, so I'll start with those. Some symbols are clearly iconic, in other words the resemblance between the sign and the thing that it represents is likely to be obvious to someone who hasn't learned the code, where "code" means the rules for translating between a symbol and its meaning.

For example, the sign for a horse looks like a horse's head. Admittedly, so does the symbol for pig, and a reader who doesn't know (or can't "decode") Linear B might have trouble knowing which is which. But the fact remains that both are iconic symbols – the claim that the symbol looks like the thing it represents doesn't mean that the sign can't be misinterpreted.

Note that here I've also given the number of the sign. Before Linear B was deciphered, scholars inventoried all the signs, and give them sequential numbers as names. This way they had a systematic way of identifying the signs, and they didn't assign names that presumed a particular interpretation. Even now, when most of the signs are well-known, it's still common to mention the number of a sign when referring to it.

(Slide 10) The symbols for spear and arrow are pretty straightforward, as is the symbol for a tripod. A tripod is, in general, any object with three feet. In contemporary America, when you go into a general store and say you want a tripod, you'll be given something to put a telescope or gun on, in other words, a stand to which something can be attached. In the ancient Greek world, a common object for ritual use and trade was a bowl on three legs, and this is what scholars of antiquity refer to as a "tripod."

(Slide 11) Some symbols are harder to decode, like those for cloth or figs, and we might say that these are not iconic, though of course to some extent whether a symbol is iconic is in the eye of the beholder.

Sometimes an ideographic sign will be joined with a syllabic sign, to make it easier to read. For example, the sign for pig might be joined with the syllabic sign SI-. A Classical Greek word for pig was *sialos*, so very likely this fused sign is an indication that "pig" is meant rather than, say, horse. This indicates that the writers implicitly recognized that the code could be hard to read even for people who were somewhat literate in it. But if it was easy to recognize the signs for spears and horses, reading the syllabary definitely required some training.

(Slide 12) In any case, symbols that stand for units of weight or measure can't be iconic because they stand for abstract concepts, and hence can't look like them. Here are some examples of units of volume and weight. Of course we don't know the absolute quantity of any of these measures, but we do know relative sizes, for example that sign 118 indicates a weight 30 times that of sign 117. In fact, Emmitt

Bennett worked out the ratios of weights and measures in 1950, three years before the decipherment of the script that demonstrated that the language of Linear B was Greek.