

Ling 151 Phonetic Analysis
Homework 1
Due Wed January 20th

General Instructions

Read the following questions and provide detailed, typed answers. You may (and should) work in groups on these. If you work with any of your classmates, note at the top of your submitted answers who you worked with. All write-ups should be done individually and demonstrate that you understand the material; i.e. all answers should be your own! Good luck!

Part 1: Transcription

Go to <http://people.ucsc.edu/~gmcguir1/Ling151/Hwk1/> and download and listen to the .wav files. These are sentences from a Mayan language. Please transcribe them in detail using IPA symbols. Primarily concern yourself with segmental details, i.e. don't worry about stress, pitch, etc. If you're curious, here's what each sound file means:

- (1) he made himself a song
- (2) the sun and also the moon
- (3)[the love that] is in your heart for him

Part 2: Data analysis 2

The figure on the following page shows X-ray microbeam data of a person saying “Say compact again”. Note that all of the traces follow the location of a pellet in the vertical direction, so if the trace goes up that means that the articulator moved vertically up in the mouth. For example, the line from the initial “c” in “compact” shows that the tongue dorsum was highest near the midpoint of this segment. Similarly the line from the final “n” of “again” shows that the tongue blade reached a peak during this segment.

- A. Is the vowel before “m” nasalized? When does the nasalization start? Why is this a difficult question? Does the vowel nasalization in “again” help at all?
- B. Is the jaw higher for the initial [k] of “compact” or the one in the final syllable? Why would the jaw be more involved in the production of one of these [k] sounds?
- C. Oddly, there appears to be tongue blade elevation in the [mp] sequence and lower lip elevation during the [kt] sequence of “compact”. What caused these articulator movements?
- D. How many lip closing gestures are there in the [mp] sequence? How many tongue dorsum closing gestures are in the sequence “-pact again”. Discuss the similarities and differences of these two cases.

