Lab 1 (Measuring Vowel Formants) Instructions

The sound files for this lab are a series of monosyllabic English words spoken by an adult male American from Southern Indiana. Each word begins with /h/ or /ʔ/ and ends with /d/ or /t/. There are a ten different words. The files are numbered, so you won't know from the filenames which tokens are supposed to be productions of the same word.

Your score for this assignment will be based on your answers to a set of questions in Canvas. But before you tackle those questions, you should do the following:

- Download the sound files and unzip the file.

- Listen to each sound file, and transcribe each word broadly.

- Open each sound file in Praat and make a spectrogram of it. Measure the duration of the vowel in each word using the waveform and the spectrogram for guidance. You may choose to create a textgrid to save your duration locations or not.

- For all vowels (monophthongs, diphthongs):

  ❖ Find the midpoint of the vowel.

  ❖ Measure F1 and F2 at the midpoint of the vowel. Make sure that "Spectrum > Show Spectrogram" and "Formant > Show Formants" are checked. Next, go to "Spectrum > Spectrogram Settings" and click "Standards". You should also go into "Formant > Formant Settings" and click "Standards", but change "Maximum Formant" from 5500 Hz to 5000 Hz before clicking "OK".

  ❖ Record your vowel transcription, F1, F2 measurements in the data table in the Excel spreadsheet provided, All Vs tab. The points on the graph will change after you do so.

- For diphthongs:

  ❖ Go to the Diphthongs tab of the Excel spreadsheet.

  ❖ Record the time points for the start and end of the vowel under "selection start" and "selection end". The 1/3 and 2/3 time points will then be calculated for you.

  ❖ In Praat, move your cursor to the 1/3 and 2/3 points of diphthongs and measure F1 and F2 there.

  ❖ Record these numbers in the spreadsheet. The points on the graph will change after you do so.