

L541 Lab Session

Week 2

January 19/20, 2012

Outline

- Review Terms and Symbols
- Transcription Practice
 - Consonants of American English
- Practice with PRAAT
- Homework 2

Consonants

- What is a consonant?
 - airstream in the vocal tract is obstructed some way – blocked, impeded, diverted
- What features are important?
 - What parts of the vocal tract move in order to make a constriction: Active & passive articulators
 - How close do the articulators get?
 - Air flowing through nose? Around the sides of the tongue?
 - Vocal folds vibrating?

Review of Terms, Consonants

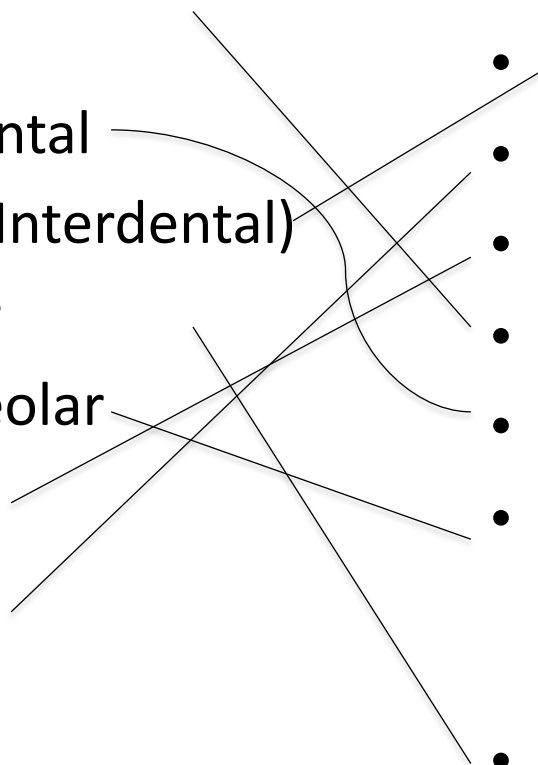
Match PoA with A+P Articulators

Place of Articulation

- Bilabial
- Labiodental
- Dental (Interdental)
- Alveolar
- Postalveolar
- Palatal
- Velar

Active + Passive Articulators

- Tongue tip/blade + Teeth
- Tongue back + Velum
- Tongue front + Hard palate
- Lower lip + Upper lip
- Lower lip + Teeth
- Tongue tip/blade + Back of alveolar ridge/Hard palate (front part)
- Tongue tip/blade + Alveolar ridge



Review of Terms, Consonants

Place of Articulation	Active Articulator	Passive Articulator
Bilabial	Lower lip	Upper lip
Labiodental	Lower lip	teeth
Dental (Interdental)	Tongue tip/blade	teeth
Alveolar	Tongue tip/blade	Alveolar ridge
Postalveolar	Tongue tip/blade	Back of Alveolar Ridge/ Hard palate (front part)
Palatal	Tongue front	Hard palate
Velar	Tongue back	Velum/Soft palate
Glottal	*vocal folds	

Review of Terms, Consonants

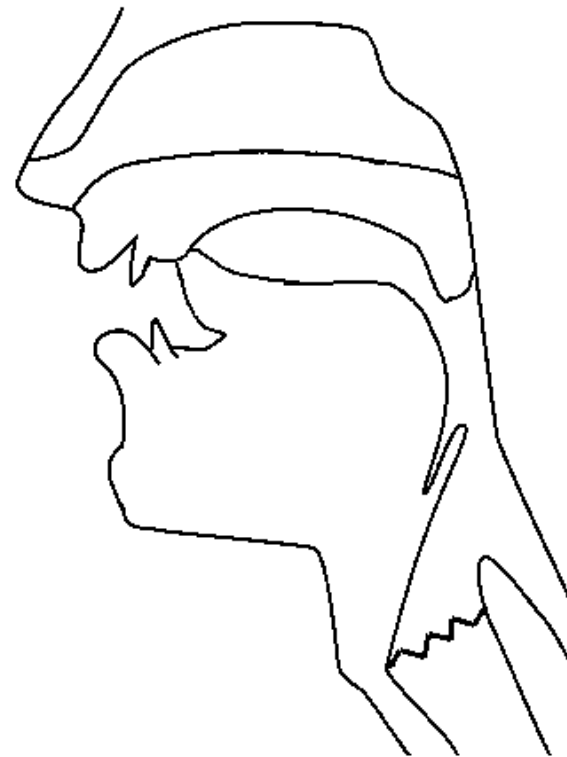
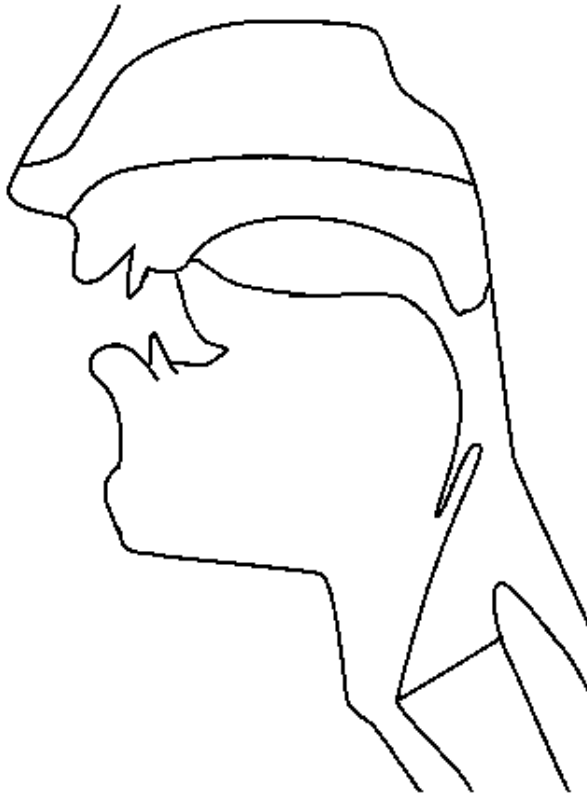
Manner of Articulation

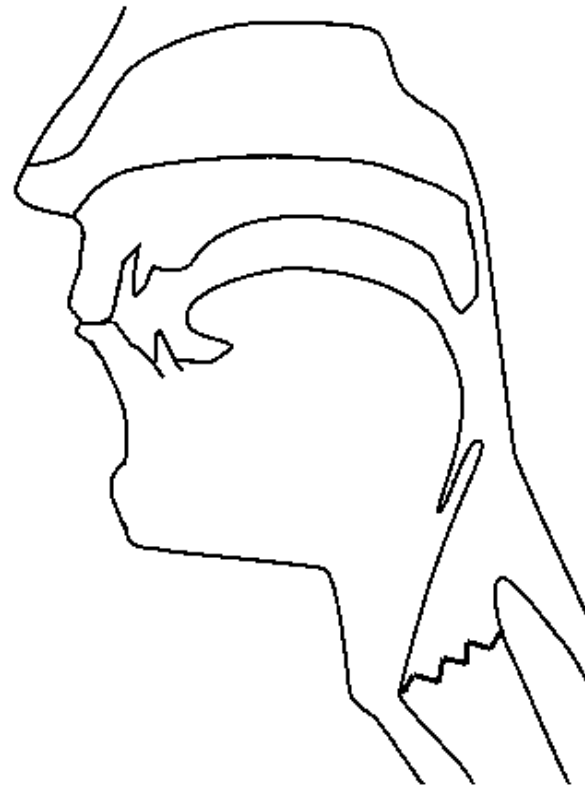
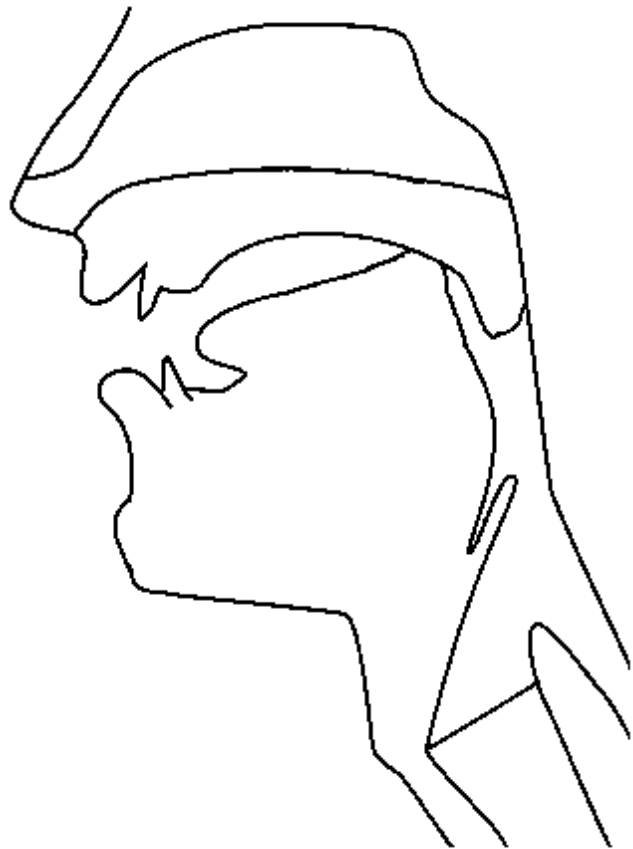
- Plosive/Stop
 - Articulators form a complete constriction and completely block the oral flow of air
- Nasal
 - Air is diverted through nasal cavity
 - Articulators form a complete constriction and completely block the oral flow of air
- Fricative
 - A narrow passage is created by one articulator coming close to another – air is forced through the narrow passage creating noisy turbulence of air
 - No complete blockage of the flow of air
- Affricate
 - Involves two manners of articulation: Stop + Fricative, produced at the same place of articulation
- Approximant
 - One articulator approaches another, but not enough to create friction
 - Airflow partially obstructed
 - Central (central airflow) vs. Lateral approximants (air flows around laterally around central constriction)

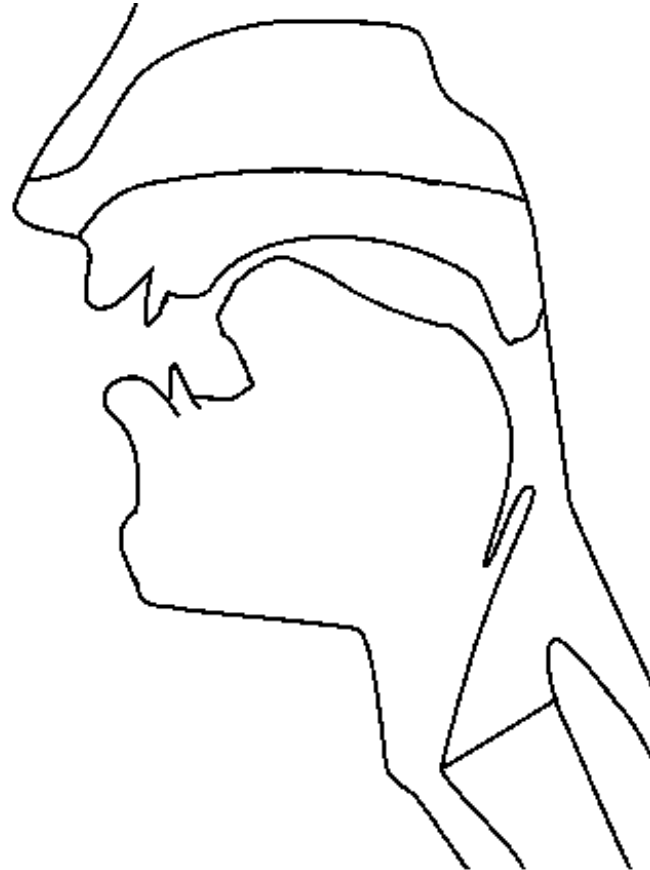
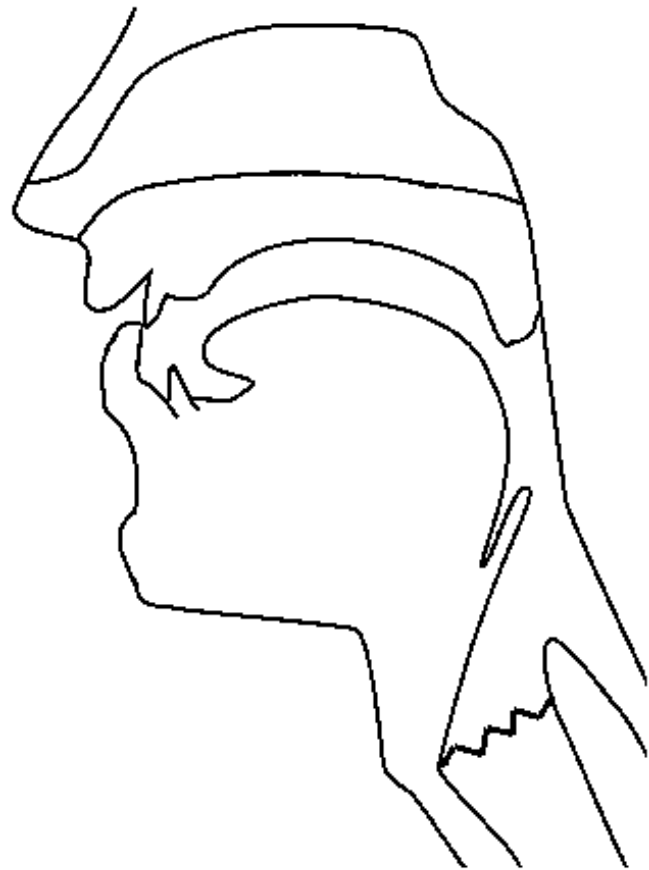
Other

- Voicing

What sound?







Review of Symbols, Consonants

Others

- “l” - dark l, light l
- Glottal stop
- Variants of the “r” in GAE
 - Alveolar/bunched
 - Retroflex
 - Flap
- What about “w”?
 - Labial-velar approximant - double articulation

Transcription Practice, Consonants



Useful Resources

- Ladefoged IPA charts
 - <http://phonetics.ucla.edu/course/chapter1/chapter1.html>
- Interactive Resources for Consonants
 - <http://homes.chass.utoronto.ca/~danhall/phonetics/sammy.html>
 - <http://www.uiowa.edu/~acadtech/phonetics/#>

Using Praat: The Basics

Opening sound files

1. Open Praat.
2. Read: Read from file...
3. Find and choose a sound file.

Or... Right click on a file(s) and open the file with Praat.

Saving sound files

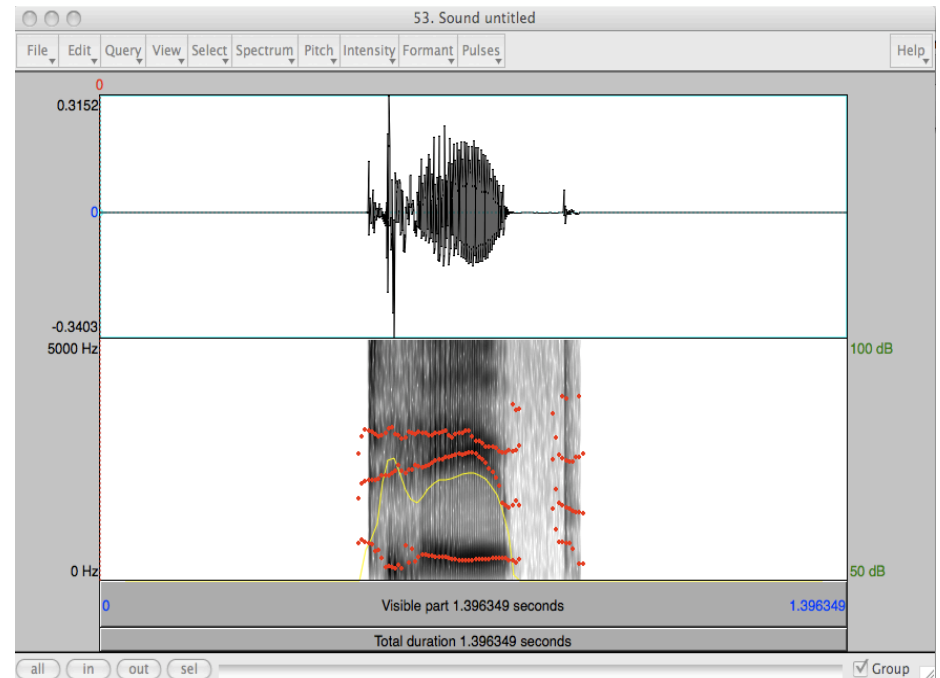
1. Sounds show up in the object window. Sound files are not automatically saved.
2. To save sound files (ones in the object window), Write: Write to WAV file...

Or... in Edit mode, select material you want to save, File: Write selected sound to WAV file, Save

Using Praat

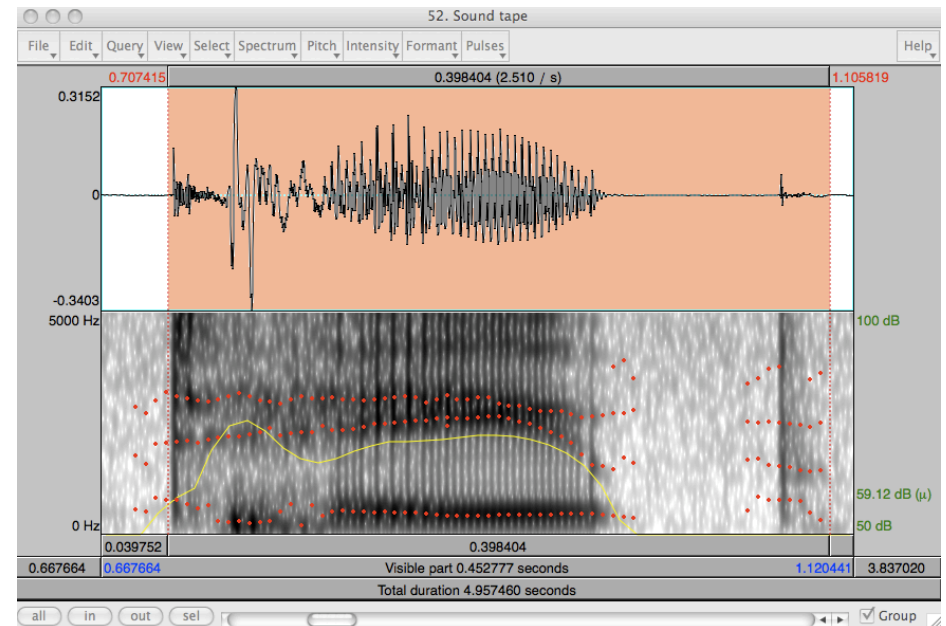
Editing your files

1. Highlight a sound in the object window, then click Edit.
2. The file will open with a waveform on top and a spectrogram on the bottom.



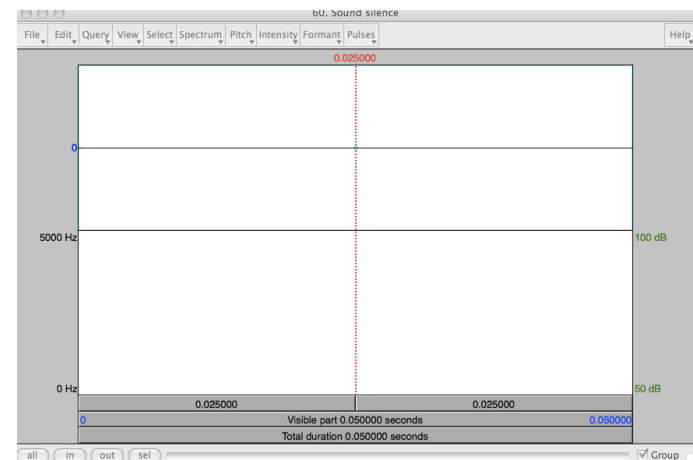
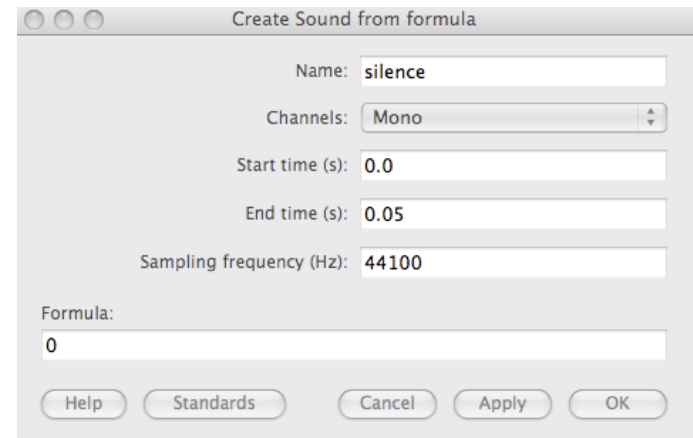
Selecting Part of a Sound File

1. Open 'tape' in the object window
2. Select the word by clicking on the beginning and ending of the word (to highlight the word) – click and hold or click + SHIFT
 - Move start/end of selection to the nearest zero crossing using Select:
Move start/end of selection to nearest zero crossing
3. Once you have 'tape' selected, Save the selected sound
 - In Edit mode, select material you want to save, File: Write selected sound to WAV file, Save
 - Or, select material you want to save, File: Extract selected sound (time from 0), which will send the selection to the object window; Then, you will have to save it from there, Write: Write to WAV file...



Creating Silence

1. To create a file with silence, from object window, New: Sound: Create sound from formula
2. Name = silence, Start Time/End Time = ?? In seconds, Formula = 0
3. It will appear in the object window

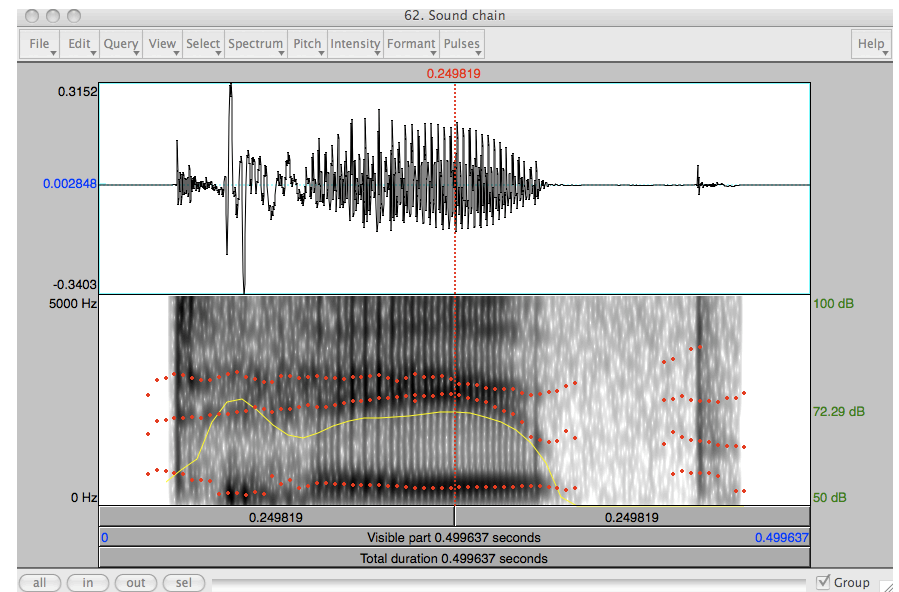


Adding Silence

1. Open the sound file containing your target word
2. Add silence to 'tape' by highlighting both sounds (tape_selection and silence) in object window, Combine Sounds: Concatenate (need to do this twice to add silence to both beginning and end of 'tape')

Or, open 'tape' and 'silence' in Edit mode, Copy silence by selecting all silence and copying it (Edit: Copy selection to Sound clipboard). Then, in tape_selection, paste the silence before and after sound (Edit: Paste after selection)

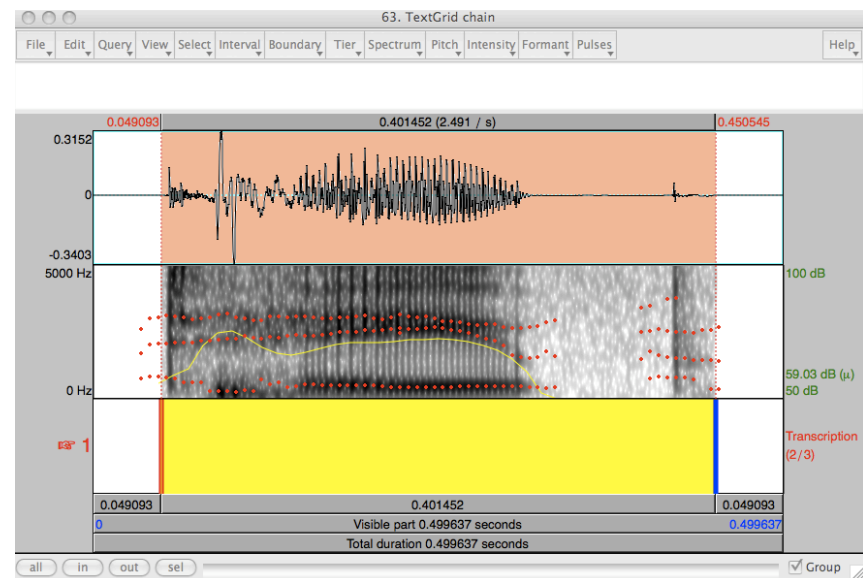
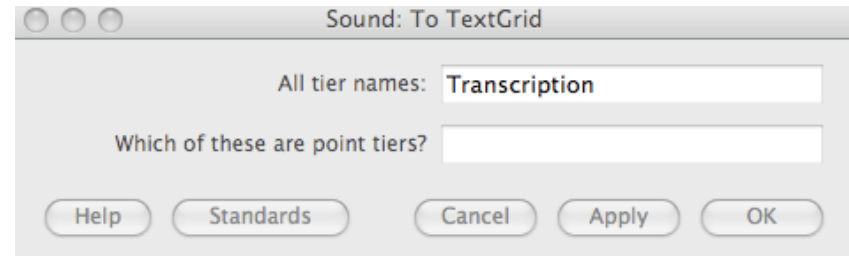
3. Save your new file!



Annotation

Create a TextGrid for the new file

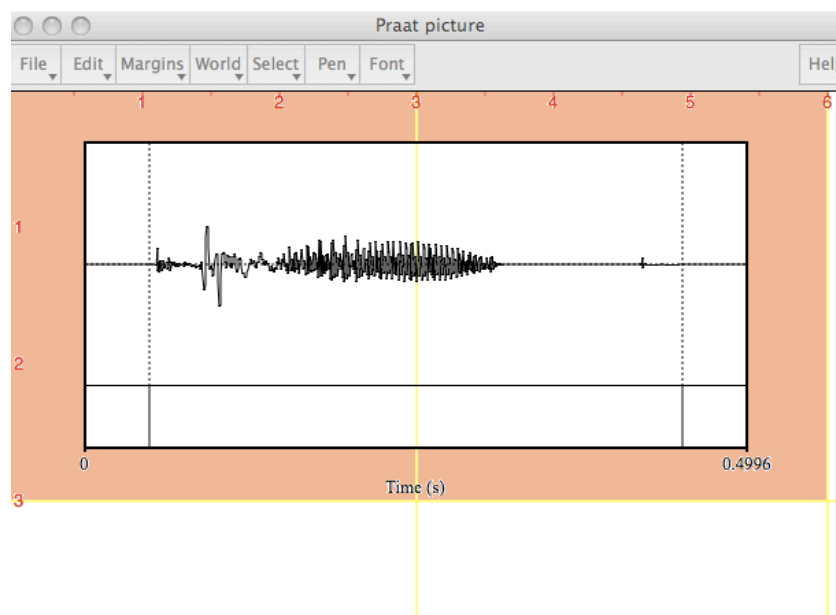
1. Highlight sound in object window. Then, click on Annotate: To TextGrid...
2. All tier names = 'Transcription'; Which of these are point tiers? = (none)
3. Select both your new sound file and new TextGrid file in object window and open (Edit). Your annotation tier will show up below waveform and spectrogram.
4. Save the TextGrid file.



Draw

Drawing the Waveform and TextGrid

1. In the object window, select your sound and TextGrid. Click on Draw.
2. For now, leave all as is.
3. The waveform and the annotation tier will appear in Praat picture window. You can save and print this picture.



Homework #2