

Acoustic Analysis

Objective

The objective of this session is to learn more about what can be accomplished using computer tools designed for working with sound. We will learn about programs for:

- analyzing pitch contours and other acoustic properties of speech (PRAAT, Fujisaki)

The session is not designed to give you complete mastery over acoustic analysis tools, since this merits a course in itself. Rather, it is designed to let you gain enough experience with what they can do for you that you can follow up on your own to learn more, if you find that you are interested in the new research potential which is opened up by these and other similar tools for acoustic analysis.

PRAAT

PRAAT is a program designed for doing phonetic analysis of speech on a computer. For example, it will analyze a sound file to do a “pitch extraction”, that is, it will determine the fundamental frequency of the speech, and draw a corresponding curve. This is only one of many kinds of phonetic analysis that PRAAT is designed to do

Start **PRAAT** by double-clicking on the icon labeled **PRAAT** (the lips-and-tongue icon). (If you do not see it immediately, you may need to do the following to find it. Select the “**Linguistics 212**” (or equivalent) folder, click on the **Programs** folder, then the **PRAAT** folder. Then double-click on the PRAAT icon. This will start the PRAAT program.

When PRAAT starts, it initially appears as two separate windows on your screen.

To **open** a (stereo) audio **file**, from the menu on the left window, select:

Read/Read two sounds from stereo file

To play sound from the **left channel** of the stereo file, select **Sound left** by clicking on it.

Then click on **Play**.

To play sound from the **right channel** of the stereo file, select **Sound right** by clicking on it.

Then click on **Play**.

For further information on how to use PRAAT, click on **Sound help**. Experiment with the various functions you see.

[rev. 7-Sep-2004]