Vowels

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Source-Filter Model of Speech Production
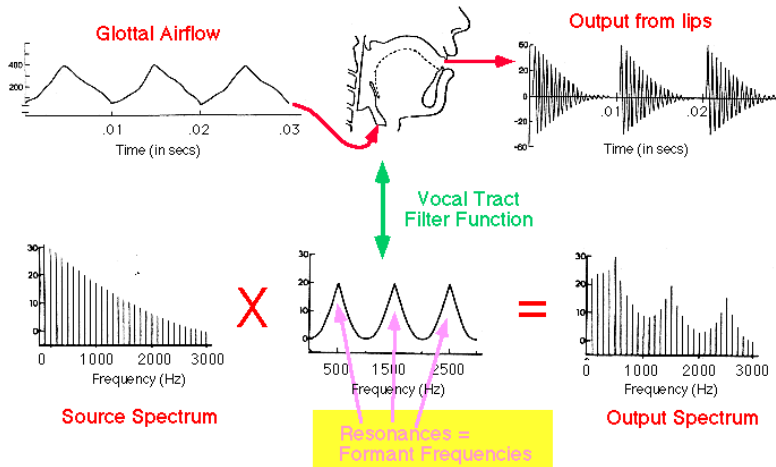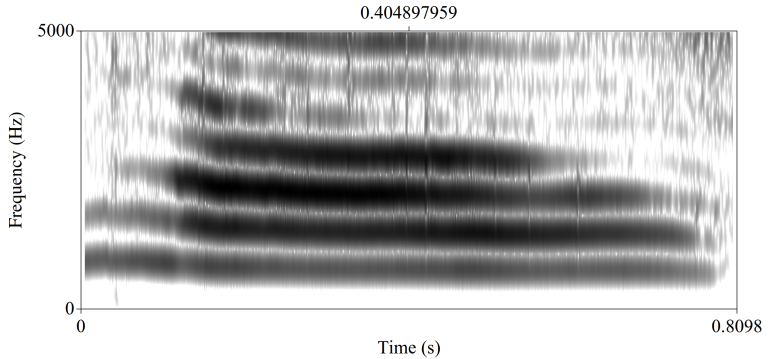
The output energy (at the mouth) for a given frequency is equal to the amplitude the source harmonic, multiplied by the magnitude of the filter function for that the frequency.

???

Source-Filter
Model

Vowel analysis
exploratory analysis
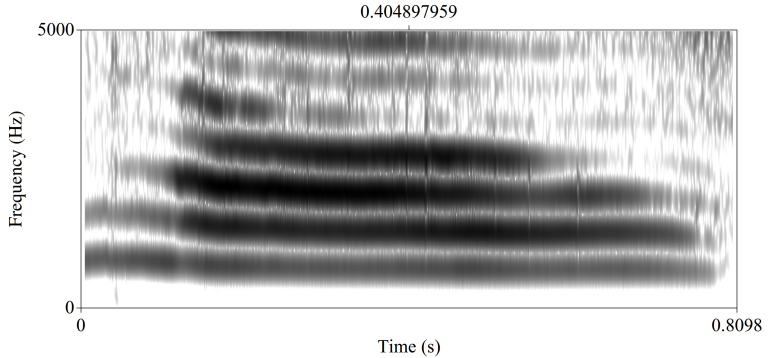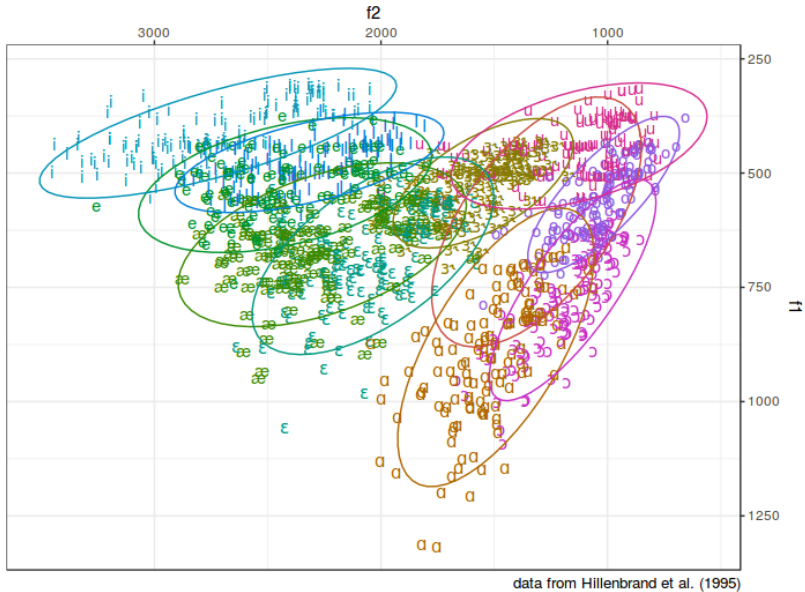extract data
plotting

R packages
vowels
phonTools

0.404897959

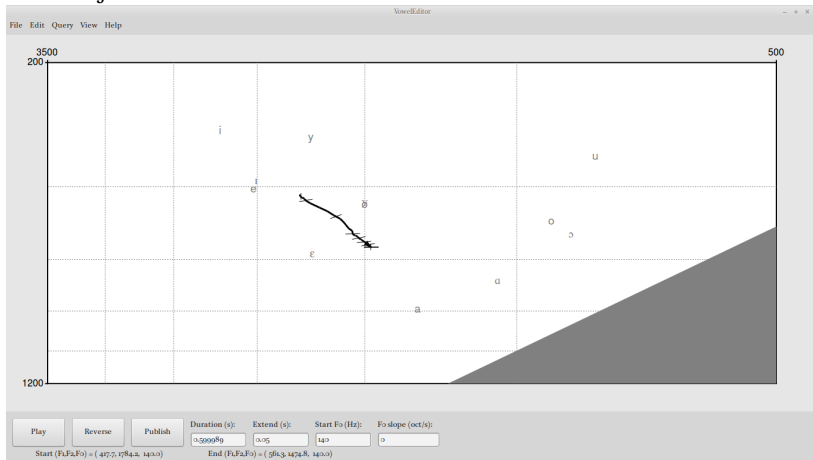# Cat meow

Vowel chart

Source-Filter
Model

Vowel analysis
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data from Hillenbrand et al. (1995)

Vowel editor

Praat objects > New > Sound > Create sound from VowelEditor...

How to analyse vowels?

- record sounds
- annotate sounds
- make an exploratory analysis
- extract duration and formant information from your data
- create the plot

How to analyse vowels?
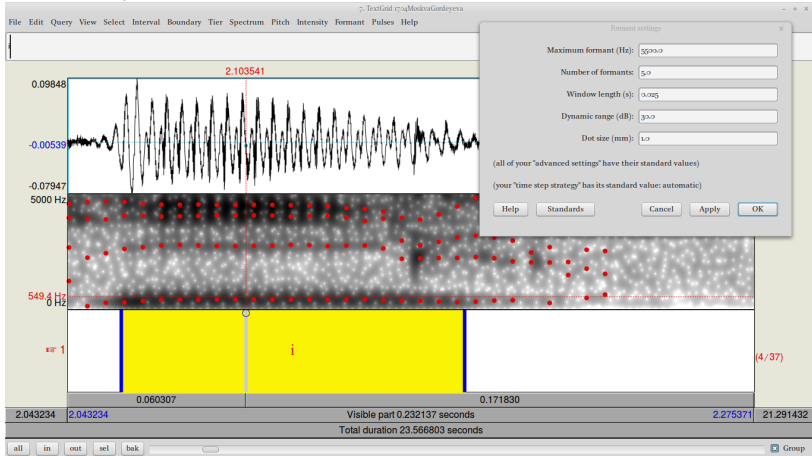
✓ record sounds

✓ annotate sounds

· make an exploratory analysis

· extract duration and formant information from your data

· create the plot

Formants in Praat

Source-Filter
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Praat Analyser > Formant > Show Formants
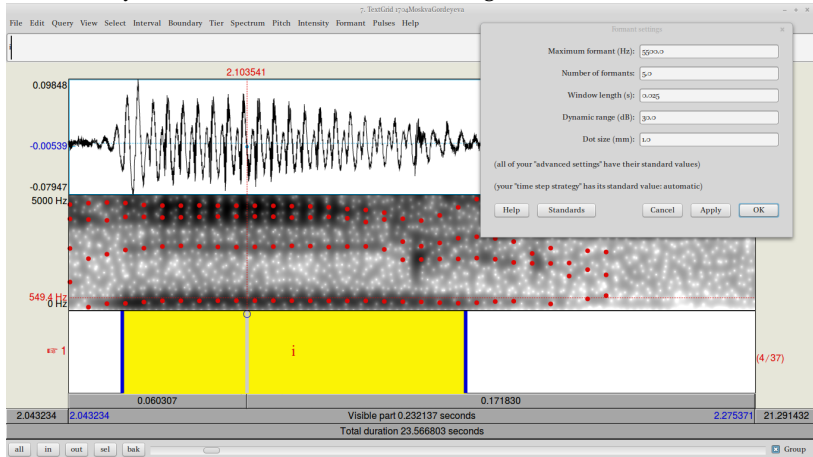

F1   select the nearest first formant value or mean value for selection

F2   select the nearest second formant value or mean value for selection

F3   select the nearest third formant value or mean value for selection

Formants in Praat

Praat Analyser > Formant > Formant Settings...

During analysis you should set Maximum Formant value so as to distinguish [i], [a] and [u].

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✓ annotate sounds

✓ make an exploratory analysis

· extract duration and formant information from your data

· create the plot

Praat scripting

Praat have its own scripting language. You can read about it:
Praat Objects > Help > Scripting tutorial
There are a lot of Praat scripts here.