

prbn
SIG



INTRODUCTION TO USING PRAAT IN PRONUNCIATION TEACHING

PAVEL ŠTURM
INSTITUTE OF PHONETICS
CHARLES UNIVERSITY, PRAGUE



PLAN

Part I: A guided tour around Praat

Part II: Speech acoustics for pronunciation teachers

Part III: Am I really saying this? – A practical demonstration

Q&As

A GUIDED TOUR AROUND PRAAT

www.praat.org

Task 1: Open a sound file and play it

Task 2: Extract parts & save sounds

Task 3: Record yourself

SPEECH ACOUSTICS FOR P.T.S

What is sound/speech?

- sound (acoustics, speaker-dependent)
- perception of sound (linguistics, listener-dependent)



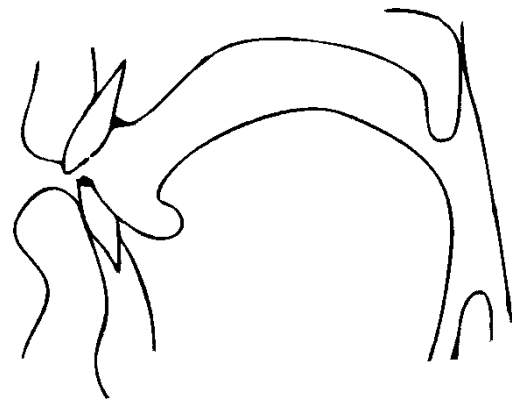
Basic dimensions of sound:

- duration [ms] – how long
- amplitude/intensity [dB] – how loud
- frequency [Hz] – how low

TYPES OF SOUNDS IN SPEECH

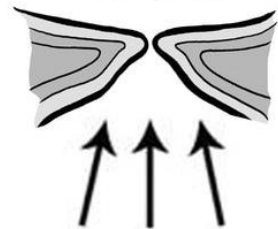
aperiodic sounds

- noise-like, random elements
- no clear coupling between the elements

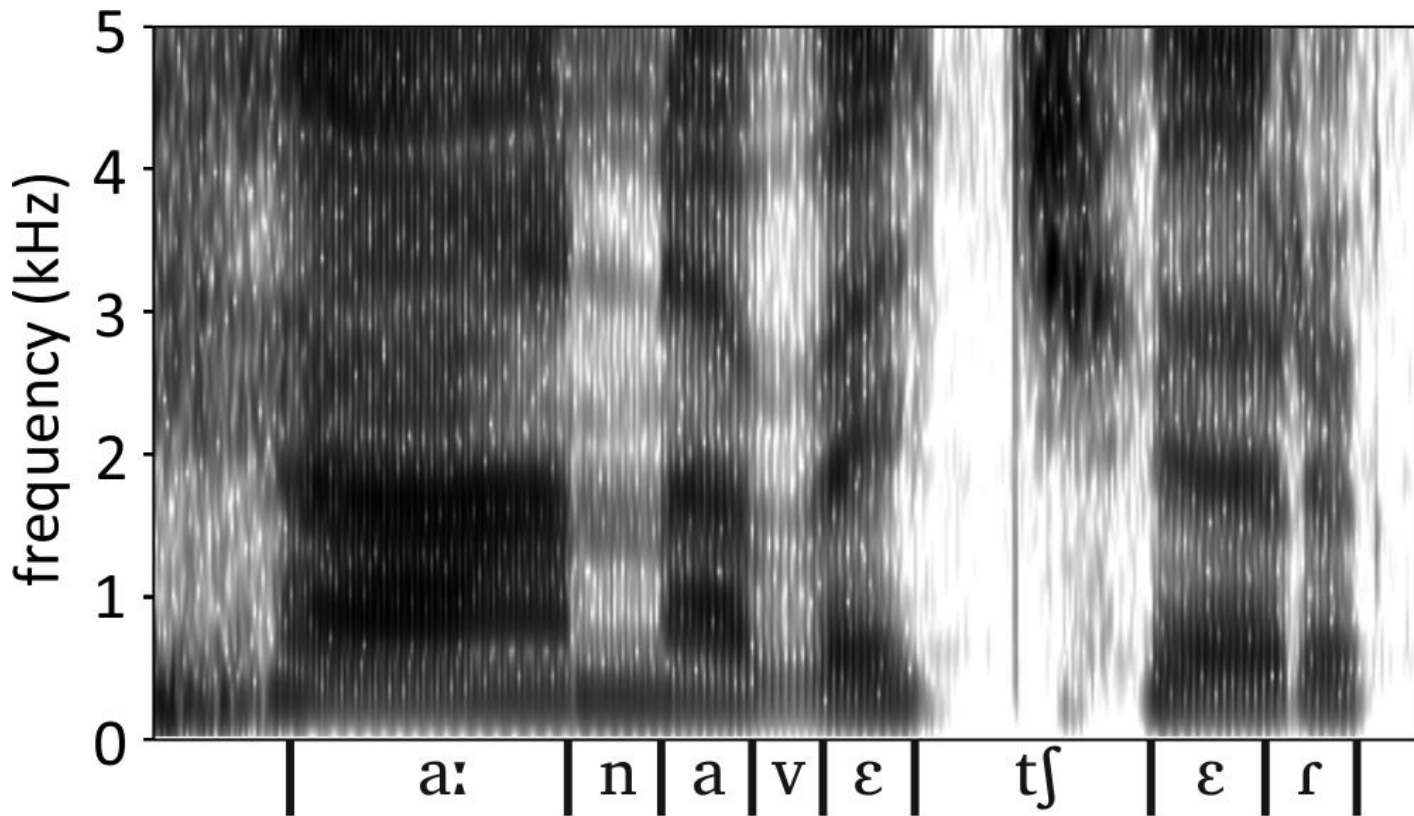


periodic sounds

- tone-like, lots of periodic elements in a harmonic relation
- fundamental frequency (f_0) + harmonic frequencies



SPECTROGRAM



duration

+

frequency

+

intensity

SEGMENT CLASSES

voiced vs. voiceless

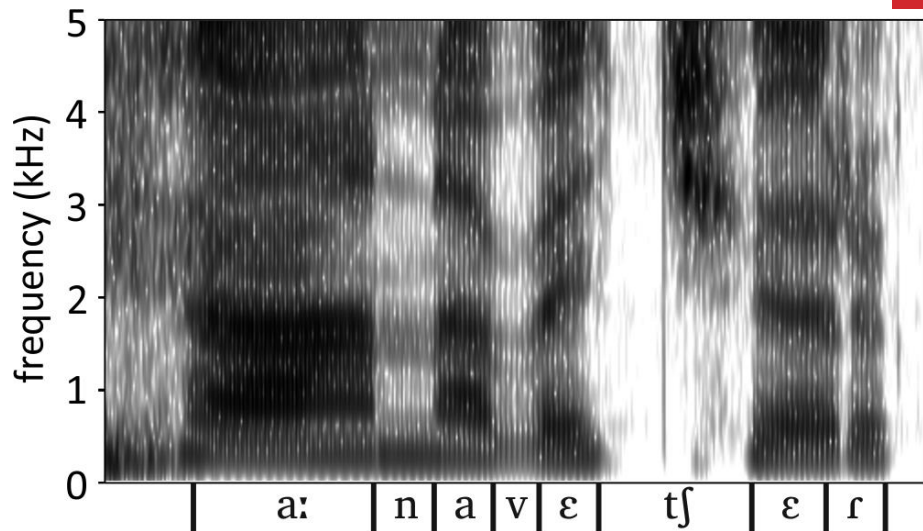
- presence of f_0

plosive vs. fricative

- complete closure – silence
- critical narrowing – friction noise

vowels

- open tract → less dampening, stronger periodicity → **formants**



SEGMENT CLASSES

voiced vs. voiceless

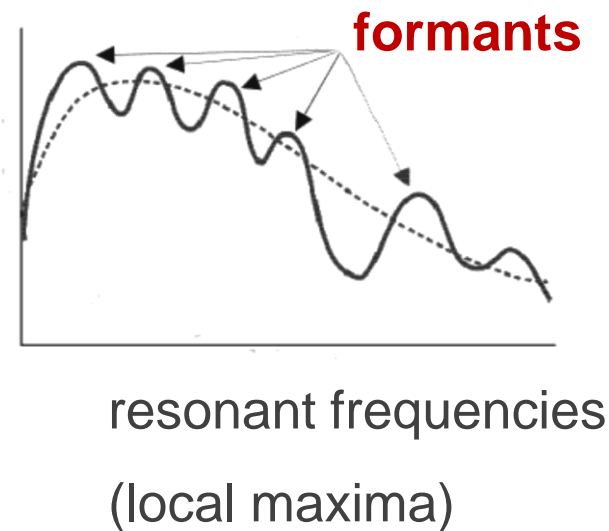
- presence of f_0

plosive vs. fricative

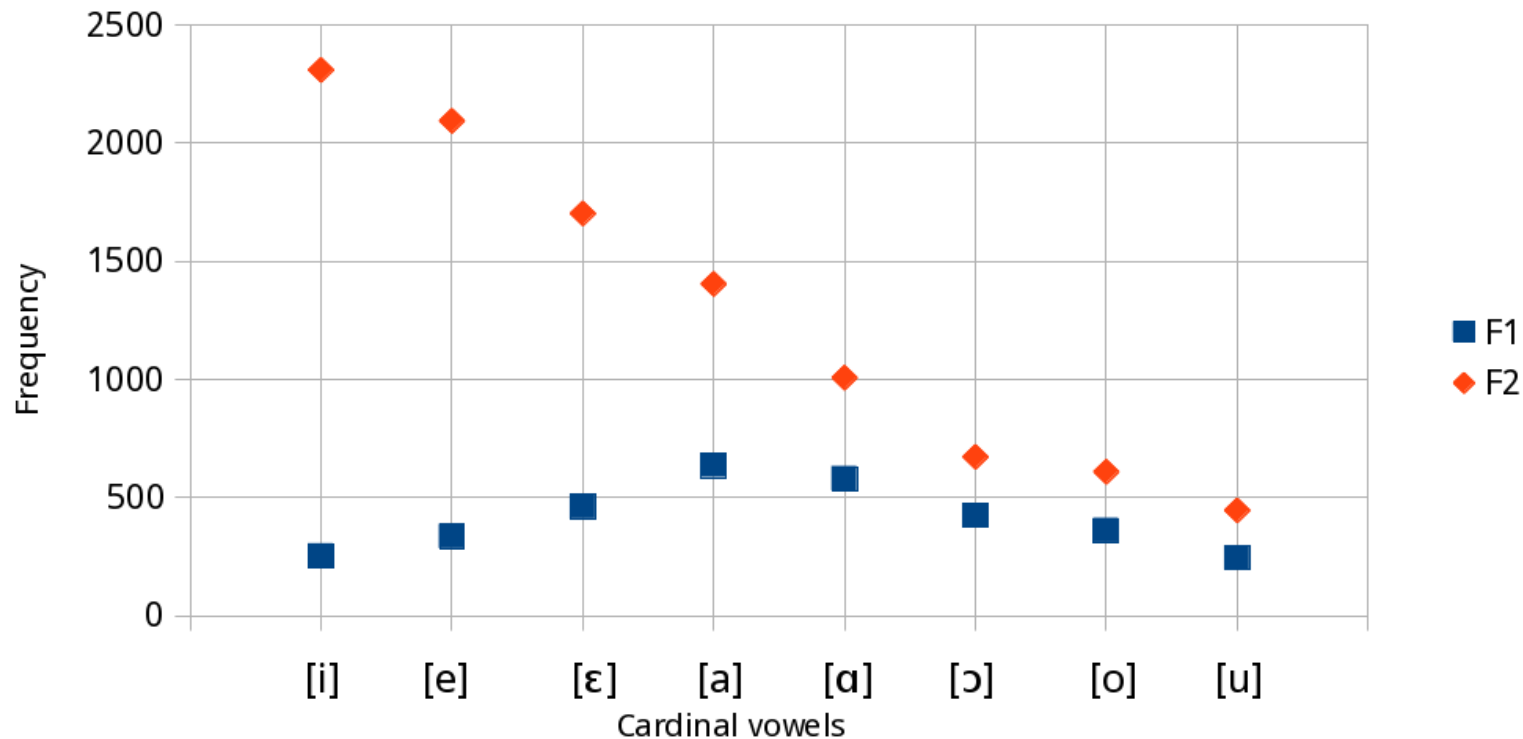
- complete closure – silence
- critical narrowing – friction noise

vowels

- open tract → less dampening, stronger periodicity → **formants**

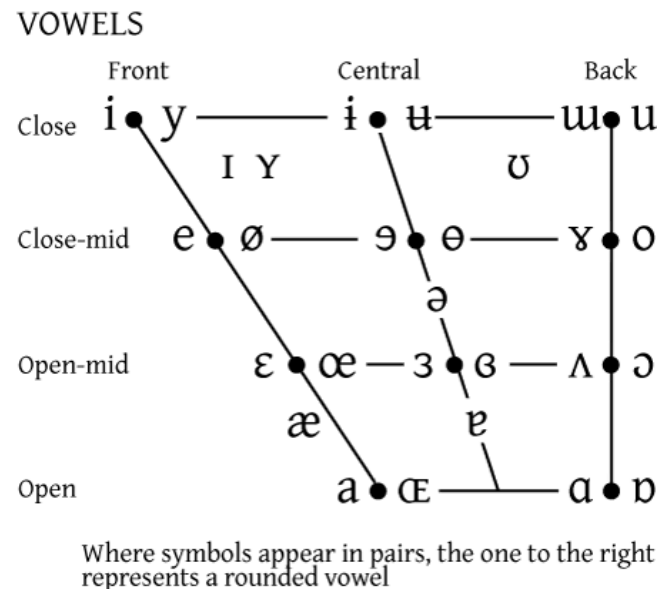
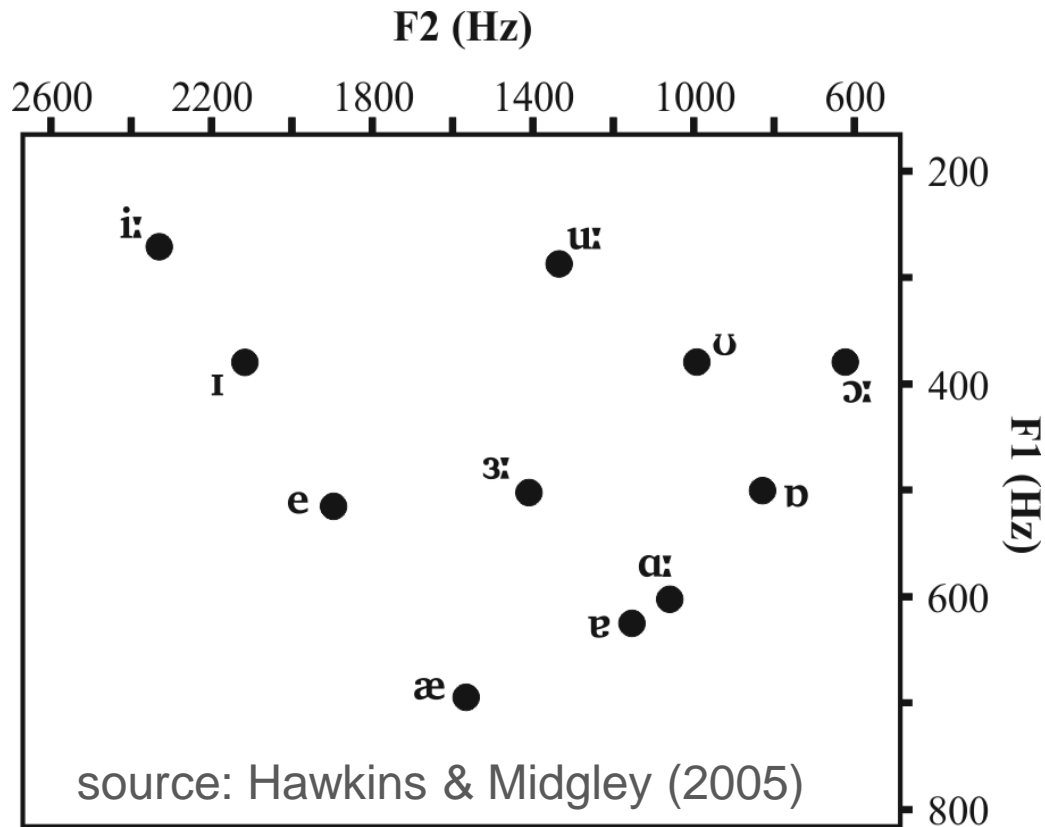


F1 – F2 FORMANT PLOT



source: Olle Linge (www.snigel.nu)

F1 – F2 FORMANT PLOT



AM I REALLY SAYING THIS?

Task 4: Create annotations (TextGrid objects)

Pronunciation of /æ/

Pronunciation of /θ ð/

Pronunciation of /ŋ/

Aspiration

Linking

Intonation

Schwa (reduction)

CONCLUSION

Praat:

- indispensable to **L2 researchers**
 - useful to **(pronunciation) teachers?**
-
- great for listening analysis and feedback to students
 - may help explain articulation through acoustics, visual cues
 - integrates sound editor, sound analyzer, annotation tool, but also an **interactive interface** (advanced stuff...)

prbn
SIG



THANK YOU!

PAVEL ŠTURM
INSTITUTE OF PHONETICS
CHARLES UNIVERSITY, PRAGUE

