

Introduction to Speech Science

Lecture 1: The Speech Chain

Who are you?

MSc Speech and Language Sciences
(Human Communication Sciences)

Intercalated BSc Speech Sciences

MA Phonology

PhD students, affiliate students, academic
visitors

Who are we?

Course Tutor: Paul Iverson



Laboratory tutors: Andy Faulkner,
Steve Nevard, Matthew Smith,
Dave Cushing

Occasional tutors: Stuart
Rosen, Mark Huckvale



Format of course

Lecture: Thursday 9 - 9.50 am

Followed by (10:00 - 11:30)

Lab session + round-up

OR

Review tutorials

Learning resources

Course and laboratory handouts

Course website:

www.phon.ucl.ac.uk/courses/spsci/ish/

Textbook: *The Speech Chain* (Denes
and Pinson)

Readings (on loan from Listening Centre)

Multimedia software (LC)

Recommended web sites

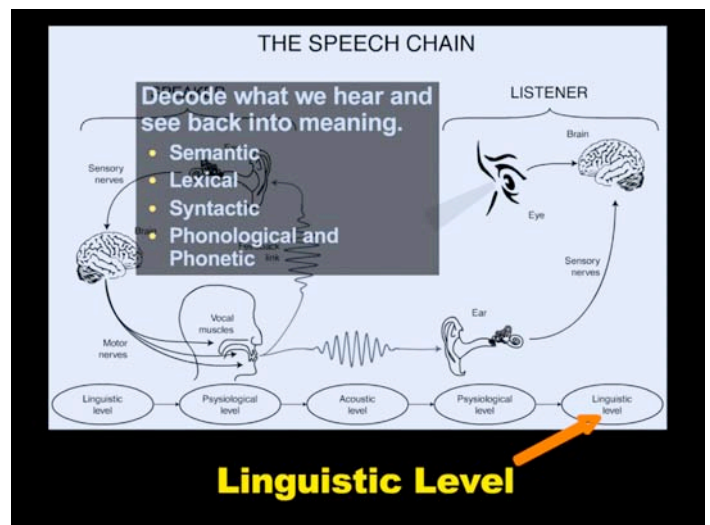
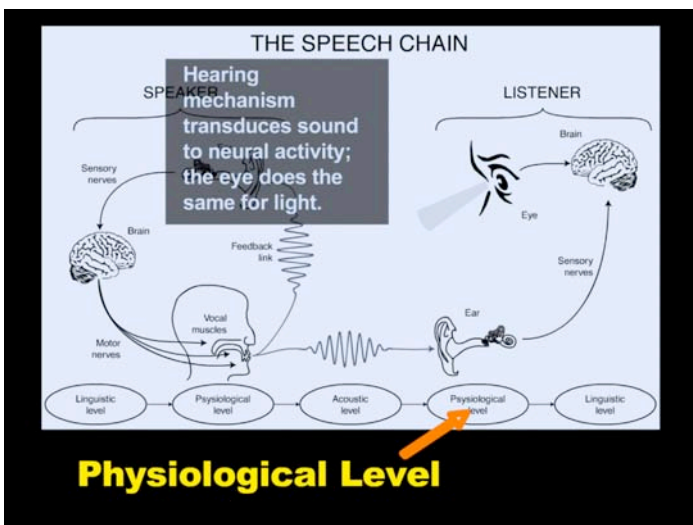
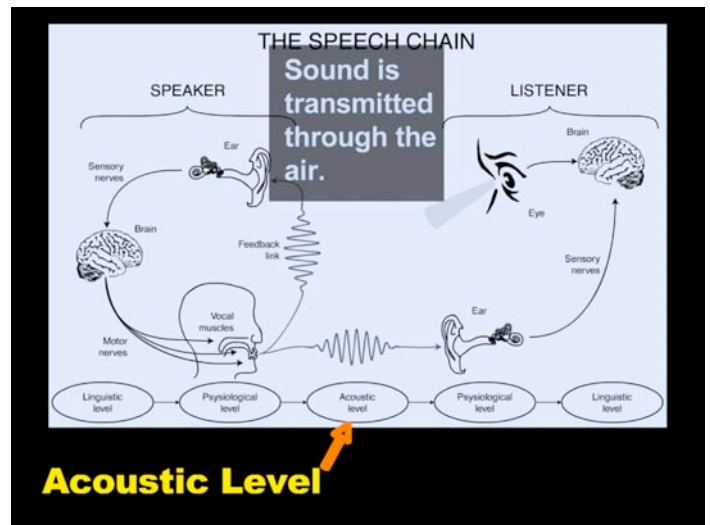
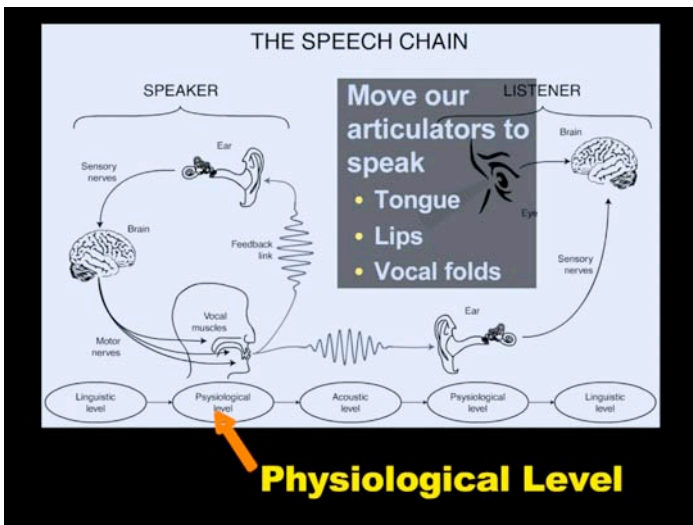
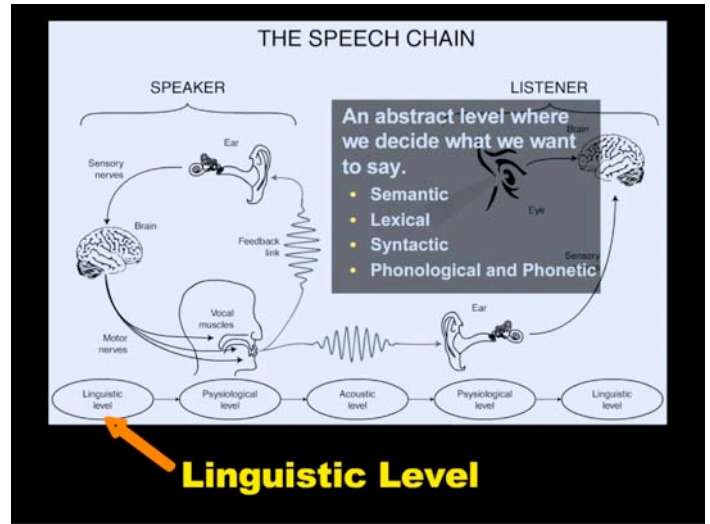
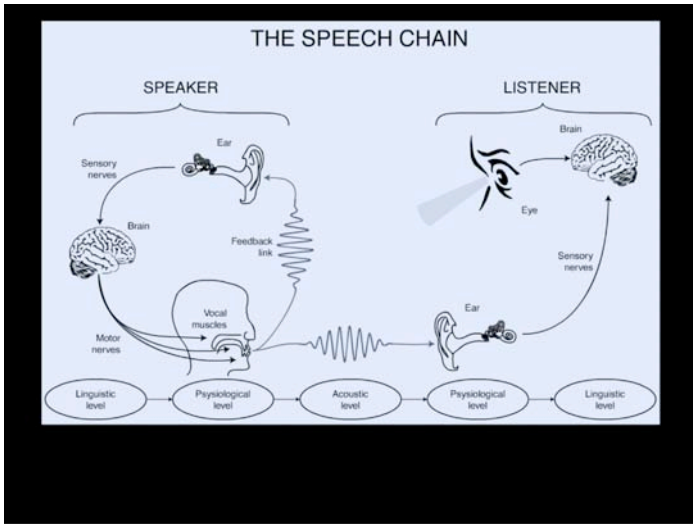
Today's lecture

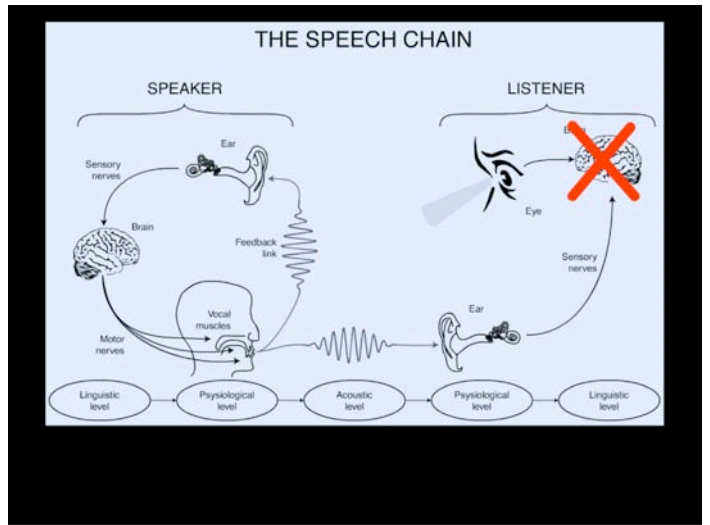
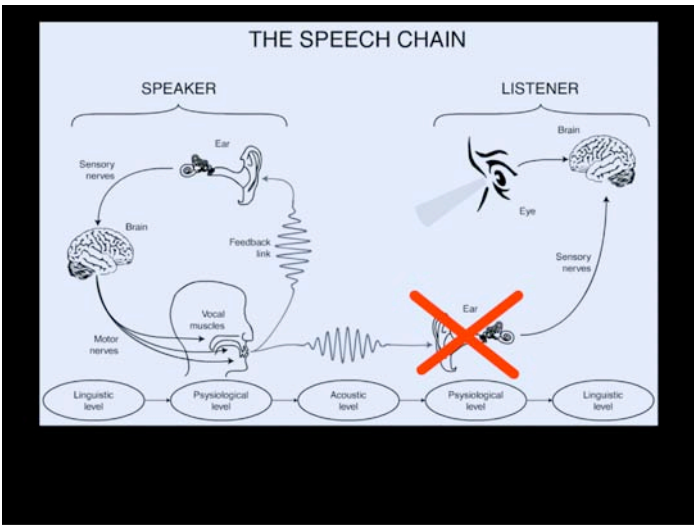
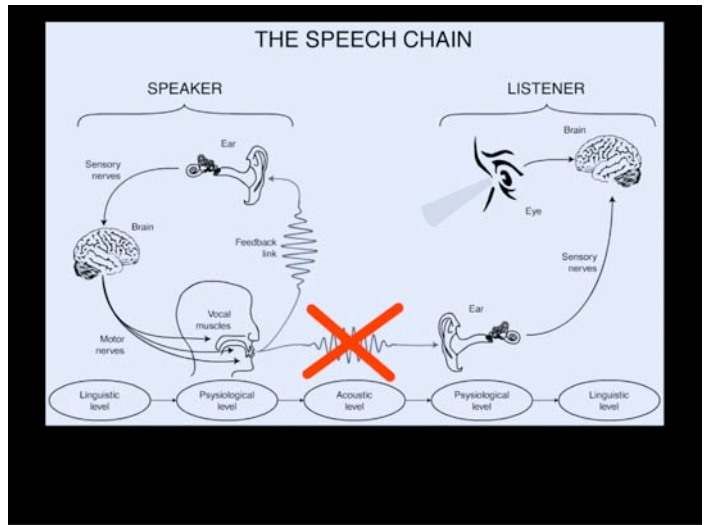
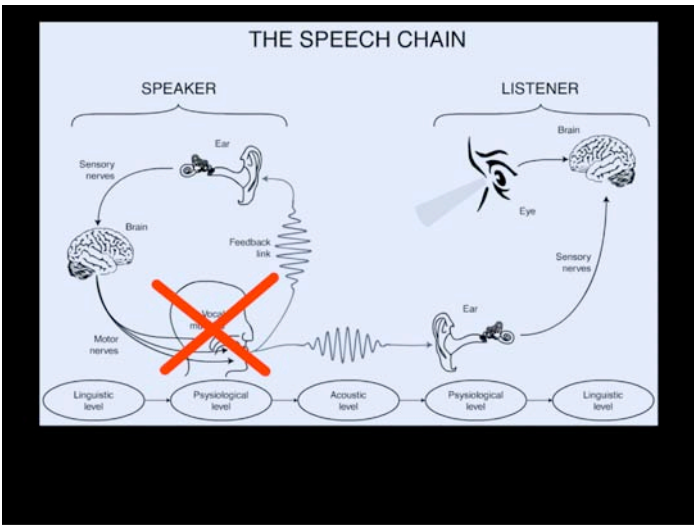
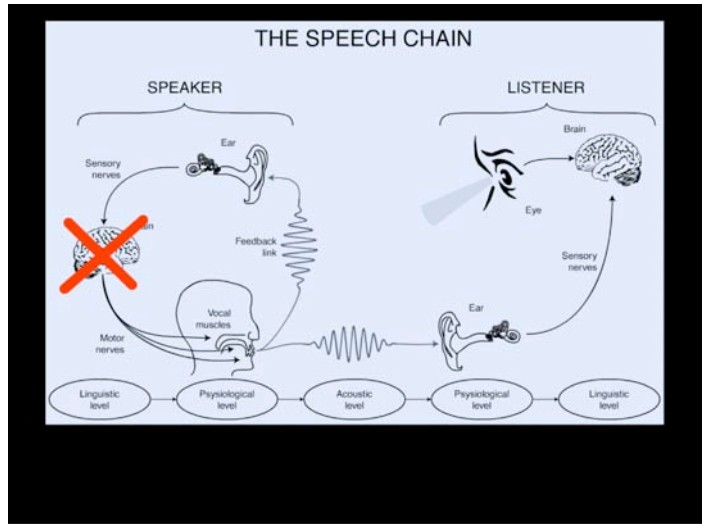
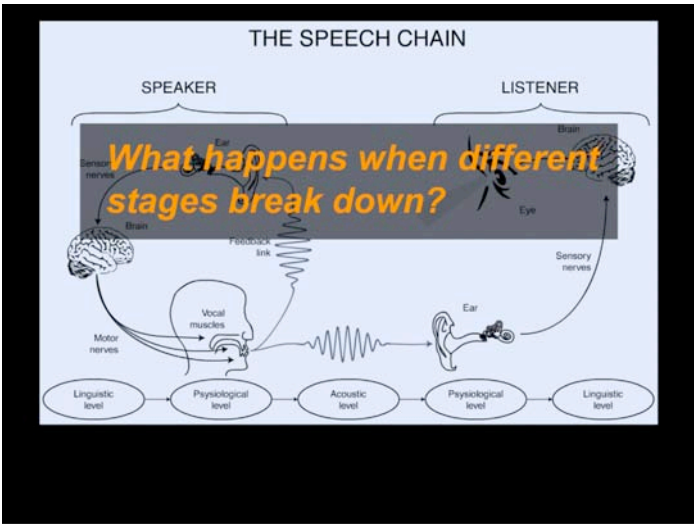
Introduction to the speech chain

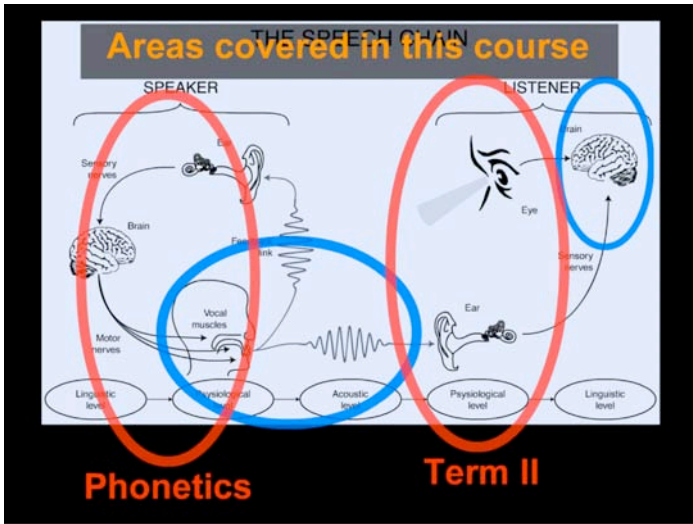
- A rough overview of how we produce and understand speech

Why this material is relevant to you

Summary of Term I lectures







Why bother learning this?

Basic science

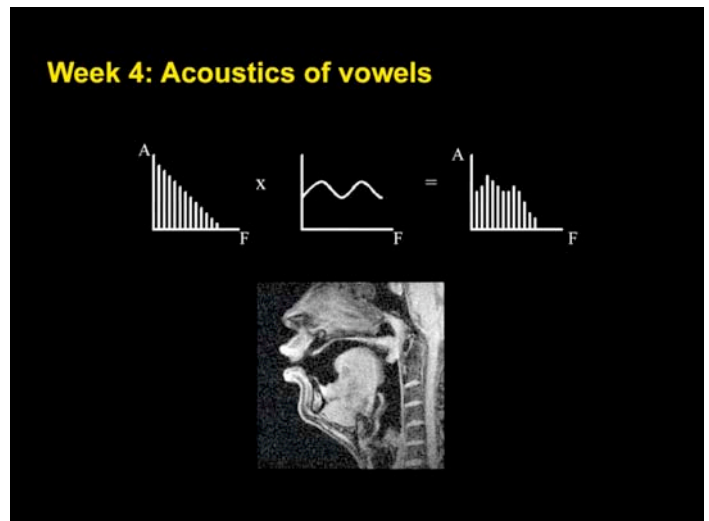
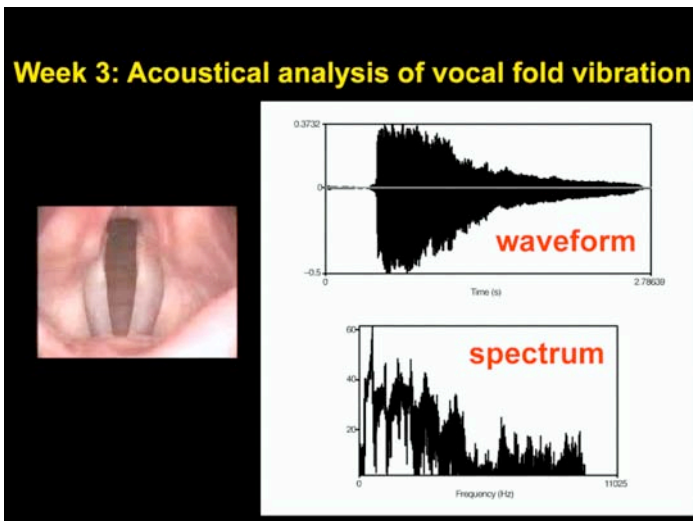
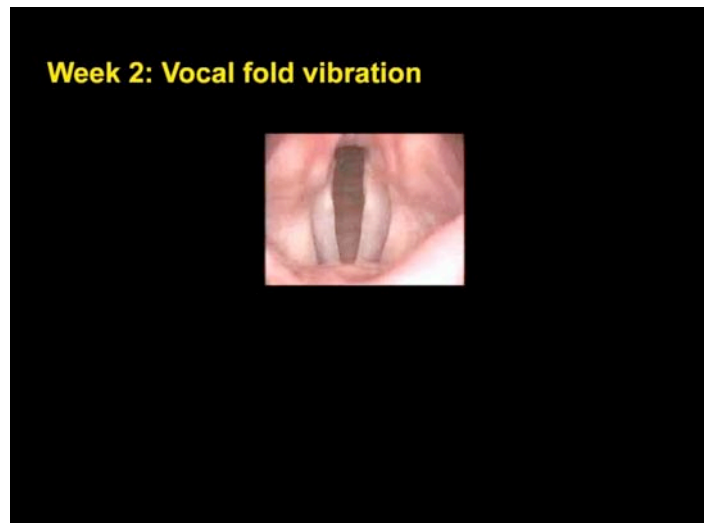
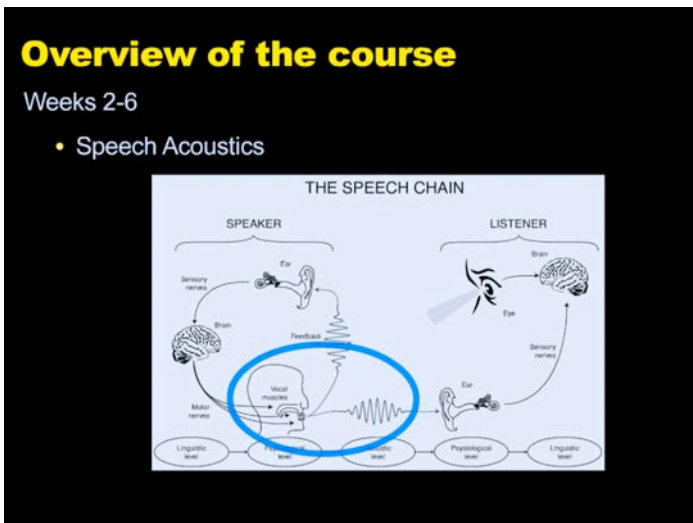
- No *direct* application to speech therapy

Gives a context to your clinical training

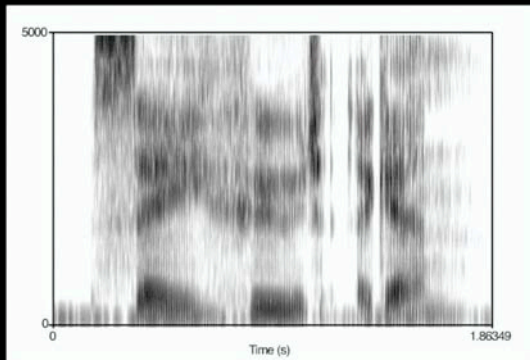
Helps you deal with novel clinical situations

Helps you learn new material

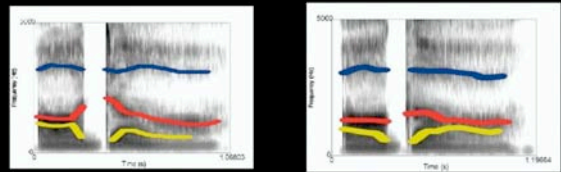
Helps you interact with other professionals



Week 5: Fricatives and spectrograms



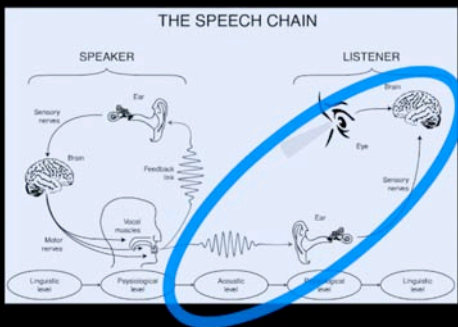
Week 6: Acoustics of consonants



Overview of the course

Weeks 7-10

- Speech Perception



Speech Perception

Phonetic perception

- What low-level processes help us to understand speech?
- Categorical perception, perceptual tuning, cue multiplicity, visual cues

Effects of linguistic structure

- How does our knowledge of language help us to understand speech?
- Lexical neighborhoods, contextual information
- How does this affect the design of speech tests?

Development of speech perception

Second-language learning

Today's lab session...

Theme: 'Exploration' of speech signals

