

Introduction to Phonetics

Branches of phonetics

- Phonetics examines all physical and physiological/anatomical aspects of speech sounds
- **Articulatory phonetics**: study of the organs of speech, the way they move to produce various sounds
- **Acoustic phonetics**: study of sound waves, their properties and the way they are transmitted
- **Auditory phonetics and speech perception**: study of how sounds are decoded by ear and brain
- Plus **instrumental/experimental phonetics** – uses instrumental techniques to analyse particular aspects of sound production, transmission and perception

What is speech?

Speech is a term that refers to the processes associated with production and perception of **sounds** in **spoken languages**

Sound is variation of pressure that is transmitted through the physical medium, usually the air, that is detectable by ears

Sound waveform: variation of pressure as a function of time

Acoustic phonetics is the study of the **acoustic** characteristics of speech, including an analysis and description of speech in terms of its physical properties, such as frequency, intensity, and duration.

What is sound?

- Sound is variation in air pressure detectable by the human ear
- Sound is a **wave** characterised by the transmission of energy in the form of **compression/condensation** (increased pressure) and **rarefaction** (decreased pressure)
- All sounds result from vibration
- A source of energy is needed to initiate that vibration
- There must also be a **medium** through which the sound can travel, e.g. air