

Phonetics 352 Notes: Class #1

Chapter 1: A "Sound" Science

Phonetics:

- Study of production and perception of speech sounds
- Breakdown words by sounds.
- Writing what you hear
- Symbols/rules that represent sounds of English instead of spelling
- *p. 14 - see (IPA) international phonetic alphabet (107 symbols) - know this well. Print on index card for reference. ipa.typeit.org

Why phonetics is important:

- Gets patient baseline and allows to show progress in speech over time.
- International Phonetic Alphabet
- (IPA) is like a universal language, it doesn't allow room for individual interpretation
- Phonetics allows one to look at assessments and be aware what a patient might need

What phonetics helps:

- TBI- traumatic brain injury
- Any type of neurological disorders/damage
- Accent reduction
- Fluency disorder
- Hearing loss
- deaf population
- ASL
- Cleft palate
- Stroke victims
- Placing articulation
- Phonological disorder
- Cochlear implants

*remember to use slash marks "/" when transcribing
Quotation marks mean how it is spelled in English, slash marks means the phonetic transcription.

/ / = Phonetic transcription

" " = English spelling of word

“meet” = /mit/

“meat” = /mit/

DEFINITIONS

Historical Phonetics: Study of sound changes in words and how speech evolves over time.

- o Linguists use this
- o Examples
 - “Bae” shortened form of “baby” or “babe”
 - “Kinda” from “kind of”
- o Why are words shortened?
 - People move faster
 - Reduce time speaking
 - Time is of the essence

Physiological (Articulatory) Phonetics: examines the movement/function of the individual speech organs during the process of speaking.

Acoustic Phonetics: looks at difference in frequency, intensity (force), and duration (length of time) of consonants and vowels (break down sounds).

- Allows listeners to perceive how sounds, syllables, and words differ from one another.
- Ex: specific acoustic attributes of the initial consonants in the words “mug,” “hug,” “rug,” and “thug” allow the listeners to tell them apart.
- used in experimental phonetics/lab work- replicate human voice for augmentative communicative devices

Perceptual Phonetics: the study of the listener’s perception of speech sounds in terms of loudness, pitch, perceived length, and quality; discrimination of speech sounds.

- hearing aid (don’t hear every sound...brain fills in gaps)

Experimental Phonetics: lab study of physiological, acoustic, and perceptual phonetics.

- Lab equipment is used to measure the various attributes of the speech organs during speech production as well as to measure the acoustic characteristics of speech.

- o Ex. Makes speech devices, shows patients voice on a spectrogram.
- o Ex: in the Theory of Everything there is a device used that helps the main character communicate- this came from experimental phonetics
- o Ex: voice disorders-use graphic representation to display sounds
- o Ex: Siri on the iPhone
- o Ex: voice synthesized software
- o Ex: trying to get people who have lost their voice from trauma or disease to return to more natural speech/sound

Clinical Phonetics: Study and transcription of speech sound disorders.

Phonology = systematic organization of speech sounds and the production of language (phonological rules)

- ❖ **Phonetics vs. Phonology**- study of speech sounds vs. rules of language
 - o **Phonology** relies on rules and is not the same as **phonetics**.

Dialect -variation of language based on geography as well as social and ethnic group membership.

- Includes grammar (syntax) and vocabulary usage, there is no right or wrong way to pronounce words.

Syllables:

- A syllable is a syllable because it has a vowel or a vowel sound with a consonant preceding or following it.
 - o You cannot have a syllable without a **vowel** (a, e, i, o, u, sometimes y)
 - o only one vowel sound per syllable

o Vowel is sometimes referred as “nucleus of syllable” or “peak of syllable” b/c it has the most acoustic energy

- **Syllable stress**- to test where syllable stress occurs→ overstress each syllable- if it sounds odd then it is not the stressed syllable
 - o Louder and higher pitched sound places more emphasis on certain syllables.

Supra Segmental Qualities = beyond the segment

- ▬ length
- ▬ tone
- ▬ stress
- ▬ intonation