Tutorial 2 (11&12 Nov)

1. What is phoneme, phone, and allophone respectively? Give examples for each category.

-phoneme: the smallest unit which distinguishes meaning

*pit*: 3 phonemes /p/ /ɪ/ /t/

-phone: any individual sound that you can produce, actual sound [pʰ] [ɪ] [t]

-allophone: variants of the phoneme, in different phonetic context, doesn’t distinguish meaning, will never overlap with each other (complementary distribution)

clear l and dark l are allophones

/l/: [l], [ɫ]

/p/: [pʰ], [p]

word initial position [pʰ]

non word initial position [p] spit, spark

Analogy of letter

‘a’: A a

Arbeit (n.) arbeiten (v.)

A A A a a **a**

1. How to identify phonemes (Hint: m)? Use the example of /p/ in English to illustrate.

-minimal pair test: word pairs that differ in only one sound and meanings

pit and bit: the same number of sounds (3)

the same phonetic environment except one sound /\_ɪt/

compare the meanings

/p/ and /b/ are separate phonemes

1. What are the two main speech segments (Hint: v, c)? What are their criteria of phonetic description respectively? Describe /i, æ, u, ɑ/ and /p, s, n, ʔ/. (Hint: What is the difference between /i:/ and /i/? What is the counterpart of /p, s, n, ʔ/?)

-vowel: length (short or long), openness of oral cavity (open-close), position of the tongue (front-back), roundness of the lips (rounded or unrounded)

-consonant: voicing (voiced or voiceless, vibration of the vocal cord/folds), place of articulation, manner of articulation

/i/ short close front unrounded vowel

/æ/ short open front unrounded vowel

/u/ short close back rounded vowel

/a/ short open back unrounded vowel

/p/ voiceless bilabial plosive vs voiced /b/

/s/ voiceless alveolar fricative vs voiced /z/

/n/ (voiced) alveolar nasal vs no voiceless counterpart

/ʔ/ glottal plosive (glottal stop)

1. What are the three main branches of phonetics? Use the example of /p/ in English to illustrate. (Hint: How is /p/ produced? What are the acoustic properties of /p/? Google can help you.)

-articulatory phonetics: production of speech sound

(close your lips stopping phase, compression phase, release phase, aspiration)

-acoustic phonetics: physical properties of sound (duration of stopping, pressure of aspiration, voice onset time etc.) objective measurement by machine

-auditory phonetics: perception of speech sound by human being (ear) subjective