

## 20 Phonology: Introduction

### 20.1 Phonology

- (1) Phonology: selection of meaningful sounds in a language.
  - a. It also governs the systematic phonetic variations (articulatory processes) in a language.
- (2) Definitions:
  - a. Features: atomic units that distinguish one phoneme from another.
  - b. Segment: a sequence of phonemes, similarly used in phonetics.
  - c. Syllable: a segment that composed of a *nucleus, onset and coda*.
- (3) Phonetics vs Phonology:
  - a. Phonetics is the study of the process of articulation.
  - b. Phonology is the study of meaningful speech sound.
  - c. Phonetics studies phones, and phonology studies phonemes.
  - d. phones are represented by [ɪ], and phonemes are represented by /ɪ/.

### 20.2 Minimal pairs

- (4) Minimal Pairs: a variation between two or more features/qualities of a word which represent a change in *meaning*.
  - a. In other words: a single distinction in phonemes between two words.
  - b. examples: 'sip', 'zip', 'tip', 'dip'.
- (5) Some phonological examples:
  - a. beat, boot, bot, /bit, but, bat/.
  - b. bit, bet, butt, /bɪt, bɛt, bʌt/.
- (6) Near minimal pairs: 'bud' vs 'pub'
  - a. /bʌd/ vs. /pʌb/
- (7) Environment: Context in which sounds occur.
- (8) Aspiration does not create a minimal pair in English.
  - a. /k<sup>h</sup>æt/ is the proper pronunciation for cat, whereas \*/kæt/ is not.
  - b. Compare to gas, and got, /gæs/, /gɒt/.
  - c. Aspiration does not occur with voiced stops in English.
- (9) Aspiration creates a minimal pair in Hmong.
  - a. khov /k<sup>h</sup>ǎ/, 'sturdy'.
  - b. kov /kǎ/, 'to touch'.
  - c. Voicing is not minimal in Hmong: \*/gǎ/.
- (10) In Thai the following form minimal pairs: /d, t, t<sup>h</sup>/
  - a. dtaa /dæ:/, 'eye, grandpa'.
  - b. deek /te:k/, 'child'.
  - c. thuuj /t<sup>h</sup>u:ŋ/, 'bag'.

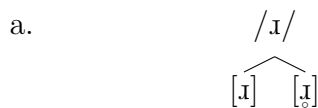
## 20.3 Complementary distribution

- (11) Complementary distribution: representative of articulatory processes.
- Definition: Two separate sounds that never occur in the same place.
- (12) Voiceless /ɾ/ only occurs after a voiceless stop.
- truck, prince, crack [tɾʌk, pɾɪns, kɾæk].
  - drug, broke, grind [dɾʌg, bɾoʊk, gɾaɪnd].
- (13) Aspiration only occurs on voiceless stops at the beginning of words or syllables.
- tug, puck, can [tʰʌg, pʰʌk, kʰæn].
  - dug, buck, gone [dʌg, bʌk, gʌn].
- (14) The phoneme /t/ is pronounced differently in 5 separate environments:
- Non-released: put [pʰʌt̚]
  - Aspirated: top [tʰɑp̚]
- (15) /t/ continued:
- Flap: butter [bʌɾɪ]
  - Glottal stop: button [bʌʔn]
  - Elsewhere: twin, tree, putrid [tʷɪn, t̪i, pjʊt̪ɪd]
- (16) The phoneme /l/ has 3 different pronunciations.
- Dark l: pill [pʰɪɫ]
  - Voiceless: clean [kliːn]
  - Elsewhere: lip, lull [lɪp, lʌɫ]

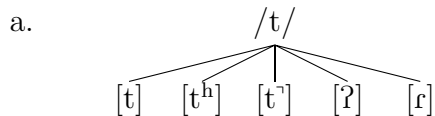
## 20.4 Allophonic variation

- (17) Allophones: variants of a phoneme.
- Allophonic distribution: set of distinct environments that separate allophones occur.
  - Allophones are represented phonetically.

- (18) Allophones of /ɾ/:



- (19) Allophones of /t/:



- (20) Allophones of /l/:



- (21) Phonetic and phonemic inventories

- Phonemic: phonemes that have contrast in a language, i.e. phonemes that form minimal pairs.
- See page 71, Tables 3.17 and 3.18