

Phonology-Part I: Phonemes and Allophones

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Practice: Syllabification

(1) [gɪv æn əj pi ej tɪ.ænskɪpʃən ænd ə sɪləbɪfɪkeɪʃən fɔɪ ðə fɒləʊɪŋ wɛɪdʒ]:

a. Architecture b. Zestfully c. Constellation

Phonemes and Allophones

	Definition	Representation
Phonemes	The sound (/spatial and temporal cues) as represented in memory. *In oral languages, the units are based on sound, whereas in signed languages, they are based on space and time.	/.../
Allophones	The sound as actually produced by a speaker	[...]

"[α] is an allophone of /β/ if [α] is a way that speakers pronounce /β/"

How do we determine which is which?

Minimal Pairs

Minimal pairs are the tool we will use to determine whether two segments belong to different phonemes in a language.

Where a minimal pair := two words with different meanings that differ in only one sound.

- If alternating *exactly one* sound in a (preferably short) string results in
 - a. a different meaning, then the phones are allophones of different phonemes.
 - b. the same meaning, then the phones are allophones of the same phoneme.

Example:

- a. Take [pɪl] and change it to [tɪl].
- b. This *minimal* change resulted in a change of meaning ⇒ [p] and [t] are allophones of different phonemes in English.
- c. Now take [najt] and change it to [najʔ].
- d. This minimal change *didn't* result in a change of meaning ⇒ [t] and [ʔ] are allophones of the same phoneme in English.

Practice: Minimal Pairs, Phonemes and Allophones

(2) [wɪtʃ əv ðə fəloʊɪŋ ɪz ə mɪnəməl pɛ(ə)ɪ]:

- | | | | |
|-------------------|----------------|------------------|----------------|
| a. [najs]–[nis] | 'nice'–'niece' | d. [pleɪ]–[kleɪ] | 'play'–'clay' |
| b. [mɑp]–[tɑp] | 'mop'–'top' | e. [sɪŋ]–[sɪŋk] | 'sing'–'sink' |
| c. [dɑ:k]–[dɑ:ɪt] | 'dark'–'dart' | f. [kaɪt]–[laɪt] | 'kite'–'light' |

(3) [pɹævaɪd mɪnəməl pɛ(ə)ɪz fɔɪ ðə fəloʊɪŋ fuʊnɪmz]:

- | | |
|----------------|----------------|
| a. /j/ and /m/ | c. /i/ and /u/ |
| b. /ɪ/ and /k/ | d. /ɪ/ and /p/ |

(4) The following are some words from Palestinian Arabic, a language spoken mainly in Palestine and Israel. The words are transcribed into IPA for you.

[taɪb]	'repented'	[kʊl]	'all/every'
[s ^ɪ abɑːja]	'young women'	[ʕalam]	'sign/flag'
[ʔalam]	'pain'	[seɪ]	'traffic'
[roːh]	'soul'	[libɪs]	'clothing'
[daːb]	'dissolved'	[sɪr]	'secret'
[kɪzɪb]	'to lie'	[ruːh]	'go!'

- a. Please find the minimal pairs amongst the words above.
- b. For each minimal pair, state which phones are shown to be allophones of different phonemes.
- c. Based on your answer to (b), did you find any phonemes?