Applied Phonetics and Phonology

Introduction

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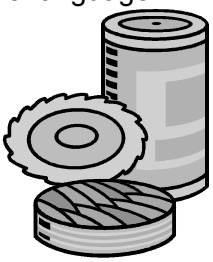
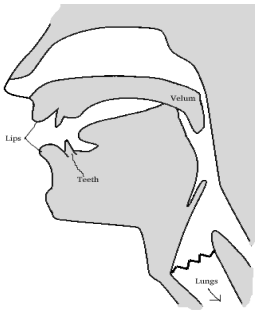
Phonetics: The articulation and perception of speech sounds. The inventory and structure of the sounds of speech in a language



Articulatory Phonetics: The study of the physiological mechanisms of speech production



Phone: Any actual speech sound:

[k^h]

Phoneme: A distinctive speech sound in the sound system of a language. A sound as it exists in the mind:

/k/

Phonetic Transcription: A universal system for transcribing the sounds of speech in any language. Phonetic Symbols are enclosed in square brackets [ ].

Phonetic Feature: One isolated property of a speech sound that can be used to differentiate one sound from another. For example, voicing is a phonetic feature.

Segments: Clusters of phonetic features that occur in sequence in the speech stream.

[a] [t] [l] [m]

[æ] [ɔ] [ð] [ŋ]

Consonant: A kind of segment that involves significant obstruction in the vocal tract.

[t] [l] [m] [ð] [ŋ] . . .

Vowel: A kind of segment that involves little or no obstruction in the vocal tract.

[a] [æ] [ɔ] . . .

Suprasegmental (or "autosegmental") features: Phonetic features that may span several segments, and which rely on segments for their expression, e.g., stress, pitch and intonation.

Glide: A glide is a segment that is sort of a vowel and sort of a consonant. The glides of English are [y] as in *yes* and [w] as in *went*. Some varieties also have a voiceless glide [hw], as in *when*.

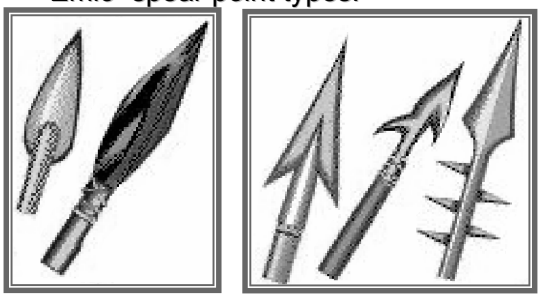
Etic vs. Emic Categories

Etic vs. Emic Categories

"Etic" spear point shapes:

Etic vs. Emic Categories

"Emic" spear point types:



Etic vs. Emic Categories

- Phonetics and phonology both deal with speech sounds.
- Phonetics deals with the physical properties of speech sounds – sounds as they exist "in the mouth."

Etic vs. Emic Categories

- Phonology ("phonemics") deals with the organization of speech sounds in a particular language -- sounds as they exist "in the mind."
  - Which sounds affect the meanings of words?
  - Which environments condition variations in pronunciation?

Etic vs. Emic Categories

- English has the sounds [s] and [ʃ].

  'sue' [su] 'shoe' [ʃu]

  'see' [si] 'she' [ʃi]

  - [s] and [ʃ] can occur before any vowel.
  - changing [s] to [ʃ] affects the meaning of the word

Etic vs. Emic Categories

- Korean also has the sounds [s] and [ʃ].
  - '시청사' [ʃitɕʰɔŋsa]
  - '식' [ʃik]
  - '소' [so]
  - '사' [sa]
  - '수서' [susɔ]

Etic vs. Emic Categories

- But [ʃ] only occurs in certain contexts
  - It can only occur before [i]. There are no Korean words with the sequence [si].
  - When speaking English, native speakers of Korean may have difficulty producing and perceiving [s] before [i].

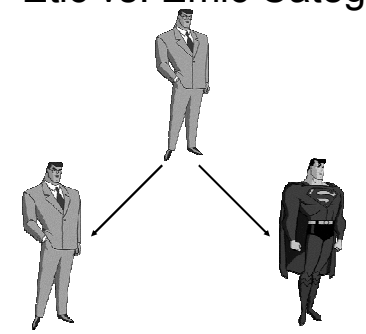
Etic vs. Emic Categories

- So, in Korean [s] and [ʃ] are considered to be the same sound, even though they are phonetically distinct.
- They do not *contrast* in Korean.
- They are the same sound in the mind, though they are actually different "in the mouth."

Etic vs. Emic Categories

- How do you know whether two sounds are "underlyingly" the same or not?
  - If they contrast – i.e., can occur in the same environment and have different functions, they are distinct *phonemes*.
  - If the are in *complementary distribution*, i.e., one always occurs in one set of environments, and the other always occurs in another different set of environments, then they are probably allophones of one phoneme.

Etic vs. Emic Categories



Normal Emergencies!

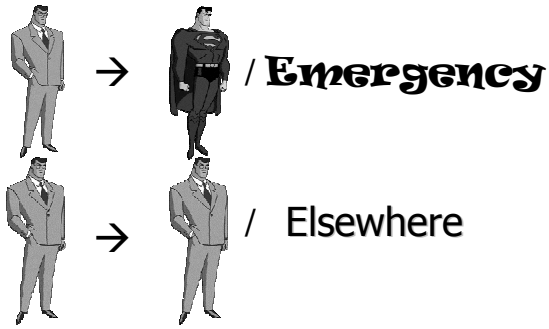
Etic vs. Emic Categories

/s/

[s] [ʃ]

Normal Before [i]

Etic vs. Emic Categories



Etic vs. Emic Categories

Korean [s] and [ʃ]

/s/ → [ʃ] / ___i

/s/ → [s] / Elsewhere

Etic vs. Emic Categories

English [p] and [p^h]

/p/ → [p^h] / #____

/p/ → [p] / Elsewhere

Etic vs. Emic Categories

A Phoneme is a **cognitive category** of speech sounds that contrasts with other phonemes: /t/, /b/, /f/, /v/

A Phone is an **instance** of a speech sound as it is actually pronounced:

[t], [t^h], [t‘], [b], [s], [o]

An Allophone is a **variant**, or alternate phonetic form of a phoneme, e.g. [t] and [t^h] are allophones of the phoneme /t/ in English.