



Phonology and CA

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Phonetics vs. phonology

- **Phonetics** studies the classifications of speech sounds:
 - deals with three :
 - their production by the vocal tract (articulatory phonetics)
 - their perception by the auditory system (auditory phonetics)
 - their physical properties as sound waves (acoustic phonetics)

- Phonetician task is to identify the variations of different accent and specify their range

Phonology

- Phonology studies the ways in which speech sounds form systems and patterns:

- the relationship between how sounds are pronounced and how they are stored in the mind

Concerns with the finer details of phonetic variety as with the functional identity of these variants

- which phonetic distinctions are significant enough to signal differences in meaning
- the ways sounds are organized within words

Three main concentrations:

- i. Movement of the speech organs
(Articulatory Phonetics)
 - we compare L1 & L2 sound with shared articulatory bases.
 - It is physiological
 - Sounds are produced by limited number of combination of articulatory features

ii. Vibration of the sound in speech organs (**Acoustic phonetics**)

- Physical rather than physiological
- There are instruments to record the occurrence of aspiration (puff of breath), such as sound spectrograph.

iii. The process of Hearing (Auditory Phonetics)

- Deals with the **message** the ear transmits into the brain
- It is mental
- /p/ and /p' / is the allophones (token) for the same phoneme (type)
- The mind will recognize both allophones as the same phoneme

- Bryzgunova(1963) gives lists of 'minimal pairs' : to illustrate the phonemic status
- **similar sounds** of two languages can have **different functional** statuses; in **L1** the differences may be disregarded and the two speech sounds viewed as '**the same**', while in **L2** the same objective difference is upheld as constituting a **functional difference**. This contingency is the cornerstone of contrastive phonetics and phonology.

CA in sound systems of two languages

- 1. Drawing up a phonemic inventory of L1 and L2
- 2. Equating the phonemes interlingually
- 3. Listing the phonemic variants for L1 and L2
- 4. Stating the distributional restrictions on the phonemes and allophones of each language

There are 4 steps :

- Stockwell and Bowen (1965)
- Burgschmidt and Geitz (1974)
- add a fifth step: **A Statement Of The Frequency Of Each Phonemic Contrast Within L1 And L2**

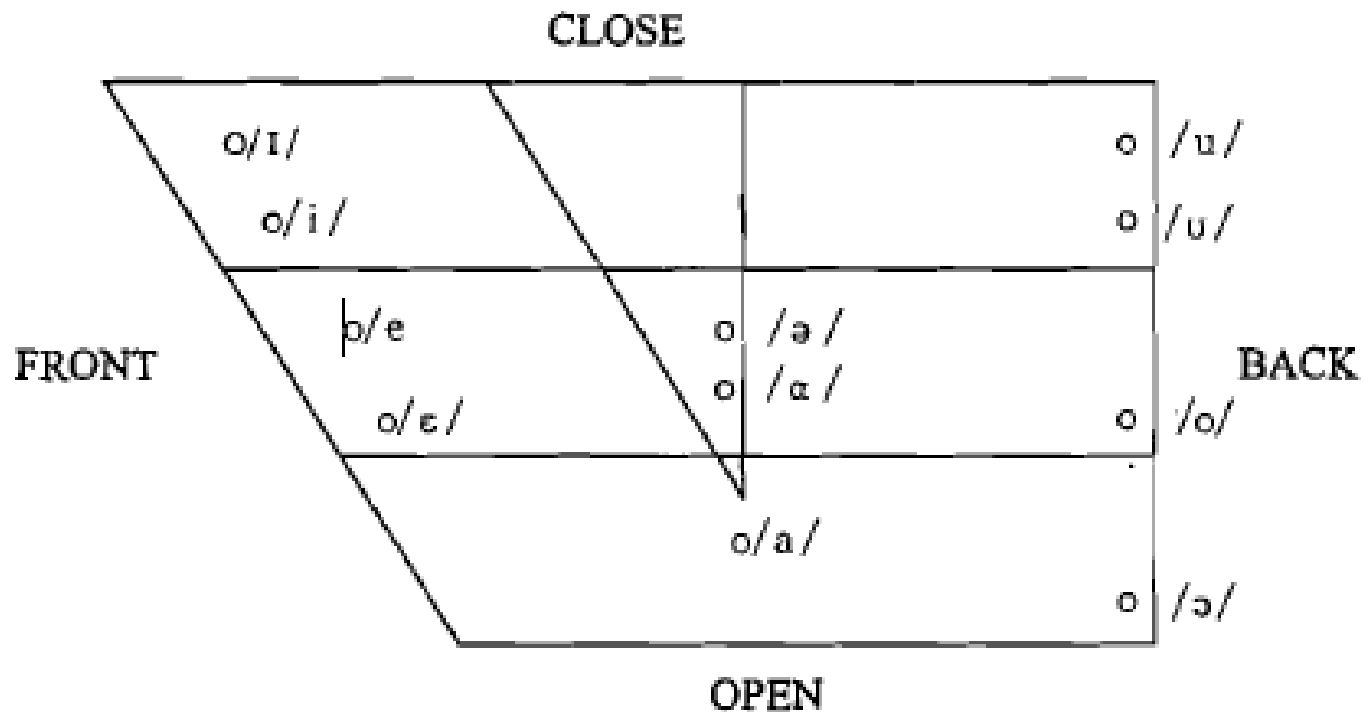
Inventorise the phonemes of L1 and L2

- The first step is descriptive, and isn't really part of CA
- 2nd step consists of equating phonological categories across the two languages. Note that for most languages phonemic inventory will already have been made available by a phonologist
- • IPA symbols are usually used for representing sounds
- • There are diacritics available to indicate any extra features e.g. Nasality (~) and Length (:)

- The consonants of L1 and L2 can conveniently be classified according to place and manner of articulation and placed in the appropriate cell of the chart, with voiceless/voiced pairs (e. g. /p/: /b/).

Manner	Plosive	Nasal	Fricative	Affricate	Lateral	Vibrant
Place	VCL/VCD	VCL/VCD	VCL/VCD	VCL/VCD	VCL/VCD	VCL/VCD
Bilabial	p b	m				
Labio - dental			f v			
Denti - alveolar	t d	n	s z		l	
Palato - alveolar		ɲ	ʃ ʒ	tʃ		
Palatal	c ɟ				ʎ	
Velar	k g	ŋ			ʟ	
Uvular						R
Apical						r

For the vowels, the conventional vowel-diagram can be used



Stating the allophones of each phoneme

This category of contrast applies to pair of L1 and L2 sounds that stand in a one-to-one relationship, not the one-to-many characteristics of category, here the two equated segments have different absolute statuses in their respective phonological systems.

State the distributional restrictions of allophones and phonemes of L1 and L2

- What is called for now is a detailed and fully explicit account of the environment in which allophones occur.

Phonological Models

- There is two-way choice for phonological models:
- **Taxonomic phonology** Aims in the setting out phoneme systems, combinatorial possibilities of phonemes and non-distinctive variations of these units in different languages
- **Generative phonology** Derived from deep-structure phonology by means of transformation and is a component of generative grammar that assigns the correct phonetic representations to utterances in such a way as to reflect a native speaker's internalized grammar