

Phonemic Analysis: Phonemes or Allophones?

Follow these steps to determine if two phonetically similar sounds are different phonemes or allophones of the same phoneme.

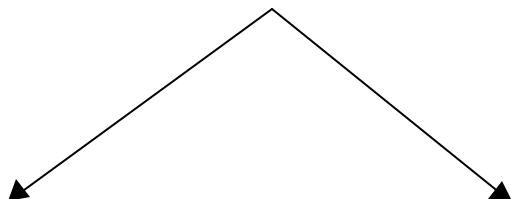
- (1) Transcribe phonetically and gloss a set of data that sufficiently represents the language.
(You can assume that the data in problem sets assigned in class are representative.)



- (2) Set up the inventory of sounds, picking out similar sounds to analyze.
(Problem sets usually determine the sounds for you.)



- (3) Determine the environment each sound occurs in – you may find the t-diagrams useful.



- (4) Near-minimal and/or minimal pairs exist
Sounds occur in the same environment

No near-minimal or minimal pairs exist
Sounds occur in different environments

- (5) Words in minimal pairs
have different meanings

Words in minimal pairs
have the same meaning



CONTRASTIVE

Different phonemes



FREE VARIATION

Allophones of the same phoneme



COMPLEMENTARY DISTRIBUTION

Allophones of the same phoneme

Example of Phonemic Analysis: Turkish Nasals

What is the distribution of the nasal phones [m], [n], [ŋ]?

en	<i>width</i>	em	<i>suck</i>	in	<i>cave</i>
im	<i>sign</i>	dʒam	<i>glass</i>	dʒan	<i>life</i>
tym	<i>all</i>	tyn	<i>afternoon</i>	son	<i>end</i>
som	<i>solid</i>	un	<i>flour</i>	um	<i>hope</i>
baŋk	<i>sand bank</i>	zamk	<i>glue</i>	kent	<i>city</i>
semt	<i>neighborhood</i>	kamp	<i>camp</i>	reŋk	<i>color</i>

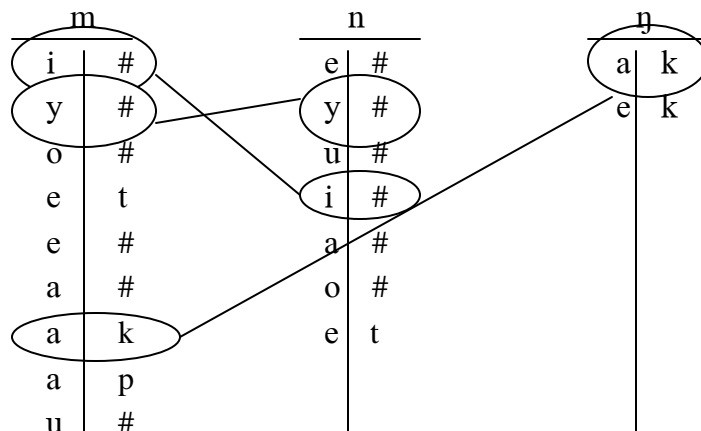
STEP (1): Transcribe phonetically and gloss a set of data that sufficiently represents the language. *Data already transcribed and glossed. Assume data on Turkish nasals are accurately transcribed and represent nasals in Turkish.*

STEP (2): Set up the inventory of sounds, picking out similar sounds to analyze.

Similar sounds already determined: [m], [n], [ŋ]. They are similar in that they are nasals, but differ in place of articulation. Compare in pairs: [m] and [n], [m] and [ŋ], [n] and [ŋ].

STEP (3): Determine the environment each sounds occurs in.

Set up t-tables for all the environments (preceding and following sound or word boundary) containing the nasals.



STEP 4: For each pair of nasals, determine if there are minimal pairs or not.

Minimal Pairs for n/m: en em; in im; dʒam dʒan; tym tyn; son som; un um

Near Minimal Pair for n/m: kent semt

Near Minimal Pair for m/ŋ: zamk baŋk

No near minimal pairs or minimal pairs for n/ŋ. ŋ only occurs before k, n never occurs before k.

→ n ŋ are in complementary distribution, allophones of the same phoneme

STEP 5: Check if words in minimal pairs have different meanings.

en ≠ em; in ≠ im → m n are in contrast; different phonemes