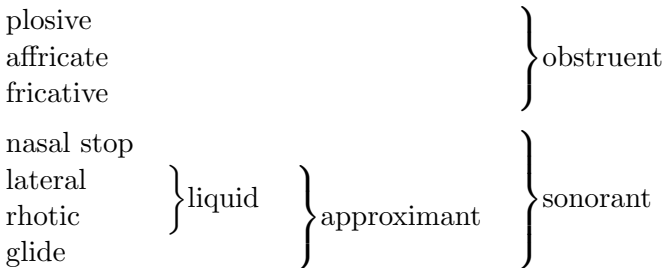


Ling 105
Sounds of Language

Thursday, November 7, 2024

Kevin Ryan

Terminology review: manner



- Vowels are also considered sonorants and approximants, so specify e.g. “sonorant consonants” if necessary
- Sibilants are a subset of fricatives/affricates
- Voiced vs. voiceless

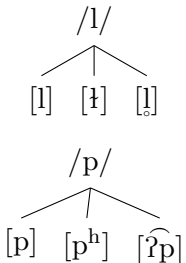
Terminology review: place

bilabial	}	labial
labiodental		
interdental	}	coronal
dental/alveolar		
palato-alveolar		
retroflex		
palatal	}	dorsal
velar		
uvular		
glottal	}	laryngeal

- Vowel place: high, low, non-high, back, etc.

Phonemes & allophones

- English, e.g.



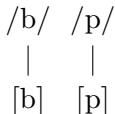
The phoneme

- Phoneme
 - Abstract category generalizing over allophones
 - Unit of contrast
 - Can distinguish minimal pairs (e.g. ɪɔ, lɔ, *lɔ)
 - Words are stored as strings of phonemes
- Allophones
 - Contextual realizations of a phoneme
 - Not contrastive with each other
 - Complementary distribution or free variation
 - **Predictable**, thus encoded as rules
- Underlying representation (UR) in /.../
→ rules →
surface representation (SR) in [...]

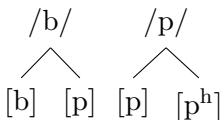
Phonemic vs. phonetic inventories

- Two languages can have identical **phonemic inventories** but different **phonetic inventories**, or vice versa

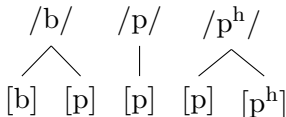
French:



German:



Thai:



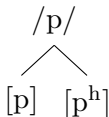
The phoneme

- Lexicon is repository of **unpredictable** info
- Therefore, URs contain only phonemes
- Why not store words exactly as pronounced, e.g. /'spɪt/, /'p^hɪt/?
 - Inefficiency
 - Missed generalizations (why no /'sp^hɪt/?)
 - Productivity (pronounce *spoose*)
 - Predictable allophonic detail is even more fine-grained than narrow transcriptions imply

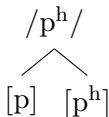
Phoneme selection

- Why (a)?

(a)



(b)



- Rules of thumb
 - (1) Choose the allophone occurring in the greatest variety of contexts
 - (2) All else equal, choose the “simpler” allophone

Phoneme selection

- [p^h]
 - Initial in a stressed syllable or word
- [p]
 - Initial in an unstressed syllable
 - Non-initial in the onset of any syllable
 - In the coda of any syllable
- [p] is more general (**elsewhere**) case
- Easier to state context for /p/ → [p^h] than /p^h/ → [p]

Persian rhotics

“army”	[ærtɛf]	“Persian”	[farsi]
“a little bit”	[qædri]	“road”	[rah]
“right”	[rast]	“beard”	[riʃ]
“starch”	[ahar̥]	“last”	[axær̥]
“however”	[hærtowr̥]	“lion”	[ʃir̥]
“starched”	[ahari]	“brother”	[bæradær̥]
“why?”	[tʃera]	“brothers”	[bæradæran]
“pale”	[biræŋg]	“past”	[ʃirini]

- Shorthand for contexts: __, V, C, #, etc.
- Express (non-elsewhere) allophones as rules

Japanese {t, ts, tʃ}

“the sun”	[taijɔː]	“difference”	[tʃigai]
“mat”	[tatami]	“dust”	[tʃiri]
“rice paddy”	[tambo]	“strawberry”	[itʃigo]
“pig”	[buta]	“exit”	[degutʃi]
“cloak”	[gaitoː]	“chores”	[zatsuzi]
“fact”	[koto]	“tidal wave”	[tsunami]
“letter”	[tegami]	“desk”	[tsukue]
“very”	[totemo]	“animal”	[doːbutsu]
“truly”	[tʃipɪː]		

- Use __ notation for contexts
- Express (non-elsewhere) allophones as rules

Modern Greek palatalization

- Consider [k, k^j, x, x^j]
- Is continuancy (k vs. x) phonemic?
- What about palatalization (j)?

“do”	[kano]	“daughter”	[kori]
“lose”	[xano]	“dances”	[xori]
“pour”	[x ^j ino]	“move”	[k ^j ino]
“shame”	[krima]	“money”	[xrima]
“handful”	[xufta]	“bonbons”	[kufeta]
“charms”	[kali]	“plight”	[xali]
“eel”	[x ^j eli]	“candle”	[k ^j eri]
“hand”	[x ^j eri]	“no”	[ox ^j i]

Tagalog tap

- Consider [t, d, ɾ]
- Phonemic or allophonic? If the latter, which is underlying?
What is the rule?

[datiŋ]	“to arrive”	[daraʔiŋ]	“will complain”
[dami]	“amount”	[marumi]	“dirty”
[dumi]	“dirt”	[marami]	“many”
[daratiŋ]	“will arrive”	[daʔiŋ]	“to complain”
[mandurukot]	“pickpocket”	[mandukot]	“to go pickpocketing”
[tapat]	“honest”	[bajad]	“payment”

Neutralization

- In some cases, a contrast is realized in only certain contexts & **neutralized** in others

e.g. German final obstruent devoicing

- | | | | | | | | |
|----|--------|----------|----------|-----|--------|----------|----------|
| a. | Tier | [ti:r] | ‘animal’ | vs. | dir | [di:r] | ‘to you’ |
| | leiten | [laitən] | ‘lead’ | vs. | leiden | [laidən] | ‘suffer’ |
| b. | Rat | [rat] | | vs. | Rates | [ratəs] | ‘advice’ |
| | Rad | [rat] | | vs. | Rades | [radəs] | ‘wheel’ |

Neutralization

- Assume that every morpheme has only one phonemic representation
- Variant realizations of a morpheme are **allomorphs**
- What's the UR of German *Rad*, given
 - ['ʁat] 'wheel'
 - ['ʁad-əs] 'of the wheel'?
- What's the UR of English *waiting*?

Russian voicing

nominative singular	genitive singular	
[glas]	[glaza]	“eye”
[les]	[lesa]	“forest”
[porok]	[poroga]	“threshold”
[vrak]	[vraga]	“enemy”
[urok]	[uroka]	“lesson”
[porok]	[poroka]	“vice”

- See beginning of Odden §4 for a write-up of this case