Handout #9

More neutralization

Turkish vowels

	[-back, -lab]	[-back, +lab]	[+back, -lab]	[+back, +lab]
[+high]	i	y	ɨ	u
[-high]	e	ø	a	o

Alternations
(Halle and Clements 1983: 85)

Nominative Singular	Nominative Plural	Gloss
ip	ipler	rope
kɨz	kɨzlar	girl
jyz	jyzler	face
pul	pullar	stamp
el	eller	hand
køj	køjler	village

Alternations

- The plural marker is *-ler ~ -lar*.
- The alternant with [e] occurs only when the preceding vowel is front.
- The alternant with [a] occurs only elsewhere.
- Distribution of alternating sounds:
  - [a] does not occur after [+syll, -back] C_0, but does occur elsewhere.
  - [e] occurs there as well as elsewhere.

Vowel harmony

- **Vowel harmony** is a restriction requiring that vowels within a word agree in some feature.

- In this Turkish case, vowels within a word must agree in [back].

- Vowel harmony can involve any of the vowel features: [high], [low], [lab], or [ATR].

Analysis

- Both front and back vowels occur as phonemes:
  - /i, y, ɨ, u, e, ø, a, o/.
- The underlying representation of the plural suffix:
  - /-lar/.
- Rule (**Back vowel harmony**):
  - V --> [-back, -low, +ATR] /   V C_0 ___

    [-back]

Turkish

(Halle and Clements 1983: 137-139)

Nominative singular	Nominative plural	Possessed	Gloss
oda	odalar	odasɨ	*room*
dere	dereler	deresi	*river*
tilki	tilkiler	tilkisi	*fox*
yty	ytyler	ytysy	*press iron*
arɨ	arɨlar	arisɨ	*bee*
boru	borular	borusu	*pipe*
balo	balolar	balosu	*ball*

The possessed

- The suffix marking "possessed" has an alternating form:
    - sɨ ~ si ~ sy ~ su
- The alternating sounds are:
    - ɨ ~ i ~ y ~ u
- These sounds are alternating, so they must be in complementary or neutralization distribution.

The distribution of the alternants

- To determine the distribution of the alternating sounds, we first look at the distribution of the different alternants.
    - sɨ occurs after [+syll, +back, -lab]
    - si occurs after [+syll, -back, -lab]
    - su occurs after [+syll, +back, +lab]
    - sy occurs after [+syll, -back, +lab]

The distribution of the alternating sounds

- Generalizing to the distribution of the alternating sounds:
  - An unrounded high vowel does not occur after [+syll, +lab] C_0, but it does occur elsewhere.
  - A rounded high vowel occurs there as well as elsewhere.

  - A back vowel does not occur after [+syll, -back] C_0, but it does occur elsewhere.
  - A front vowel occurs there as well as elsewhere.

Analysis

- The underlying representation of the alternating suffix is /-sɨ/.

- Round vowel harmony:
  - $\quad$ V $\quad$ --> [+lab] / $\quad$ V $\quad$ C_0 ____

    [+high] $\qquad\qquad\qquad$ [+lab]

Derivations

Underlying representation	/dere-sɨ/	/yty-sɨ/	/balo-sɨ/
Back vowel harmony	/dere-si/	/yty-si/	___
Round vowel harmony	___	/yty-sy/	/balo-su/
Surface representation	[deresi]	[ytysy]	[balosu]

Turkish

(Halle and Clements 1983: 137-139)

Nominative singular	Dative	Nominative plural	Gloss
kep	ke.pe	kep.ler	cap
sap	sa.pa	sap.lar	stalk
kap	ka.ba	kap.lar	container
tat	ta.da	tat.lar	taste
alt	al.ta	alt.lar	bottom

Turkish

Nominative singular	Dative	Nominative plural	Gloss
kurt	kur.da	kurt.lar	worm
satʃ	sa.tʃa	satʃ.lar	hair
sarp	sar.pa	sarp.lar	steep
gytʃ	gy.dʒe	gytʃ.ler	power
reŋk	reŋ.ge	reŋk.ler	color

Turkish: Alternations

- List the alternations in the last two tables:

- List any new alternating sounds:

- State the distribution of these alternating sounds:

Turkish: Analysis

- Give the underlying representations of all alternating morphemes:

- State the rule responsible for the alternation that we have not yet treated:

Turkish: Derivations

	/ /	/ /
Underlying representation		
Back vowel harmony		
Round vowel harmony		
Surface representation	[gydʒe]	[gytʃler]

Moore (Burkina Fasso) (Kenstowicz 1994: 53)

- Hyphens separate morphemes.
- The suffixes *-go ~ -gu* and *-re ~ -ri ~ -le ~ -li* mark the singular for two different noun classes.
  - List all the vowels in this sample.
  - List all of the [+ATR] vowels.
  - List all of the [+high] vowels.

Moore

kor-go	"sack"	kʊg-ri	"stone"
laŋ-go	"hole"	tʊb-re	"ear"
bɪd-go	"sorrel"	gob-re	"left hand"
zu-gu	"head"	la-re	"hatchet"
pil-gu	"granary"	rakil-li	"wood bundle "
rʊg-go	"pot"	bɛd-re	"big"
sen-go	"rainy season"	gel-le	"egg"

Moore

- The alternating sounds are *o ~ u*, *e ~ i,* and
  r ~ l.

  – State their distributions.

  – Give underlying representations for the two
  alternating suffixes.

  – State the rules that account for the alternations.

Moore: Derivations

Underlying representation	/	/	/	/	/	/
Surface representation	[pilgu]		[rakilli]		[tʊbre]	

References

- Halle, Morris, and G.N. Clements (1983). *Problem Book in Phonology*. MIT Press, Cambridge.
- Kenstowicz, Michael (1994). *Phonology in Generative Grammar*. Blackwell, Cambridge.