

The Typology of Mutation

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Phonological Aspects of Mutation Morphology
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Types of Mutation

- ▶ Consonant vs. Vowel Mutation
- ▶ Edge Mutation vs. Mobile Mutation
- ▶ Local Mutation vs. Across-the-Board Mutation
- ▶ Consistent vs. Variable (“Quirky”)
- ▶ Pure vs. Semi-segmental Mutation
- ▶ Single-Feature Mutation vs. Multiple-Feature Mutation
- ▶ Mutation as an affix or as part of an affix

Consonant vs. Vowel Mutation

Consonant Mutation affects consonants

Vowel Mutation affects consonants

Voicing Mutation in Aka (Akinlabi, 1996; Wolf, 2005)

Class 5 - singular

Class 6 - plural

g̀̀àlà

b̀̀èlèlé

dʒ́ám̀bà

d̀̀èngé

ǵásá

b̀̀àp̀̀l̀̀àk̀̀à

mà-**g**̀̀àlà

mà-**b**̀̀èlèlé

mà-**dʒ**́ám̀bà

ma-**t**̀̀èngé

ma-**k**́ásá

ma-**p**̀̀àp̀̀l̀̀àk̀̀à

(game of imitation)

‘sound of waterfall’

‘mud’

‘piercing tool’

‘palm branch’

‘lung’

Singular of class 5 is expressed by voicing the initial consonant

Backness Mutation in German (“Umlaut”)

Wald	‘forrest’	Wäld-chen	‘small forrest’
Schloss	‘palace’	Schlöss-chen	‘small palace’
Turm	‘tower’	Türm-chen	‘small tower’
Maus	‘mouse’	Mäus-chen	‘small mouse’

Interesting Observation

There seem to be few (if any) cases of mutation

where one mutation process affects vowels **and** consonants

(see Terena below for a possible counterexample)

Edge Mutation vs. Mobile (Infixing) Mutation

Edge Mutation occurs only at the periphery of the base

Mobile Mutation migrates into the base
for phonological reasons

Edge Mutation vs. Mobile (Infixing) Mutation

Aka Voicing Mutation is Edge Mutation
(only the first base consonant is affected)

German Umlaut is (a mild form) of Mobile Mutation
(the affected vowel is usually separated
by one or more consonants
from the right word edge)

Labializing Mutation in Chaha (I) (Zoll, 1996)

Verb	Verb + 3sm object	
dänäg	dänäg ^w	'hit'
nädäf	nädäf ^w	'sting'
näkäb	näkäb ^w	'find'

Only dorsal and labial consonants can be labialized

Labializing Mutation in Chaha (II)

the medial consonant can be labialized (the last one not):

Verb	Verb + 3sm object	
näkäs	näk ^w äs	‘bite’
käfät	käf ^w ät	‘open’
bäkär	bäk ^w är	‘lack’

Labializing Mutation in Chaha (III)

only the first consonant can be labialized:

Verb	Verb + 3sm Objekt	
qätär	q ^w ätär	‘kill’
mäsär	m ^w äsär	‘seem’
mäkyär	m ^w äkyär	‘burn’

Labializing Mutation in Chaha (IV)

no consonant can be labialized:

Verb Verb + 3sm object

sädäd sädäd 'chase"

Theoretical Background: Mobile Infixation

- ▶ Chaha mutation behaves like phonologically motivated infixation
- ▶ Labialization migrates just as far into the stem as is necessary for phonologically unmarked spellout
- ▶ Under this perspective Chaha is a case of “hyperinfixation” (the infix appears at different positions of the word)

Palatalizing Mutation in Inor (Rose, 1997:113)

Plural objects are expressed through palatalization

Only coronal obstruents can be palatalized:

Verb	3mpl Objekt	3fpl Objekt	
kfd	käf ^w äj-um	käfäj-am	‘they opened’
nks	näk ^w äj-um	näkäj-um	‘they bit’
dng	dänäg ^w -um	dänäg-am	‘they hit’
sßr	säp ^w -um	säpä-r-am	‘they broke’

Local Mutation vs. Across-the-Board Mutation

Local Mutation affects only a single segment of the base

Mobile Mutation affects all suitable segments of the base

Backness Mutation in German (“Umlaut”)

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Plural in Granada Spanish

Orthographie	Singular	Plural	
pedazo	[peðaθo]	[peðaθɔ]	‘piece’
alto	[peðaθo]	[altɔ]	‘tall’
cabeza	[kaβeθa]	[kaβeθa]	‘head’
selva	[selva]	[selva]	‘forrest’

Terena 1st Person Marking (Akinlabi, 1996)

All sonorants from the left are nasalized
until an obstruent is reached which is prenasalized

Other Forms

1sg

(a)	ayo	‘his brother’	ãyõ	‘my brother’
(b)	arɪne	‘sickness’	ãrɪnẽ	‘my sickness’
(c)	unae	‘boss’	ũnãẽ	‘my boss’
(d)	emoʔu	‘his word’	ẽmõʔũ	‘my word’
(e)	owoku	‘his house’	õwõõᵝgu	‘my house’
(f)	ɪwuʔiʃo	‘he rides’	ĩwũʔiᵝzo	‘I ride’
(g)	ɪtuke	‘poss. pro’	ĩᵝduke	‘1p. poss. pro’
(h)	nokone	‘need’	nõᵝgone	‘I need’
(i)	takɪ	‘arm’	ᵝdakɪ	‘my arm’

Consistent Mutation vs. Variable ("Quirky") Mutation

Consistent Mutation affects all sounds which it changes in the same way

Quirky Mutation affects different sounds in different ways

Voicing Mutation in Aka (Akinlabi, 1996; Wolf, 2005)

Class 5 - singular

Class 6 - plural

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dʒ́ám̀̀bà

d̀̀èngé

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b̀̀àp̀̀ùl̀̀àkà

mà-**g**̀̀àlà

mà-**b**̀̀èlèlé

mà-**dʒ**́ám̀̀bà

ma-**t**̀̀èngé

ma-**k**́ásá

ma-**p**̀̀àp̀̀ùl̀̀àkà

(game of imitation)

'sound of waterfall'

'mud'

'piercing tool'

'palm branch'

'lung'

Singular of class 5 is expressed by voicing the initial consonant

Manner Mutation in Fula (Paradis, 1992)

	'healthy'	'alive'	'stunted'	'small'	'white'
Class 1	jam ^o	geeto ^o	guddo ^o	pamaro ^o	dannejo ^o
Class 2	yam ^{be}	yeetu ^{be}	wuddu ^{be}	famar ^{be}	ranne ^{be}
Class 6	njam ^{on}	ŋgeet ^{on}	ŋgudd ^{on}	pamar ^{on}	ndanneh ^{on}

Manner Mutation in Fula

Class 2

wɔ wu wa wε wi

↔

rV

↔

sV

↔

yε yi yɔ yi ya

↔

wɔ wu yε yi a

↔

V

↔

Class 1

bV

dV

cV

jV

gV

V

Polarity: Luo

Voiceless → Voiced

	singular		plural	
[-voiced]	a. ari p	'milky way'	ari b -e	[+voiced]

Voiced → Voiceless

	singular		plural	
[+voiced]	b. co g o	'bone'	co k -e	[-voiced]

Pure Mutation vs. Semi-segmental Mutation

Pure Mutation

A morphophonological process which consistently surfaces as mutation

Semi-segmental Mutation

A morphophonological process which sometimes surfaces as mutation and sometimes as segmental affixation

Pure Mutation

All cases discussed so far

Semi-Segmental Mutation: Yowlumne (Zoll, 1996)

- a. /caaw -(ʔ)aa/ caawʔaa 'shout' *glottalizes R most post vocalic sonorant*
- b. /ʔelk -(ʔ)aa/ ʔelʔkaa 'sing'
- c. /hogn -(ʔ)aa/ hognaa 'float' *fails to surface*
- d. /max -(ʔ)aa/ maxʔaa 'procure' *surfaces in biconsonantal root as stop*

Single-Feature Mutation vs. Multiple-Feature Mutation

Single-Feature Mutation

Mutation which changes a single feature in an affected segment

Multiple-Feature Mutation

Mutation which changes more than 1 feature in an affected segment

ATR- and Height-Mutation in Javanese (Dudas 1975:18)

	Base	Intensive	
/alus/	[al <u>ʊ</u> s]	[al <u>u</u> s]	‘refined, smooth’
/rosa/	[ros <u>ɔ</u>]	[ros <u>u</u>]	‘strong’
/abot/	[ab <u>ɔ</u> t]	[ab <u>u</u> t]	‘heavy, hard’
/aŋɛ	[aŋ <u>ɛ</u> l]	[aŋ <u>i</u> l]	‘hard, difficult’

Applicative and Qualitative in Luo (Tucker, 1994)

- ▶ Applicative forms of verbs are transitive base forms and require obligatory objects
- ▶ Qualitative forms are derived from applicative forms and are transitive forms, without overt expression of the object

Multiple Mutation in the Luo Qualitative (I)

pogo cam 'divide the grain'
 lɔdhɔ ɲa:tɔ to maltreat someone
 kadɔ tɔl 'to plait a rope'
 kabɔ ɲatɔ 'to hold someone tightly'

po:ko 'to make a division'
 lu:tho 'to maltreat in general'
 ke:to 'to plait in general'
 ke:po 'to be rough in handling'

Stem-final voiced stops are devoiced

Multiple Mutation in the Luo Qualitative (II)

ka**w**ɔ pɛ:sa 'to accept money'

bu**w**o nyathɪ 'to bully a child'

ga**j**ɔ ji 'to reconcile the people'

rɔ**j**ɔ nyarwa:th 'to castrate a bull calf'

ke:**p**o 'to accept in general'

bu:**p**o 'to act in a bullying'

ge:**c**o 'to act as a peace maker'

aro:**c**o 'to castrate in general'

Stem-final approximants
turn into voiceless stops

Multiple Mutation in the Luo Qualitative (III)

la**m**ɔ due 'to pray to the moon'

ka**n**ɔ pɛ:sa 'to keep the money'

ciɛ**l**ri:ŋo 'to roast meat'

cwɛ**r**ɔpien 'to scrape a skin'

le:**m**o 'to pray'

ke:**n**o 'to keep'

cie:**l**o 'to do the roasting'

cue:**r**o 'to do the scraping'

Other sonorants remain unchanged

Multiple Mutation in the Luo Qualitative (IV)

bu p o ji	‘to hit with a large soft object’	bu: p o	‘to do this kind of hitting’
lu th o la:w	‘to dip a cloth’	lu: th o	‘to dip in general’
ke t o piny	‘to put down’	ke: t o	‘to put in general’
ro c o ŋaɔ	‘to frustrate a person’	ro: c o	‘to be frustrating’
pɔ k ɔ rabwɔn	‘to peel a potato’	po: k o	‘to do the peeling’

Voiceless stops remain unchanged

Multiple Mutation in the Luo Qualitative (V)

pogo cam	‘divide the grain’	po:ko	‘to make a division’
lɔdɔ ɲa:tɔ	‘to maltreat someone’	lu:tho	‘to maltreat in general’
ka dɔ tɔl	‘to plait a rope’	ke :to	‘to plait in general’
ka bɔ ɲatɔ	‘to hold someone tightly’	ke :po	‘to be rough in handling’

[a] in the first syllable gets [e]

Multiple Mutation in the Luo Qualitative (VI)

pogo cam 'divide the grain'

ludhoŋa:ɔ to maltreat someone

kado ɔl 'to plait a rope'

kabo ŋaɔ 'to hold someone tightly'

po:ko 'to make a division'

lu:tho 'to maltreat in general'

ke:to 'to plait in general'

ke:po 'to be rough in handling'

All vowels become [+ATR]

Mutation as an Affix or Part of an Affix

Mutation as an Affix:

Mutation which is the only exponent of a morphological category

Mutation as Part of an Affix:

Mutation which is a partial exponent of a morphological category together with a segmental affix

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mà-**b**̀̀èlèlé

mà-**dʒ**́ám̀bà

ma-**t**̀̀èngé

ma-**k**́ásá

ma-**p**̀̀àp̀̀ùl̀̀àkà

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Chaha 3sg Object marking (De Lacy, 2008)

(a) Consists of surface [^w...n]

(b) [^w] lands on the rightmost non-coronal...

(i) [tikəf^wt-in] 'she opens it' (iv) [kətəf^wə-n] 'chop'

(ii) [nək^wəsə-n] 'bite' (v) [səp^wərə-n] 'break'

(iii) [k^wəsərə-n] 'erect' (vi) [kəfətɣ^wənim] ?

(c) If all consonants are coronal, [^w] doesn't appear

[sədədə-n] 'chase'

(d) cf. feminine -na [ji-rəxiβ-n-a] 'he finds her'

Central Phenomena in this Course

- ▶ Polarity
- ▶ Multiple-Feature Mutation
- ▶ Quirky Mutation