Jochen Trommer & Eva Zimmermann
Leipzig University
UNIVERSITÄT LEIPZIG

Anticyclic Mutation

NELS 46
Concordia University, Montréal
October 17, 2015

Main Claim

The existence of anticyclic mutation is unexpected given a standard paradigmatic account for non-concatenative morphology; a prediction explicitly formulated as the principle of 'Strict Base Mutation' (=SBM; Alderete, 2001*a*,*b*)

→ We show different types of anticyclic mutation and hence extend the typology of existing **counterexamples to the SBM** principle.

→ We argue that anticyclic mutation is expected under an analysis assuming that mutation is an epiphenomenon that follows from the **affixation of (non-segmental) phonological elements**.

Mutation & Strict Base Mutation

(1) *Mutation: Non-concatenative morphology*

V Quality:	Bruder	'brother'	~ Brüder	'brothers'	(German)
C Quality:	dastah	'to dig'	~ nastah	'I dig'	(Texistepec Popoluca)
V Length:	gudù	'walk'	~ gudùː	'walking'	(Hausa)
C Length:	katai	'hard'	~ katːai	'hard!'	(Shizuoka Japanese)
Tone:	gwè	'swam' (Sg)	~ gwé	'swam' (Pl)	(Ngbandi)

(2) *Mutation cum segmental affixation*

V Quality:	Buch	'book'	~ Büch–er	'books'	(German)
C Quality:	famar–ɓe	'small' (C2)	~ pamar–o	'small' (C1)	(Fula)
V Length:	to	'take'	~ toː–ru	'take' (Pass.)	(Tarahumara)
C Length:	cam	'eat' (tr.)	~ camː–o	'eat' (intr.)	(Päri)
Tone:	tádà	'boy'	~ tàdà–wa	'boys'	(Kanuri)

(3) Theoretical accounts

	Cyclic	Non-cyclic
Morphemic	– Lexical Phonology (Kiparsky, 1982)	– Generalized Nonlinear Affixation (Wolf, 2007; Trommer and Zimmermann, 2014)
Non-Morphemic	– Word and Paradigm Morphology (Anderson, 1992) – Transderivational Antifaithfulness (Alderete, 2001*b*,*a*) – Realize Morpheme (Kurisu, 2001)	– Morphemes as constraints (Russel, 1995; Hammond, 2000)

Predicts only **cyclic mutation**:

[Prf$_2$– [Prf$_1$– [Stem] –Sfx$_1$] –Sfx$_2$]

Also predicts **anticyclic mutation**:

[Prf$_2$– [Prf$_1$– [Stem] –Sfx$_1$] –Sfx$_2$]

Anticyclic Mutation

Type I: Stem–Affix Mutation

Stem –Afx$_1$ –Afx$_2$

✦ Kpelle – Tone ✦

– 5 classes of nouns; class 2 and 5 have same surface tone pattern but affect following morpheme (affix/word) differently

(4) *Plural formation in Kpelle (Konoshenko, 2008, 24)*

Cl.		Base	Pl	
1.	H.H	wúlú	wúlú–ɤáà	'tree'
2.	L.L	yàlà	yàlà–ɤáà	'lion'
3.	L.HL	yɔ̀wɔ̂	yɔ̀wɔ́–ɤàà	'axe'
4.	H.HL	yílê	yílé–ɤàà	'dog'
5.	L.L	gbònò	gbònò–ɤàà	'ring'

Analysis

– plural affix is underlyingly low: gbònò-ɤàà (cl.5)
– final H of N spreads to this affix: wúlú-ɤáà (cl.1)
– final HL on N simplified via tone shift: yílé–ɤàà (cl.3+4)
– class 2 has a final floating H: gyàlà-ɤáà

✦ Fula – Consonant Quality ✦

– consonants in 3 'grades'
– initial C of nouns determined by noun class and suffix-initial C determined by noun (5)

(5) *Alternating noun class suffixes in Fula (Churma, 1988, 40)*

	wor– 'man'	waː– 'monkey'	hufine– 'cap'	daːg 'sleeping mat'
	stop	**nasal**	**continuant**	**zero**
Class 3	gor–gel	baː–ngel	kufine–jel	daːg–el
5	gor–gum	baː–ngum	kufine–jum	daːg–um
7	ngor–ga	mbaː–nga	kufine–wa	ndaːg–a
8	ngor–go	mbaː–ko	kufine–ho	ndaːg–o

Type II: Affix–Affix Mutation

Stem –Afx$_1$ –Afx$_2$

✦ Gã – Tone ✦

– Tense-Aspect is structurally inside of subject agreement (6)
– some TAM categories are only marked by tone (7), realized on the subject marker

(6) *Inflection in Gã (Paster, 2000, 8)&(Paster, 2003, 32)*

mí–n–cha 'I'm digging' — 1Sg-Prog-dig
e–baá–cha 'I will dig' — 3Sg–Fut–dig

(7) *Tonal overwriting on AGR in Gã (Paster, 2003, 28–30)*

	Habitual	Perfective H-tone	Simple Past L-tone
1Sg	mí–cha–a	mí–cha	mi–dú
2Sg	o–cha–a	ó–cha	o–dú
	'dig'	'dig'	'cultivate'

✦ Chaha – Consonant Quality ✦

– strong (~voiceless, hardened) and weak consonant series
– two forms for object markers: 'heavy' form after plural subject affixes, the 2.Sg.Fem, or the impersonal (9)

(8) *Object marking in Chaha (Rose, 2007, 39)*

	Malfactive Light	Malfactive Heavy	Benefactive Light	Benefactive Heavy
1.Sg	–β–i	–p–i	–n–i	–n–i
2.Sg.F	–β–x^j	–β–k^j	–n–x^j	–n–k^j
3.Sg.F	–β–a	–p–a	–r–a	–r–a
3.Pl.F	–β–əma	–p–əma	–r–əma	–r–əma

(9) *Object marking in Chaha: example (Rose, 2007, 40)*

ji–rəxiβ–β–a 'he finds (sth) to her detriment'
ji–rəxiβ–o–p–a 'they find (sth) to her detriment'

Summary: anticyclic mutation patterns

	Type I	Type II
Tone	Kpelle Awa	Gã Gaahmg
C Quality	Fula Choguita Rarámuri	Chaha
V Quality	Chukchee Hungarian	
Length	Shoshone (&CQ)	Tamil
Stress	Modern Greek	

Alternation: type II & cyclic mutation

✦ Tamil ✦

– intransitive formed by gemination the stem-final C (10-a) but if different allomorph for past tense marker –ndʒ surfaces, this is lengthened instead (10-b)

(10) *Tamil (Sundaresan and McFadden, 2014, 2+3)*

	Trans. Stem	Trans. Pst		Intr. Stem	Intr. Pst	
a.	aːgu	aː(g–i)n–	'become'	aːkːu	aːkː–in–	'make'
	uːdu	uːd–in–	'blow'	uːtːu	uːtː–in	'pour'
b.	oɖæ	oɖæ–ndʒ–	'break'	oɖæ	oɖæ–čː–	'break'
	veɖi	veɖi–ndʒ–	'burst'	veɖi	veɖi–čː–	'burst'

Anticyclic mutation: affixation account

– all mutation and non-concatenative morphology is the **result of affixation** (Lieber, 1992; Bermúdez-Otero, 2012; Trommer and Zimmermann, 2014)
– a (nonlinear) morpheme may in principle affect the preceding or the following morpheme

(11) *An affixation account for Gã*

	H L H mi + + d u	*Spread Right	τ ⇒ π	τ→ π
a.	H L H mi d u		*	*!
☞ b.	H L H mi d u		*	
c.	H L H mi d u	*!	*	

No anticyclic mutation: Antifaithfulness

(12) *An antifaithfulness account for T. Popoluca*

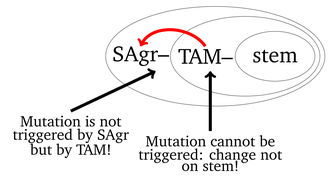
dastah + 1.Sg	Max S	¬OO-Ident Nas[dastah]	Ident-Nas
a. dastah		*!	
b. astah	*!	*!	
☞ c. nastah			*

(13) *Strict Base Mutation (Alderete, 2001b, 141)*

Base	Derivative	¬OO-Faith	OO-Faith
☞ root	ROOT-af		*!
root	root-AF	*!	

(capitalization: change/mutation)

(14) *Anticyclic mutation in Gã?*



→ Only a mutation that **distinguishes a morphologically more complex word from a less complex base** can be demanded

LaTeX TikZposter