

Exceptions

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Morphologically Conditioned Phonology: Turkish

Dative Suffix: Velar Deletion

Nominative	Dative	
bebek	bebe-e	'baby'
inek	ine-e	'cow'

Aorist Suffix: No Velar Deletion

Past	Aorist	
gerek-ti	gerek-ir	'be necessary'
birak-ti	birak-ır	'leave'

(Inkelas & Zoll 2005)


Cophonologies (Inkelas & Zoll 2007)

Cophonologies – Basic Idea


- ▶ Different morphological constructions are associated with different constraint rankings
- ▶ Only general constraints, but different rankings of the same constraints in the same language

Cophonologies for Turkish

Dative: Cophonology Φ_1

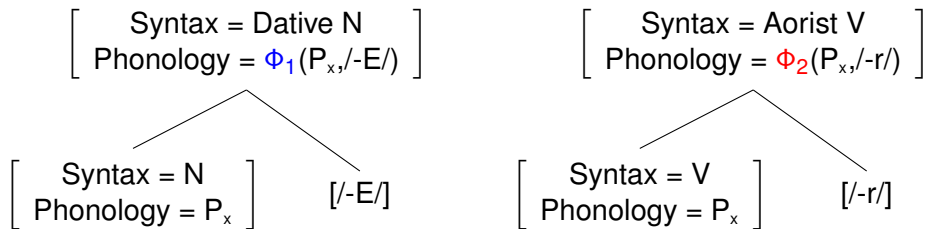
Input: inek-e	*VKV	MAX-C
 a. ine-e		*
b. inek-e	*!	

Aorist: Cophonology Φ_2

Input: gerek-ir	MAX-C	*VKV
a. gere-ir	*!	
 b. gerek-e		*

(Inkelas & Zoll 2005)

Cophonologies and Morphological Constructions



(Inkelas & Zoll 2005)

Indexed Constraints (Pater 2006)

Indexed Constraints – Basic Idea

- ▶ General phonological constraints may be cloned to a morpheme-specific variant
- ▶ The morpheme-specific clone appears in the same general ranking as its general copy
- ▶ One grammar, but different versions of the same constraint

Turkish by Indexed Constraints

Dative:

Input: inek-e	*VKV _{Dat}	MAX-C	*VKV
☞ a. ine-e		*	
b. inek-e	*!		

Aorist:

Input: gerek-ir	*VKV _{Dat}	MAX-C	*VKV
a. gere-ir		*!	
☞ b. gerek-e			*

Common Hypothesis

- ▶ Only faithfulness constraints can be indexed
- ▶ Markedness reversals are excluded
- ▶ Empirical problems with Turkish and other cases (see below)

Arguments for Indexed Constraints (Pater 2006)

Vowel Syncope in Piro (Pater 2006)

a.	/yimaka+lu/	[yimaklu]	‘teaching’
b.	/kama+lu/	[kamlu]	‘handicraft’
c.	/kaku+lu/	[kaku]	‘a shelter in which a hunter hides’
d.	/hata+nu/	[hatnu]	‘light, shining’
e.	/heta+ya/	[hetya]	‘see there’
f.	/heta+lu/	[hetlu]	‘see it’

Exceptional Failure of Syncope with -ta,-nu,-wa (Pater 2006)

/meyi+ta/	[meyita]	‘to celebrate’
/hata+ta/	[hatata]	‘to illuminate’
/heta+nu/	[hetanu]	‘going to see’
/meyi+wa+ta/	[meyiwata]	‘to celebrate’ (Matteson: 303)

-ta,-nu,-wa **Undergo** Syncope

(Pater 2006)

/mey~~i~~+wa+lu/

[meyiwlu]

‘celebration’

/heta+nu+lu/

[hetanru]

‘going to see him’

/yona+ta+na+wa/

[yonatnawa]

‘to paint oneself’

Complete Blocking of Syncope with $-wa_2$ (Pater 2006)

/heta+wa+lu/	[hetawalu]	‘going to see him yet’
/n+hiʃinika+wa+lu/	[nuʃinikawalu]	‘I’m still thinking about it’ (Matteson: 74)

Syncope by Constraints (Pater 2006)

ALIGN-SUF-C Align(Suffix, L, C, R)

The left edge of a suffix coincides with the right edge of a consonant

Input	Output	ALIGN-SUF-C	MAX
heta+ya	hetaya	*!	
	het hetya		*

Blocking of Syncope by Indexed Constraints (Pater 2006)

- (16) Grammar: ALIGN-SUF(L)-C \gg MAX \gg ALIGN-SUF-C
 Lexicon: /-lu_L/ /-nu_L/ /-lu_L/ /-ya_L/ /-ta/ /-nu/ /-wa/ /-wa/

Input	Output	ALIGN-SUF(L)-C	MAX	ALIGN-SUF-C
heta+ya _L	hetaya	*!		*
	☞ hetya		*	
heta+wa	☞ hetawa			*
	hetwa		*!	

Non-Blocking with 2 Suffixes (Pater 2006)

- (17) Grammar: MAX-L2 >> ALIGN-SUF(L1)-C >> MAX >> ALIGN-SUF-C
 Lexicon: /-lu_{L1}/ /-nu_{L1}/ /-ya_{L1}/ /-ta/ /-nu/ /-wa/ /-wa_{L2}/

Input	Output	MAX-L2	ALIGN-SUF(L1)-C	MAX
heta+nu+lu _{L1}	hetanulu		* !	
	☞ hetanru			*
heta+wa _{L2} +lu _{L1}	☞ hetawalu		*	
	hetawlu	* !		*

Problem for Cophonologies

- ▶ wa_1 undergoes syncope, wa_2 does not
- ▶ This must be due to morphology which is more “outside”
- ▶ Both wa_1 and wa_2 should behave the same

Finnish /a+i/ Allomorphy (Pater 2006)

- | | | | |
|----|----------------|--|----------------------------|
| a. | /tavara+i+ssa/ | [tavaroissa] | 'thing (plural-inessive)' |
| b. | /jumala+i+ssa/ | [jumalissa] | 'God (plural-inessive)' |
| c. | /itara+i+ssa/ | [itaroissa] ~ [itarissa] | 'stingy (plural-inessive)' |
| | | | |
| a. | /taitta-i/ | [taittoi] ~ [taitti] *[toitto] *[titi] | 'break (past)' |
| b. | /anta-isi/ | [antaisi] | 'give (conditional)' |

Finnish /a+i/ Allomorphy by Indexed Constraints (Pater 2006)

Input	Output	*[ai] _L	MAX	IDENT	*[ai]
/taitta-i _L /	taittai	* !			**
	☞ taitti		*		*
	☞ taittoi			*	*
	titti		** !		
	toittoi			** !	

Problem for Cophonologies

The /a+i/ effects cannot be restricted to the morpheme boundary

Predictions of the Cophonology Approach (Inkelas & Zoll 2007)

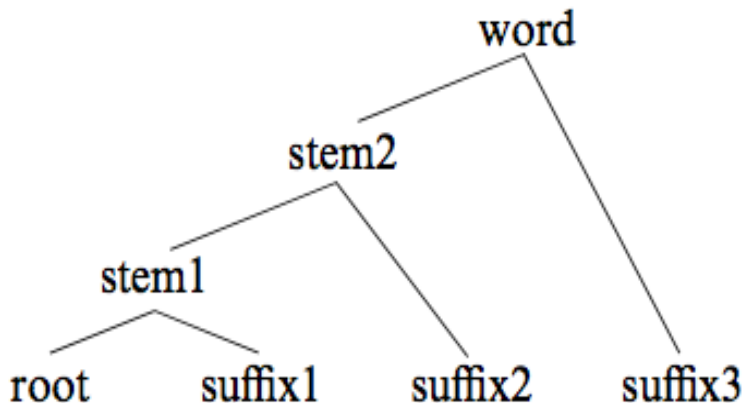
Stem scope: the scope of morphologically conditioned phonology is the stem formed by the word-formation construction in question.

Locality: the phonological pattern tied to a particular stem will never refer to morphological structure internal to the stem (“bracket erasure”).

Arguments for Cophonologies

(Inkelas & Zoll 2007)

Stem Scope (Inkelas & Zoll 2007)



Affixation: No Overwriting

a.	ba-goo-bir	+	-ii	→	bagoobirii
	L L H		H		L L H H
	'from-Gobir'		-ethonym		'a Gobir man'
b.	ba-zamfara	+	-ii	→	bazamfarii
	L L L L		H		L L L H
	'from-Zamfara'		-ethonym		'a Zamfara man'

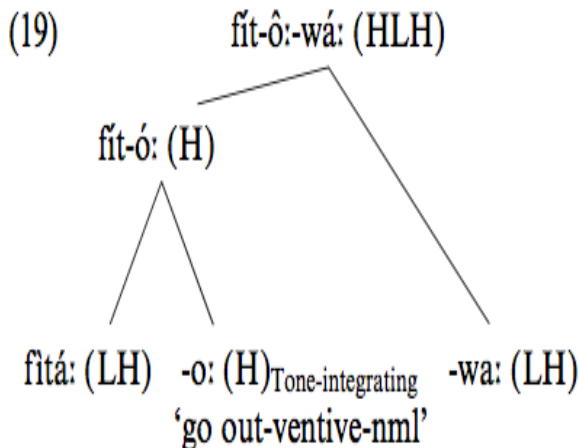
(Hausa recessive affixes, Inkelas 1998)

Tonal Template: Overwriting

a.	ba-katsina	+	-ee	→	bakastsinee
	L L H L		HL		H H H L
	'from-Katsina'		-ethonym		'a Katsina man'
b.	ba-zamfara	+	-ee	→	bazamfaree
	L L L L		HL		H H H L
	'from-Zamfara'		-ethonym		'a Zamfara man'

(Hausa dominant affixes, Inkelas 1998)

Locality of Cophonology (Inkelas & Zoll 2007)



- ← Non-tone-integrating cophonology
- ← Tone-integrating cophonology replaces LH melody with H melody

Literature

- ▶ Inkelas, Sharon & Zoll, Cheryl (2007) Is grammar dependence real? a comparison between cophonological and indexed constraint approaches to morphologically conditioned phonology. *Linguistics*, 45(1):133-171.
- ▶ Inkelas, Sharon & Cheryl Zoll (2005) *Reduplication: Doubling Morphology*. Cambridge University Press.
- ▶ Pater, J. (2006) The locus of exceptionality: Morpheme-specific phonology as constraint indexation. In Bateman, L., O'Keefe, M., Reilly, E., and Werle, A., editors, *Papers in Optimality Theory III*, pages 259-296. GLSA, Amherst, MA.