Subcategorization of Creek Intransitive Reduplication

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Contents

Introduction

Introduction

- Muskogean language spoken primarily by the Muscogee and Seminole people in the South-Eastern region of the USA (Oklahoma, Georgia, Florida).
- Creek reduplication is often used as an example of "nonlocal reduplication" (Riggle, 2004), "Wrong-Side Reduplication" (Nelson, 2005), or "Non-adjecent Reduplication" (Brown, 2017).
- **Claim:**
  There are two RED morphemes with two different positions, infixal and suffixal.

Examples of Reduplication

(1) a. hátk-iː
white-DUR
'(it is) white'

b. hat<**ha**>k-íː
white<**RED**>-DUR
'white' (two or more)

(Martin, 2011)

Examples of Reduplication

(2) a. hónn-iː
heavy-DUR
'heavy'

b. hon<**ho**>y-íː
heavy<**RED**>-DUR
'heavy' (two or more)

(Martin, 2011)

Empirical Questions

- When and why does RED infix into the root?
- Why do we see two allomorphs, namely -RED- and -REDy-?
- Morphology > Phonology?

Data and Generalizations

Syllable Formation

- Only word-initial syllables may appear onsetless, all other syllables **must** have a consonantal segment associated with the onset position.

(3) a. i.fá ‘dog’

b. a.wa.na.yí.ta ‘to tie to’

(Martin, 2011)

- Neither word class nor word length are exempt from this rule.
- These inital syllables can be analysed as *extrametrical* (Hayes, 1982)

Repairing Onsetless Syllables

- Glide insertion is a repair mechanism implemented language wide to prevent the realization of onsetless symbols.
- Alternation of 1P Agentive marker, **-iː-** and **-iy**

(4) a. *naːf.kíːs*
*naːfk-**íː**-s.*
hit.LGR-1P.AG-IND
'We are hitting?'

b. *naːf.ki.yá*
*naːfk-**iy**-á.*
hit.LGR-1P.AG-Q
'Are we hitting?'

- (4a) shows the 1P.AG marker surface as **-iː-** before the indicative marker which surfaces as a single consonant.
- (4b) shows glide insertion when it appears before the question marker **-a-**.

Intransitive Reduplication

- We see two allomorphs of the reduplicative morpheme:
  - **-RED-**
  - **-REDy-**
- -RED- infixes into the root before the final consonant.
- -REDy- attaches as a suffix to the root.

Reduplication - Infixation

(5)

a.	falápk-iː ‘split’	falap**fa**k-íː
b.	hasátk-iː ‘clean’	hasat**ha**k-íː
c.	likácw-iː ‘dirty’	likac**li**w-íː
d.	tánk-iː ‘empty’	tan**ta**k-íː
e.	citákk-iː ‘torn up’	citak**ci**k-íː

(Riggle, 2004)

- RED is always codaless and always appears before onsetless DUR marker.

(6) *falapk-**fa**-iː

- Infixes to prevent onsetless final syllable.

Reduplication - Suffixation

(7) a. hónn-iː ‘heavy’ hon**hoy**-íː

b. holátt-iː ‘blue’ holat**hoy**-íː

(Martin, 2011)

- The geminate consonant before RED is reduced to a singleton.
- There’s is phonological rule banning complex consonant clusters (Riggle, 2004; Martin, 2011).
- RED can’t insert into a geminate, therefore it attaches linearly after.
- The appearance of -y- prevents an onsetless final syllable.

Reduplication - Infixation

Infixation (Yu, 2007, 10)

"Opertationally [an affix infixes] if it appears as a segmentally distinct entity between two strings that form a meaningful unit when combined but do not themselves exist as meaningful parts."

(8) English (Yu, 2007)

absolutely → abso-bloody-lutely

Infixation vs. Suffixation

- Example (5a) is real infixation, as material either side of -RED- are meaningless individually and only constitute a meaningful string when combined.

(9) **falap**-RED-**k**-DUR → **falapk** 'split'

- Example (7a) looks like infixation due to the glide, but in fact attaches to the edge of the root.
- Material either side of the RED morpheme **do not** form a meaningful unit when combined.

(10) **hon**-RED-**y**-DUR → *__hon(n)y__

Geminates

- Sometimes the RED morpeheme infixes into the geminate, (11a).
- Sometimes the geminate is reduced to a singleton and the RED morpheme is suffixed, (11b).

(11) a. citákk-iː ‘torn up’ citak**ci**k-íː

b. hónn-iː ‘heavy’ hon**hoy**-íː

Fake vs. True Geminates

Gemination (Oh & Redford, 2012)

A true geminate can be defined as a single consonantal segment associated with two timing units. Fake geminates on the other hand are a sequence of identical consonantal segments, with each segment linked to its own mora.

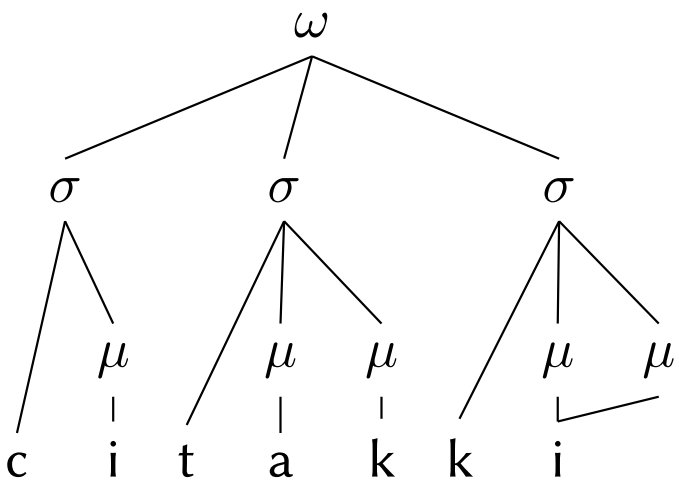
(11) a. citákk-iː ‘torn up’ citak**ci**k-íː

b. hónː-iː ‘heavy’ hon**hoy**-íː

- Henceforth, true geminates represented as Cː

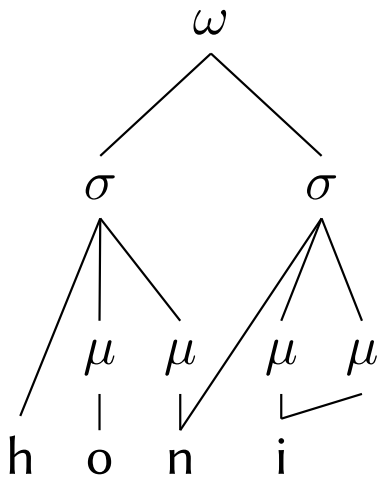
Fake Geminates

(12) citakk-iː



True Geminates

(13) hon:-i



Theoretical Account

Lexical Subcategorization

- **Lexical subcategorization** is a common approach implemented to account for phonologically conditioned allomorphy (Kiparsky, 1982; Inkelas, 1990; Paster, 2006)

Istandbul Armenian

(14) Istanbul Armenian (Vaux, 2003)

	Singular	*Plural*	*Gloss*
a.	tsʰi	tsʰi-eɾ	'horse'
b.	kʰɑɾ	kʰɑɾ-eɾ	'rock'
c.	rɑzm	rɑzm-eɾ	'battle'
d.	moɾukʰ	moɾukʰ-neɾ	'beard'
e.	jereχa	jereχa-neɾ	'child'

- Monosyllabic stems are marked with -eɾ, (13a-c).
- All other stems are marked with -neɾ, (13d-e).

Istanbul Armenian SC Frames

(15) Istanbul Armenian SC Frames [1]

a. [[σ] -er] (monsyllabic stems)

b. [[_] -ner] (elsewhere)

- "The basic idea behind this approach is that the underlying form of affixes includes specifications as to the type of stems to which they will attach" (Paster, 2006, 4)

[1] Taken from rules established in (Vaux, 2003)

Allomorphs of RED

- Rules regarding onsets in phonology result in either infixation or suffixation of RED morphs.
- The infixation of **-RED-** or the suffixation of **-REDy-**.
- What are the underlying specifications of the roots?

Creek Data

(16) Creek Intransitives

	Singular	*Plural*	*Gloss*
a.	falápk-iː	flapfak-íː	‘split’
b.	tánk-iː	tantak-íː	‘empty’
c.	citákk-iː	citakcik-íː	‘torn up’
d.	hónː-iː	honhoy-íː	‘heavy’
e.	holátː-iː	holathoy-íː	‘blue’

Creek Data

(16) Creek Intransitives

	Singular	*Plural*	*Gloss*	
a.	falápk-iː	flapfak-íː	'split'	→ singleton
b.	tánk-iː	tantak-íː	'empty'	→ singleton
c.	citákk-iː	citakcik-íː	'torn up'	→ singleton
d.	hónː-iː	honhoy-íː	'heavy'	→ geminate
e.	holátː-iː	holathoy-íː	'blue'	→ geminate

Subcategorization of Creek Data

(17) Creek SC Frames

a. [[_C] -RED] (singleton stems)

b. [[_C꞉] -REDY] (geminate stems)

Surface "Exceptions"

- If the root ends in a singleton consonant, it looks like it should trigger affixation of -REDY-.

(18) a. poló:k-i:
b. patá:k-i:
c. lowá:k-i:

(19) a. hón:-i: hon**hoy**-í: 'heavy'
b. holát:-i: holat**hoy**-í:

Surface "Exceptions"

- If the root ends in a singleton consonant, it looks like it should trigger affixation of -REDY-.

(18)	a.	poló:k-i:	polo:**po**k-í:	'round'
	b.	patá:k-i:	pata:**pa**k-í:	'spread out'
	c.	lowá:k-i:	lowa:**lo**k-í:	'flexible'
(19)	a.	hón:-i:	hon**hoy**-í:	'heavy'
	b.	holát:-i:	holat**hoy**-í:	'blue'

(17) Creek SC Frames

a. **[[_C] -RED] (singleton stems)**

b. [[_C:] -REDY] (geminate stems)

Surface “Exceptions”

(20) má:h-i: ma:hmay-í: ‘tall’

- -REDY- attached despite single consonant.
- SC frames indicate -RED- should attach.

- The final /h/ must be underlyingly long - maːhː.
- This would force the morphology to choose -RED$_Y$-.

(17) Creek SC Frames

a. [[_C] -RED] (singleton stems)

b. **[[_Cː] -RED$_Y$] (geminate stems)**

- Some phonological rule then bans the realization of long glottal fricatives.[2]

[2] Blevins (2008) shows that many languages don't allow gemination of certain consonants.

Conclusions

Why Infixation/Suffixation?

- Infixation acts as a repair mechanism to prevent onsetless syllables.
- The -REDY- would not result in any onsetless syllables therefore it remains in a suffixal position.

Contexts for two allomorphs

- Allomorph selection is dependent on the segemental make-up of the root.
- -RED- is attached if the root underlyingly ends in a single consonant.
- -REDy- is attached if the root underlying ends in a geminate consonant.

Contexts for two allomorphs

- The glide in -REDy- is not a phonological repair, but is part of the morpheme.
- If it were, we wouldn't see infixation in instances where glide insertion could apply.

(21)

a.	falápk-iː	falap**fa**k-íː / *falapk**fay**-íː	'split'
b.	poló:k-iː	polo:**po**k-íː / *polo:k**poy**-íː	'round'

Morphology > Phonology?

- Morphology must **precede** phonology.
- If the geminate /hː/ is reduced before the morpheme is attached, the root would end in a single C - no context for -RED-

(22) [_Cː] → [[_C] -RED]

(23) a. *maː**ma**h-iː

b. maːh**may**-iː

- An allomorph of RED is first selected by morphology
- Afterwards, the phonology regarding onset requirements triggers infixation if necessary.

Thanks for listening!

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Appendix

- Issues with OT - parallel OT struggles to account for infixation and the appearance of the glide.[3]

(24)

red + camp + iː	*Cplx	Red-R	Cont
a. ☞ cam.ca.piː		*!*	*
b. camp.ca.iː	*!	*	

(25)

red + poloːk + iː	*Cplx	Red-R	Cont
a. ☞ po.loːk.po.yiː		**	
b. po.loː.po.kiː		**	*!

[3] Constraints taken from (Riggle, 2004).

Appendix

- NoCoda is assumed for roots ending in a single C.

(26)

red + poloːk + iː		NoCoda	Red-R	Cont
a.	poloːkpoyiː	*!	**	
b. ☞	poloːpokiː		**	*

(27)

red + maːh + iː		NoCoda	Red-R	Cont
a.	maːhmayiː	*!	**	
b. ☞	maːmahiː		**	*