Restructuring Regular Phonology

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Introduction

Deletion of underlying even/odd vowels, aka rhythmic syncope, assumed to be stable
(Kager 1997, McCarthy 2008)

Odawa dialect of Ojibwe (Algonquian, USA and Canada) came to brink of rhythmic syncope
But learners restructured language

Learners find rhythmic syncope difficult
Perhaps difficult to induce grammar
Or grammar is unavailable

Background

Odawa had left to right iambic stress
Negligible reduction (Baraga 1878, Sapir 1912)

Strong reduction by 1938 (Bloomfield 1957)

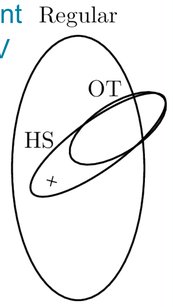
'shoe'	'my shoe'	
/mʌkɪzɪn/	/nɪ-mʌkɪzɪn/	UR
(mʌˈkɪ)(ˈzɪn)	(nɪˈmʌ)(kɪˈzɪn)	Stress
(mᵊˈkɪ)(ˈzɪn)	(nᵊˈmʌ)(ˈkᵊzɪn)	Reduction
[mkɪzɪn]	[nmʌkzɪn]	Percept

Precursor to phonological rhythmic syncope
Just needed to be phonologized by learners

Crucial Serialism

Rhythmic syncope counts underlying vowels
Obscures count by deleting them

Classic OT only sensitive to output structure
Markedness blind to input count
Possible to avoid unstressed V
At cost of FtBin violations
But random vowels delete



mʌkɪzɪn	*V-Place$_{weak}$	Id(str)	FtBin	Max-V
a. ☞ (mkǐ)(zín)		**	**	**
b. (mʌkǐ)(zín)	*!	**	*	*
c. ☞ (mʌ́k)(zín)		**	**	**
d. (mʌ́)(kǐ)(zín)		***(!)	***(!)	

HS, SPE are sensitive to pre-output structure
Can delete even/odd (McCarthy 2008)
/mʌkɪzɪn/→(mʌˈkɪ)(ˈzɪn)→(m_ˈkɪ)(ˈzɪn)

Reports of Change

Reports of shift in speakers born around 1938
Piggott (1974:2), Rhodes (1975, 1985a,b)

Leveling and new prefixes (ndʌ-, ndoː-, ndɪ-)

'shoe'	'my shoe'
[mkɪzɪn]	[ndoː-mkɪzɪn]

New prefixes recut from vowel-initial words

goːʤɪn	n-[d]ʌgoːʤɪn	'he/I hang'
ʤeːpzɪ	n-[d]oːʤeːpɪz	'he/I am smart'
naːbʤɪtoːd	n-[d]ɪnaːbʤɪtoːn	'he/I use it'

Perhaps not cohort-wide (Valentine 2001:67):
"not reflecting usage of fluent speakers"

Current Study

21 speakers (8 males, 13 females):
From Manitoulin and Walpole Islands
All born during heyday of strong reduction

3 forced-choice surveys:
prefix choice (non-alternating at left edge)
ndʌ-, ndoː-, ndɪ-, n-, (nd-) + dɑːbɑːn 'car'
alternation vs leveling
n-mʌkzɪn vs ndoː-mkɪzɪn 'my shoe'
real vs fake alternations
n-mʌkzɪn vs n-mɪkzɪn 'my shoe'

30 pseudo-random words per survey

Prefix Choice

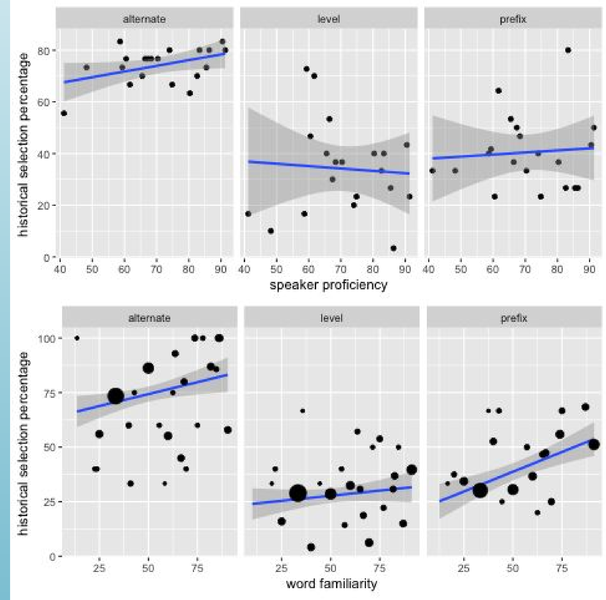
ndʌ-, ndoː-, ndɪ- chosen very often
ndʌ-, ndoː- usually favorites
Historically correct (bolded) get a boost

	C	ʌC	ʊC	ɪC	VV
n-	**27**	8	15	8	3
ndʌ-	33	**49**	16	29	34
ndoː-	23	25	**53**	21	32
ndɪ-	17	17	15	**42**	4
nd-	--	--	--	--	**27**

Old Form Selection

Speakers know old forms, prefer new pattern

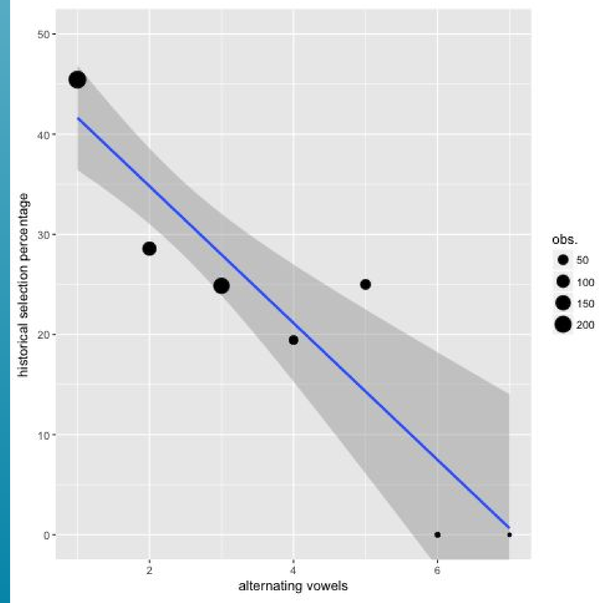
Old forms improve with proficiency, familiarity



Dispreference against rhythmic alternations

As more vowels alternate, old forms do worse

1	ndoː-mʃiːmɪn	n-mɪʃiːmɪn	'my apple'
2	ndoː-mkɪzɪn	n-mʌkzɪn	'my shoe'
6	ndoː-bdʌkʃkʌʔgʌn	n-bʌdkʌʃkʔɪgʌn	'my pitchfork'



Discussion

Original allomorph distributions abandoned
Rhythmic alternations actively dispreferred
Modern rhythmic analysis untenable
N.B: other alternations still active
(word-final devoicing, apocope)

Instead, identity map + prefixes + memorized

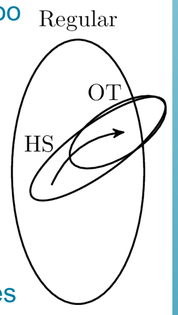
/mkɪzɪn/	→ [mkɪzɪn]	'shoe'
/ndoː-mkɪzɪn/	→ [ndoː-mkɪzɪn]	'my shoe'
/n-mkɪzɪn/	→ *[n-mkɪzɪn]	'my shoe'
/nmʌkzɪn/	→ [nmʌkzɪn]	'my shoe (mem)'

Whence avoidance of large alternations (fig 2)?
Graded irregularity (Justus et al 2011)

Conclusion

Language moved back into OT
Modern language lacks rhythmic deletion
→ Problematic alternations removed

Other languages have changed too
East Slavic (Isačenko 1970)
Old Irish (McManus 1983)



In OT, change is *obligatory*
No analysis for old system
Grab a prefix, halt alternations

Prospects unclear in other theories
Top-down footing → deletion is not hard
Perhaps inferring (m_ˈkɪ)(ˈzɪn) from [mkɪzɪn] 'shoe' is stumbling block

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