

Irish Phonological Restructuring

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- Such radical, rapid change means similar change in Irish is plausible
 - External support for early obsolescence theory of Irish syncope
 - (Armstrong 1976, McCone 1985)

Irish Alternations

- Key Irish analogue: prototonic-deuterotonic alternations

‘fall’ (deuterotonic)	‘fall’ (prototonic)	McCone (1996:202)
<i>do:ro-chratar</i>	<i>:torchartar</i>	Orthography
/do-ro-xaratar/	/X-do-ro-xaratar/	UR
do-(‘roxa)(,ratar)	X-(‘doro)(,xara)(,tar)	Stress
do-(‘rox_)(,ratar)	X-(‘dor_)(,xar_)(,tar)	Syncope
[do-‘rox_,ratar]	X-[‘dor_,xar_,tar]	SR

Loss of Alternations

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- ‘Dummy’ prefixes in deuterotonic contexts without alternations:

		<i>/di-fo-trac/</i>	Armstrong 1976:57-8
Prototonic	→	<i>dia-n-:duthraccar</i>	Wurzburg 14b6
Deuterotonic	→	<i>do:duthrac</i>	Wurzburg 26b1

		<i>limb-uss-gab-/</i>	
Prototonic	→	<i>:(‘im_)(caib)</i>	Wurzburg 28c24
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‘desire’		<i>/di-fo-trac/</i>	Armstrong 1976:57-8
Prototonic	→	<i>dia-n-:duthraccar</i>	Wurzburg 14b6
Deuterotonic	→	<i>do:duthrac</i>	Wurzburg 26b1

‘avoid’		<i>limb-uss-gab-/</i>	
Prototonic	→	<i>:(‘im_)(,caib)</i>	Wurzburg 28c24
Expected deut	↔	<i>*im:(‘ocaib)</i>	Armstrong 1976:65
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- New simple stems also built from prototonic stem/verbal nouns without dummy prefixes (McCone 1996 §XII.5.2)

Transitional Odawa

–1930s Adults–

-Cusp of Syncope-

Phonetic Reduction

- Odawa had iambic stress (typical in Ojibwe dialects)
 - Iterative feet from left-right
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- Cusp of rhythmic syncope, will assume perceived as categorically deleted

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‘book’

/mΛZɪnΛʔɪgʌn/

(mΛzɪ)(nΛʔɪ)(gʌn)

(m^əzɪ)(n^əʔɪ)(gʌn)

[m^əzɪn^əʔɪgʌn]

‘my book’

/ni-mΛZɪnΛʔɪgʌn/

(nimʌ)(zimʌ)(ʔɪgʌn)

(n^əmʌ)(z^ənʌ)(ʔ^əgʌn)

[n^əmʌz^ənʌʔgʌn]

UR

Stress

Reduction

SR

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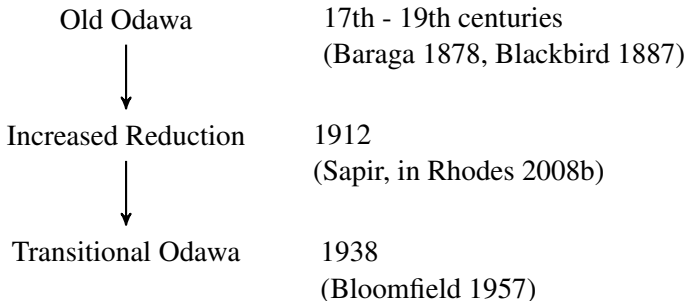
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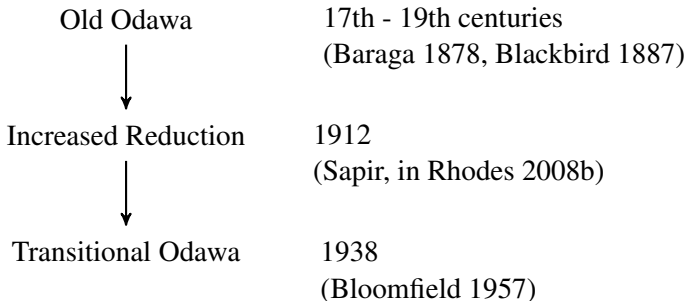
- Robust lexical evidence for alternations:
 - ~40% of stems began with at least 1 light σ
 - ~25% began with more than 1 light σ

Local Summary



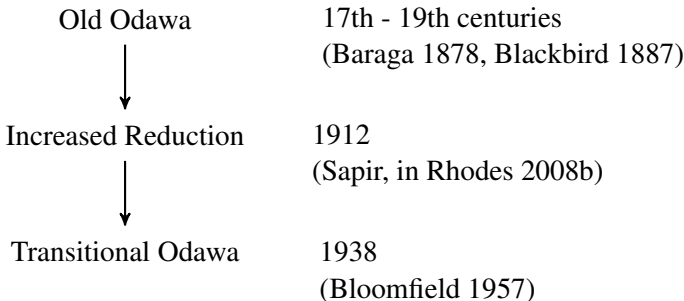
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- “The reduced vowels are rapidly spoken and often whispered or entirely omitted” (Bloomfield 1957:5).
- Language at cusp of rhythmic syncope
- Children just need to turn gradient reduction to full deletion

New Odawa

–1930s Children–

Murmurs of Change

- “Odawa has added a rule fairly recently, which deletes unstressed vowels . . . It would be interesting to speculate about the ultimate impact of this rule on Odawa phonology”
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- Missing vowels “easily resupplied” by older speakers, not by younger speakers
 - Rhodes (1975:130):, see also Rhodes (1976:5-6)
 - i.e. The vowels are gone for younger speakers

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- Kaye and Piggott gathered most of their data in 1968-70
- Early childhood of mid-30’s consultants coincides with Bloomfield.

Prefix Restructuring

- Rhodes (1985) identifies a major change in person prefixes
 - See also Kaye (1974a)
- Expected person prefixes:

Pre-Consonantal			Pre-Vocalic			
1	2	3	1	2	3	
ni-	gi-	ʊ-	niɔ-	giɔ-	ʊɔ-	Old Odawa
n-	g-	∅	nd-	gd-	d-	New Odawa

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- Innovative prefixes became productive

1	2	3	(New Odawa)
ndʌ-	gdʌ-	dʌ-	
ndɪ-	gdɪ-	dɪ-	
ndoː-	doː-	doː-	

New Prefixes Spread

- New prefixes displace old prefixation pattern across lexicon

‘He has a close call’	‘I have a close call’	(T. Odawa)
/bʌʒime:/	/ni-bʌʒime:/	UR
(bʌʒí)(né:)	(ni b ʌ)(ʒimé:)	Stress
(b ^ə ʒí)(né:)	(n ^ə bʌ)(ʒ ^ə né:)	Reduction
[b ^ə ʒímé:]	[n ^ə bʌʒ ^ə né:]	SR
[bʒímé:]	[nbʌʒné:]	Likely Percept

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- New Odawa: [bɜime:], [ndΛ-bɜime:]
- Note: stem alternations are gone too!

New Prefix Origins

- New prefixes arose via reanalysis of Transitional Odawa short vowel-initial words:

‘He hangs’	‘I hang’	(T. Odawa)
/Λg ^o :d̥zɪn/	/nɪ-Λg ^o :d̥zɪn/	UR
—	nɪ[d]Λg ^o :d̥zɪn	Hiatus Resolution
(Λg ^o :)(d̥zɪn)	(nɪd̥)(g ^o :)(d̥zɪn)	Stress
(^ə g ^o :)(d̥zɪn)	(n ^ə d̥)(g ^o :)(d̥zɪn)	Reduction
[^ə g ^o :d̥zɪn]	[n ^ə d̥Λg ^o :d̥zɪn]	SR
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—	ni[d]Λgo:dʒim	Hiatus Resolution
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[gó:dʒím]	[ndáɡó:dʒím]	Likely Percept

- A plausible mis-analysis (repeatable for [ɪ, ʊ], see Bowers 2019):

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- To find out: surveyed 20 speakers on Manitoulin Island and Walpole Island

Surveys

–1930s Children (now elders)–

Surveys and Participants

- 20 first-language speakers
 - (8 males, 12 females)
 - All born during heyday of strong reduction
 - 61-87 years old
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 - Includes highly competent translators, instructors, activists
- 3 surveys:
 - 1 Prefix intuitions only (no stem-internal alternations)
 - Forced Choice: Which prefix do you prefer?
 - Rating: How much do you like each prefix?
 - 2 Do you prefer [ndo:-] or [n-]? (words with stem-internal alternations)
 - 3 Can you pick the right prefixed stem allomorph? (words with stem-internal alternations)

Prefix Survey Task

- Target question 1: which prefix do you prefer?
- Target question 2: how much do you like each prefix?
 - ndΛ-, **ndo:-**, ndr-, n- + da:ba:n ‘my car/vehicle’

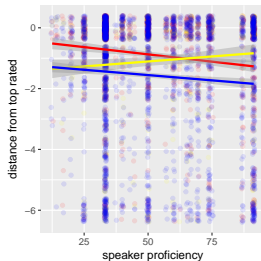
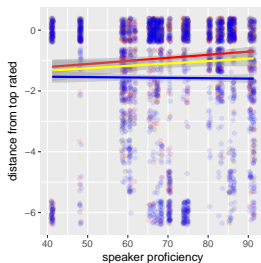
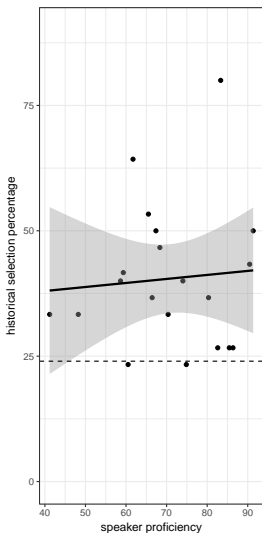
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 - plus nd- for vowel-initial words
- All words underlyingly began with ((Λ ,I,U)C)VV
- Equal numbers of Λ C, IC . . . , words were drawn

ndΛ-/ndo:- preferred except for highly familiar words



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- Conservative form surpasses *ndΛ-/ndo:-* for most widely familiar words
- New pattern + familiarity boost → historical forms are irregulars

Leveling Survey Task

- Target question: do you prefer [ndo:-] or [n-]?
 - n-makzɪn vs ndo:-mkɪzɪn ‘my shoe’

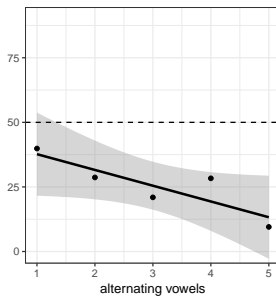
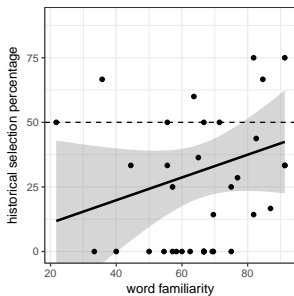
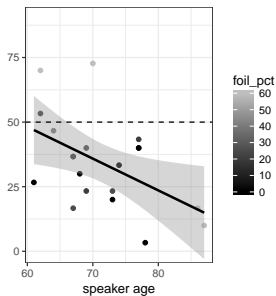
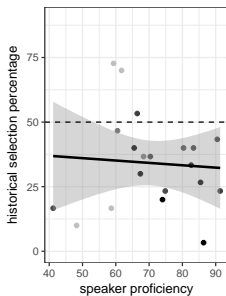
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 - *n-mʊkzɪm vs ndo:-mkɪzɪm ‘my shoe’
- Words varied in number of alternating syllables (1-5)
 - n-mɪjɪ:mɪn ‘my apple’ (1)
 - n-mΛk∅zɪm ‘my shoe’ (2)
 - n-bΛd∅kΛfk∅ʔɪgΛn ‘my pitchfork’ (5)

Preference for Non-Alternation



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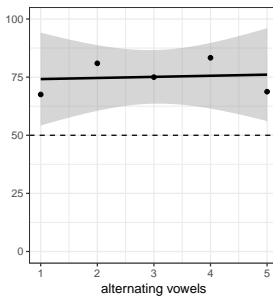
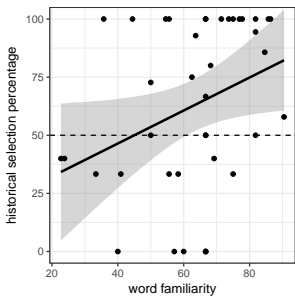
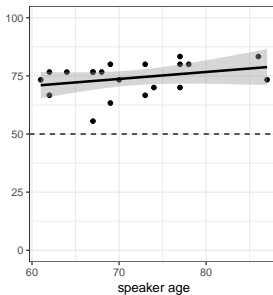
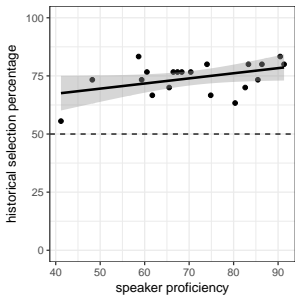
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 - The big alternations are the hallmarks of rhythmic syncope!
- If fooled by foils, conservative forms chosen more
- Maybe participants just aren't very familiar with conservative forms ...

Alternation Survey Task

- Target question: Can you pick the right prefixed stem allomorph?
 - **n-makzin** vs *n-mikzin ‘my shoe’

Preference for Correct Historical Form



Alternation Survey Summary

- Motivating concern: speakers just pick innovative because conservative is unfamiliar

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- Motivating concern: speakers just pick innovative because conservative is unfamiliar
- Speakers substantially above chance when conservative vs foil

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 - Speakers prefer new prefixes + leveled paradigm (survey 2)
 - Do so despite familiarity with conservative forms (survey 3)
- They know the conservative forms, but converged on innovation
- All in the space of a generation

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 - Thin data pre-8th century → events may have moved more quickly

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 gi:-bo:kwa:k **I**game:fk **∅**wa:d

Irish Stone Inscriptions

CAT **∅**VVIRR MAQI LUG **U**VVEC
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- Irish variability could be anything if viewed in isolation
- Parallels with reduction-phase Odawa → inscriptions reflected reduction

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7th c Poets treat missing vowels opportunistically (Carney 1971, Sims-Williams 2016)

- $/\sigma_1\sigma_2\sigma_3\sigma_4\sigma_5/\rightarrow[\sigma_1_ \sigma_2_ \sigma_3] = 3$
- $/\sigma_1\sigma_2\sigma_3\sigma_4/\rightarrow[\sigma_1_ \sigma_2\sigma_3] = 3$
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- Even $/\sigma_1CC\sigma_2/\rightarrow[\sigma_1\sigma_2] = 3!$

→ Early reduction consistent with $/\sigma_1\sigma_2\sigma_3/\rightarrow[\sigma_1_ \sigma_2] = 3$

- Mistakes like $/\sigma_1CC\sigma_2/\neq 3$ could indicate early restructuring

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 - Presumably continued to live for some time after.

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 - (Thurneysen 1946:68-69, Armstrong 1976, McCone 1985)
- New Odawa alternations → derived by phonotactically conditioned deletion
 - ‘Delete so long as resulting cluster is acceptable’
 - ✓ /mkizɪn-ʌn/ → [mkiz_nʌn] ‘shoes’
 - X /mnʊpgʊzɪd/ → [mnʊpgʊzɪd] ‘If he tastes good’

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	Expected	Observed
Irish	:(<i>tar</i> ₁)(<i>ti</i> ₂ <i>sset</i>)	:(<i>tar</i> ₁ <i>t</i> ₂ <i>sat</i>)
Odawa	('mo:)(n ₁ 'ʔΛ ₂ f)(k ₃ 'kI ₄)(we:)	mo:n ₁ _2ʃk ₃ _4we:

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→ Vacillation in syncope sites

Odawa (Field Notes)	Irish (Wurzburg)
/da:ŋn-id I z ʊ -wɪn/	/:tom o n i tis/
[...-id I z ₋ -wɪn] ~ [...-id ₋ z ʊ -wɪn]	:tom o n ₋ tis ~ :tom ₋ n i tis

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	UR	‘shoe’	‘my shoe’	Irregular
T. Odawa	/mʌkɪzɪn/	[mkɪzɪn]	[nmʌkzɪn]	—
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 - ? Never an Old Irish golden age of regularity, passed straight to silver age of restructuring
 - (David Stifter, p.c.)

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- Thank you!

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Prefix Survey Results

- Target question: which prefix do you prefer?

	C	ΛC	υC	iC	VV
n-	27	8	15	8	3
ndΛ-	33	49	16	29	34
ndo:-	23	25	53	21	32
ndɪ-	17	17	15	42	4
nd-	—	—	—	—	27

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- ndΛ-, ndo:- favorites in columns (always combine to $\geq 50\%$)
- Conservative prefixes (n-, nd-) never even a plurality
 - But, historically attested gets a boost (largest in row)
- But *ndΛ-/ndo:-* are always acceptable

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‘If he plays a game’

/dʌnʌkʌmɪgɪzɪ-d/

(dʌ' nʌ)(kʌ' mɪ)(gɪ' zɪd)

(d_ 'nʌ)(k_ 'mɪ)(g_ 'zɪd)

—

[dʌkʌmɪgɪzɪ-d]

‘We play a game’

/nɪ-dʌnʌkʌmɪgɪzɪ-mɪn

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/dʌnʌkʌmɪgɪzɪ-d/	/nɪ-dʌnʌkʌmɪgɪzɪ-mɪ/	UR
(dʌ'nʌ)(kʌ'mɪ)(gɪ'zɪd)	(nɪ'dʌ)(nʌ'kʌ)(mɪ'gɪ)(zɪ'mɪ)	Stress
(d_ 'nʌ)(k_ 'mɪ)(g_ 'zɪd)	(n_ 'dʌ)(n_ 'kʌ)(m_ 'gɪ)(z_ 'mɪ)	Syncope
—	(n_ 'dʌ)(n_ 'kʌ)(m_ 'gɪ)(z_ 'mɪ)	Other
[dʌkʌmɪgɪzɪ-d]	[n-dʌnʌkʌmɪgɪz-mɪ]	SR
- ‘Too much syncope’ (Mary Ann Corbiere, p.c.)
- Yet, recent text has *ndan'kamgizmi* ‘we play a game’ (Panamick 2015)

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- Wurzburg, Milan and St. Gall glosses are generally conservative
- In Odawa, despite preference for leveling, conservative forms can appear
- E.g: 6 syllable stems had large alternations

‘If he plays a game’	‘We play a game’	
/dʌnʌkʌmɪgɪzɪ-d/	/nɪ-dʌnʌkʌmɪgɪzɪ-mɪ	UR
(dʌ'nʌ)(kʌ'mɪ)(gɪ'zɪd)	(nɪ'dʌ)(nʌ'kʌ)(mɪ'gɪ)(zɪ'mɪ)	Stress
(d_ 'nʌ)(k_ 'mɪ)(g_ 'zɪd)	(n_ 'dʌ)(n_ 'kʌ)(m_ 'gɪ)(z_ 'mɪ)	Syncope
—	(n_ 'dʌ)(n_ 'kʌ)(m_ 'gɪ)(z_ 'mɪ)	Other
[dʌkʌmɪgɪzɪ-d]	[n-dʌnkʌmɪgɪz-mɪ]	SR
- ‘Too much syncope’ (Mary Ann Corbiere, p.c.)
- Yet, recent text has *ndan'kamgizmi* ‘we play a game’ (Panamick 2015)
- Strong Irish literary tradition → conservative texts unsurprising