

Mutation as Suppletion

Jochen Trommer

`jtrommer@uni-leipzig.de`

University of Leipzig
Department of Linguistics

Phonological Aspects of Mutation Morphology
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Green (2005)

- ▶ Celtic Mutation ist purely morphological
- ▶ Mutated & non-mutated forms are stored as full-form lexicon entries
- ▶ The choice of (non-)mutated forms is governed by diacritic morphosyntactic features

Mutation in Irish

dha, ‘two’ triggers **lenition**:

	[teach]	‘house’
dha	[h each]	‘two houses’

bhur, ‘your (pl.)’ triggers **voicing**:

	[teach]	‘house’
bhur	[d each]	‘your (pl.) house’

The Lexicon in Green (2005)

/teach/ [+simple]

/heach/ [+lenited]

/deach/ [+voiced]

/bad/ [+simple]

...

Triggering Mutation in Green (2005)

▶ **dha** selects [+lenited] noun

▶ **bhur** selects [+voiced] noun

→ analogous to the choice of case by prepositions

Morphological Lenition in Manx

f	∅
s	x ~ h (?)
t	x ~ h
k	x ~ h
p	f
d	ɣ
g	ɣ
b	v ~ w
m	v ~ w
n	no change
l	no change
r	no change
vowel	no change

Stops and m get [+continuant]

Coronal obstruents get velar

s, t & k debuccalize (optionally)

Phonological (Intervocalic) Lenition in Manx

f	??
s	z ~ ð
t	d ~ ð
k	g ~ ɣ
p	b ~ v
d	ð
g	ɣ
b	v
m	no change
n	no change
l	no change
r	no change

Voiceless stops get voiced stops or fricatives

Voiced stops get voiced fricatives

Green (2005) on Phonological Lenition


Input: pre:sən

	ID(cor)	*V[-VC]V	ID(vc)	*ð	*z
a. pre:sən		*!			
☞ b. pre:zən			*	*	
☞ c. pre:ðən			*		*
d. pre:hən	*!	*			

Crucial: ID(cor) \gg *ð/*z

Green (2005) on Morphological Lenition

Input: [+cont]₁d₂ulis

	REALMORPH	*ǫ	ID(cor)
a. d _{1,2} ulis	*!		
b. ǫ _{1,2} ulis		*!	
 c. ɣ _{1,2} ulis			*

Crucial: *ǫ/*z ≫ ID(cor)

Green's (2005) Problem

Phonological Lenition: $ID(\text{cor}) \gg *ð/*z$
(no debuccalization)

Morphological Lenition: $*ð/*z \gg ID(\text{cor})$
(debuccalization)

→ Ranking paradox

→ Morphological lenition cannot be phonological

Alternative Analysis

- ▶ The mutation morpheme is an incomplete segment:
[DORSAL +cont]
- ▶ In mutation [DORSAL +cont] coalesces with the stem-initial consonant
- ▶ e.g. mutation +t = h:
[DORSAL +cont]₁ + [CORONAL -son -cont]₂ =
[-son+cont]_{1,2}
- ▶ **Problem:** Why do DORSAL & CORONAL disappear?

Reinterpreting IDENT for Place Features

IDENT PLACE: Output segments should be only linked to tokens of place features to whose correspondents all correspondent input segments are linked

IDENT PLACE: Count 1 constraint violation for every output segment S and for every token of a place feature P such that there is an input segment S' corresponding to S and an input place feature P' corresponding to P and P is linked to S, but P' not to S'

IDENT PLACE Violations under Coalescence

Input Segment	Input Segment	Output Segment	Violations
$[DOR_a]_1$	$[COR_b]_2$	$[DOR_a COR_b]_{1,2}$	★ ★
$[DOR_a]_1$	$[DOR_b]_2$	$[DOR_a DOR_b]_{1,2}$	★ ★
$[DOR_a]_1$	$[DOR_b]_2$	$[DOR_a \quad]_{1,2}$	★
$[DOR_a]_1$	$[DOR_b]_2$	$[\quad DOR_b]_{1,2}$	★
$[DOR_a]_1$	$[DOR_b]_2$	$[\quad]_{1,2}$	✓

Why non-coalesced segments do not Debuccalize



IDENT PLACE is supplemented by MAX { LAB, COR, DOR }

Input: [DOR]₁

	*FLOAT	MAX DOR	IDENT PLACE
☞ a. [DOR] ₁			
☞ b. [] ₁		*!	
c. [] ₁ DOR	*!		

IDENT triggers Debuccalization

Input: [DOR]₁ + [COR]₂

	ID Place	MAX DORS	MAX COR
a. [COR] _{1,2}	*	*!	
 b. [DOR] _{1,2}	*		*
 c. [] _{1,2}		*	*


Morphological Lenition in Manx: [p]

f	∅
s	x ~ h (?)
t	x ~ h
k	x ~ h
p	f
d	ɣ
g	ɣ
b	v ~ w
m	v ~ w
n	no change
l	no change
r	no change
vowel	no change

Why does [p] not debuccalize?

MAX saves [p]

Input: [DOR]₁ + [LAB]₂

	MAX LAB	ID Place	MAX DORS	MAX COR
a. [COR] _{1,2}	*!	*		
 b. [LAB] _{1,2}		*		*
c. [] _{1,2}	*!			*

Morphological Lenition in Manx: Voiced Stops

f	∅
s	x ~ h (?)
t	x ~ h
k	x ~ h
p	f
d	ɣ
g	ɣ
b	v ~ w
m	v ~ w
n	no change
l	no change
r	no change
vowel	no change

Why do voiced stops not debuccalize?

MAX [+vc] Saves Voiced Stops

Input: [DOR]₁ + [COR +vc]₂

	MAX [+vc]	ID Place	MAX DORS	MAX COR
☞ a. [DOR +vc] _{1,2}		*		*
b. [COR +vc] _{1,2}		*	*!	
c. [] _{1,2}	*!		*	*

Manx doesn't have fi (the voiced laryngeal fricative)

Open Questions

- ▶ Why is [n] resistant to morphological lenition?

- ▶ Why is [f] deleted under morphological lenition?

More Arguments for the Non-Phonological Analysis

- ▶ Celtic mutations have exceptions
- ▶ Triggers and targets are sometimes non-adjacent
- ▶ Quirky Mutation
- ▶ Zero-Mutation ($f \rightarrow \emptyset$)

Celtic Mutations have Exceptions

Green (2005): In Welsh, loanwords and proper names are not mutated in specific contexts

Wolf (2006): Loan words and proper names might also be exceptions to other phonological processes

e.g. In Japanese obstruents are palatalized before [i] but not in loan words (Ito & Mester, 2001)

Non-adjacency of Trigger and Target

dha, ‘two’ triggers lenition:

	[s uil]	‘eye’
dha	[h uil]	‘two eyes’

a, ‘her’ **doesn’t** trigger lenition:

	[s uil]	‘eye’
a	[s uil]	‘her eye’

Assumption: **dha** has a floating feature on its right

Non-adjacency of Trigger and Target

dha, ‘two’ triggers **lenition**:

	[teach]	‘house’
dha	[h each]	‘two houses’

bhur, ‘your (pl.)’ triggers **voicing**:

	[teach]	‘house’
bhur	[d each]	‘your (pl.) house’

bhur + dha, together trigger **voicing**:

	[seach]	‘house’
bhur dha	[d each]	‘your two houses’

→ Mutation is triggered/blocked non-locally

Non-adjacency of Trigger and Target

dha, ‘two’ triggers lenition:

	[suil]	‘eye’
dha	[huil]	‘two eyes’

a, ‘her’ **doesn’t** trigger lenition:

	[suil]	‘eye’
a	[suil]	‘her eye’

dha + a, together **don’t** trigger lenition:

	[suil]	‘eye’
a dha	[suil]	‘her two eyes’

→ Mutation is triggered/blocked non-locally

Non-adjacency of Trigger and Target

Green (2005): Non-adjacency of Trigger and Target
is evidence against a floating-feature analysis

Wolf (2006): Syntax triggers (non-adjacent) affixation
The affix triggers (locally) Mutation

Quirky Mutation in Breton

b → v *spirantization*

d → t *devoicing*

g → γ *spirantization*

gw → w *deletion*

m → v *spirantization*

(Triggered by *e* “that”, *ma* “that/if”, and the progressive marker *o*)

Quirky Mutation

Green (2005): shows that Quirky Mutation isn't phonological

Wolf (2006): shows that different floating features are involved (allomorphy)

Summary

- ▶ A phonological analysis of Manx is difficult, but not impossible
- ▶ The other arguments in Green (2005) are either amenable to a morphological or to a phonological analysis
- ▶ More on Quirky Mutation later