

Analogy, Plain and Simple:  
The Development of Exceptions  
to Sievers' Law in Gothic and  
Umlaut Alternations in the Old  
Norse Short-Stem Class-I Weak  
Verbs

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# The larger project: Analogy

Is a strictly surface-oriented, word-and-paradigm model of morphology and morphophonology a suitable foundation for the study of analogical change, especially of developments regarded as **conundra**?

To what extent can analyses that posit abstract, underlying phonological representations be reformulated or rethought in terms of relations among surface wordforms without sacrificing explanatory power?



# Conundrum I:

The emergence of "exceptions" to Sievers' Law in Gothic

In particular:

gen. sg. *reikeis* > *reikjis*

in the heavy *ja*-stem neuter nouns

# Why is *reikeis* > *reikjis* a conundrum?

Often cited as a counterexample to the principle that analogical change simplifies/optimizes the grammar (Kiparsky 2000):

Appears to introduce an exception to a previously exceptionless generalization:

<ei> always and only with **heavy** stems

<ji> always and only with **light** stems



Analogical change typically **eliminates exceptions** to regular patterns.

But what if particular forms are **crucial evidence of their own regularity?**

neut. gen. sg. heavy *ja*-stem forms like *reikeis* are a perfect example of such forms.

# A perfect conundrum

If a speaker/learner of Gothic (or a linguist) knows that the neuter gen. sg. of heavy *i*-stem nouns ends in *-eis*, this knowledge will allow them to figure out the Sievers' Law generalization, and these *-eis* forms will then be perfectly regular within the system they construct.

But without direct knowledge of these particular forms, they will arrive at different generalizations, and the resulting grammar will not generate these forms in *-eis*.



# Conundrum 2:

The *Rückumlaut* alternation in short-stem class-I weak verbs in Old Norse (contrasting with umlaut throughout the paradigm of long-stem verbs).

		telja 'tell'	dœma 'deem'
pres. sg.	1	tel	dœmi (-e)
	2	telr	dœmir (-er)
	3	telr	dœmir (-er)
pl.	1	teljum	dœmum
	2	teliõ (-eõ)	dœmiõ (-eõ)
	3	telja	dœma
past sg.	1	talõa	dœmda
	2	talõir (-er)	dœmdir (-er)
	3	talõi (-e)	dœmdi (-e)
pl.	1	tõlõum	dœmdum
	2	tõlõuõ	dœmduõ
	3	tõlõu	dœmdu



# A conundrum because...

the umlaut conditioning factor in the past tense forms – medial *-i-* before the past suffix *-ō-* (as in Gothic *nasida*, Runic [6th c.] *raisidō*) – was presumably lost to syncope in long-stem verbs before it was lost in short stems.

So we might expect umlaut in the past tense of short stems and Rückumlaut in long stems – *exactly what we find in German, but the opposite of what we find in Norse!*

# Traditional accounts...

maintain that:

*i* (by itself) only caused umlaut after long stems, whereas

*-j-* and *-iR* caused umlaut after both long and short stems (Gordon 1957:271-2)

This accounts for umlaut in the present but not the past indicative of verbs like *telja*.



# On again, off again

Kock (1888) combines this traditional notion of short-stem umlaut before *-j-* and *-iR* (only) with the proposal that umlaut was turned on when syncope occurred in the long stems, turned off when syncope later occurred in the short stems, and subsequently turned back on again.

# "umlaut reversion"

Iverson and Salmons (2012) emphasize the importance of 2 developments for the emergence of non-umlauted vowels in forms that had had umlaut triggers in pre-literary Old Norse:

1. The historical extension/generalization of syncope from the long stems (*dæmida* > *dæmda*) to the short (*teliða* > <sup>+</sup>*telða/talða*).
2. The "impending phonetic demise" of umlaut.



# Extension of syncope (I)

"We suppose that the allomorphy with respect to historical /-iǰa/ (sometimes -iǰa, sometimes -ǰa) **combined with the emergent extension of syncope in short stem medials** to restructure the suffix to simply /-ǰa/ everywhere" (2012:116-7).

# Extension of syncope (2)

"with syncope extending to short stems and the consequent restructuring of /-iǫa/ to /-ǫa/ – umlaut still being a phonetically active process, too – the motivation for retaining umlaut in <sup>+</sup>*telǫa*, now from /tal+ǫa/, simply disappeared" (2012:117).



# "impending phonetic demise"

"the steps outlined here chart the path that led [Old Norse speakers of the pre-literary period] to morphologize umlaut this way **in the face of its impending phonetic demise**" (2012:117).

# Syncope and the demise of umlaut

"As syncope generalized to short stems [...] the transparency of umlaut there came under challenge as well but was maintained (to begin with, at least) by analogical reversion to the basic vowel wherever the trigger for umlaut was no longer in evidence – most notably in the preterite indicatives. These formed a **sufficiently identifiable subclass** to retain their basic rather than derived character as umlaut itself was progressively losing its phonetic motivation" (2012:118).



# I completely agree...

with Iverson and Salmons on 3 basic points:

1. the "ingenerate" view of umlaut.
2. that syncope occurred first in long and only later in short stems (*pace* Kiparsky 2006).
3. that the relevant short-stem forms with "umlaut reversion" all had umlauted vowels at some point in pre-literary Old Norse.

# My account differs...

from Iverson and Salmons's – and from traditional accounts – on two main points:

1. The relevant development that looks like medial syncope in the short stems was **entirely** an effect of morphological analogy.
2. Umlaut in the short stems was – crucially – still a fully productive, and very possibly still a transparent, purely phonologically conditioned alternation at the time of the *te*li*ǎa > ta*l*ǎa* development.



Phonetic syncope and the demise of phonological umlaut – with concomitant morphologization – came to short stems only later and were not relevant to umlaut "reversion".

# "very late life cycle change"?

"the story of Old Norse umlaut is one of a very late life cycle change, which suggests that we should see strong morphological and analogical effects in its distribution" (Iverson and Salmons 2012:106)

Yes, but umlaut reversion itself is not an example of the kind of "morphological and analogical effect" that only comes late in the life cycle of a sound change.



# We need to distinguish:

1. analogical developments that are inconsistent with the original phonological conditioning of a rule – these only come late in the life cycle;
2. analogical developments affecting the morphological distribution of the conditioning environments for a productive rule – these can come at any point in the life cycle;

Umlaut reversion is of the latter type.

# "a direct parallel"?

"Morphological and lexical reversions are commonplace, in fact. The history of English offers a direct parallel via the removal of umlaut from plurals and other categories, with Middle English dialectal *bōc* ~ *bēc* and *lamb* ~ *lemb* becoming *book* ~ *books* and *lamb* ~ *lambs*, respectively [...]." (Iverson & Salmons 2012:110fn.2)

But there are other, much earlier parallels in West Germanic...



# Precedent for analogical "syncope" in short stems

*i*-stem masc. nouns in WGmc.:

"Das Westgerm. hat das stammhafte *-i* [...] nach kurzer Silbe bewahrt [...]. Nur im Ahd. sind die meisten kurzsilbigen *i*-Stämme den langsilbigen angeglichen worden, haben also ihr *-i* auf analogischem Wege eingebüßt; daher z.B. ahd. *slag* = as. *slegi*, ags. *slege* "Schlag".  
(Krahe/Meid 1969, vol. 2, p. 26)

# OHG/MHG feminine *i*-stems

Phonological "reversion" of umlaut follows automatically with the analogical innovation of gen., dat. sg. forms without OHG *-i*/MHG *-e*.

OHG

sg.	nom/acc.	anst	
	gen.	ensti	
	dat.	ensti	(anst)!
pl.	nom/acc.	ensteo	
	gen.	ensteo	-
	dat.	enstim	

MHG

sg.	nom/acc.	kraft	
	gen.	krefte	kraft!
	dat.	krefte	kraft!
pl.	nom/acc.	krefte	
	gen.	krefte	-
	dat.	kreften	



# Bidirectional predictability

At the relevant time, the umlaut alternation in short stems was quasi-allophonic (non-neutralizing, w/ complementary distribution).

The umlaut vowels  $e$ ,  $ø$ ,  $y$  occurred **only**, the corresponding back vowels  $a$ ,  $o$ ,  $ɔ$ ,  $u$  **never**, before umlaut triggers in short stems.

# The apparent "extension of syncope"...

...to the short stems here is:

NOT the spread of a sound change by Schuchardtian "phonetic analogy"

NOT generalization of the syncope rule by simplification of its structural description.

It is purely "conceptual" (morphological) analogy: One way of forming the past tense (- $\check{d}$ -suffixation) replaces another (- $i\check{d}$ -suffixation).



*dæmða* has umlaut; *talǫða* does not...

...because the innovators who first produced *dæmða* started from *dæmida* and applied syncope;

whereas the innovators who first produced *talǫða* **did NOT start from *teliǫða***; they started from *telja* and applied a productive morphological rule to form an innovative past tense with *-ǫ-*, thereby automatically entailing the productive short-stem umlaut rule:

ɛ, ø, ʏ (only) in the presence of an umlaut trigger

a, o, ɔ, u (only) in the absence of an umlaut trigger

# "Parasitic rule loss"??

"[...] the phonological demise of umlaut due to its opacity in long stems had the automatic consequence of stopping its operation in short stems as well." (Iverson & Salmons 2012:112)



# But...

...far from being evidence for the **demise** (or morphologization) of phonological umlaut, the reversion of umlaut in short-stem forms (like *tal<sup>h</sup>ǫa* for earlier *te<sup>h</sup>li<sup>h</sup>ǫa*) is proof of the **unimpaired productivity** of the alternation and is consistent with it still being **purely phonologically conditioned** and **transparent** in short stems at the time in question.

# The essence of analogy

If you start with *teliǎa* and apply syncope, it is very hard to explain how you wind up with *talǎa* instead of *telǎa*.

The straightforward way to get from *teliǎa* to *talǎa* historically is to show that *talǎa* is the product of a system of synchronic morphological and phonological rules in which *teliǎa* does not figure at all, which is precisely what a traditional analogical account does.



# Conclusions (I)

The **posit-analogy-as-a-last-resort-only** principle gets us into trouble here, i.e. the idea that if observed syncope in short stems CAN be attributed to regular sound change, it SHOULD be attributed to regular sound change.

There are bound to be some cases where analogy yields new forms that would otherwise have arisen later through regular sound change.

And when analogy happens to get there first, it can have consequences that make no sense if we assume we're dealing with sound change.

# Conclusions (2)

The principle that "languages do not lose transparent rules, only OPAQUE ones" (Iverson & Salmons 2012:112) not only means that alternations reflecting transparent rules **resist leveling**;

it must also mean that if new candidates for such an alternation emerge (e.g. through an independent analogical change) the **extension** of the alternation to these new candidates will be automatic.



## Conclusions (3): Change vs. non-change

When dealing with analogical effects and productive rules, what counts as a "change" is a matter of perspective.

From the perspective of the affected inflectional paradigms, we could say that umlaut reversion constitutes (one aspect of) a change.

But from the perspective of the productive short-stem umlaut rule, reversion reflects non-change; retention of umlauted vowels where there is no longer an umlaut trigger (*teliǫa* > *\*telǫa*) would have reflected a change (as it does in the long stems).

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