

# Analological changes in Germanic verbs and the theoretical status of paradigm leveling

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GLAC 18

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April 26, 2012



# Analogical Leveling = Analogical Extension?

- ✦ No: “LEVELING [...] is ‘non-proportional’ because it does not require a non-alternating model paradigm” (Kiparsky 1992:58)
- ✦ Yes: “[P]ure leveling does not exist and [...] the emergence of paradigm uniformity is always the imposition of an existing (uniform) pattern on a non-uniform paradigm.” (Garrett 2008:142)



# What's at stake?

- ✦ Is there an innate “preference” for paradigm uniformity (a non-alternating shape of the lexical root across all inflected forms)?
- ✦ Linguists working in a wide variety of theoretical frameworks have argued that we must posit such a preference in order to account for historical paradigm leveling.



# What is partial Leveling?

- ✧ Two conceptions:
  - ✧ 1. Elimination of stem alternation between some forms in a paradigm but not across the entire paradigm (e.g. *speak-spake-spoken* > *speak-spoke-spoken*)
  - ✧ 2. Stem alternants become more similar without becoming identical (e.g. *freeze-fror(e)n* > *freeze-frozen*).
- ✧ (This talk mainly concerns the 2nd sense.)



# Partial leveling as a problem

- ✦ “[P]artial leveling [...] is especially recalcitrant to proportional treatment [...].” (Kiparsky 1992:58)
- ✦ There are almost always plenty of potential models for a pattern of non-alternation, but partial leveling results in a new alternation.
- ✦ Even if there are models for the new alternation, we may have to account for why innovators would choose those models over a more regular, non-alternating model.



# Example 1:

- ✦ Elimination of Verner's Law alternations with retention of ablaut in Germanic strong verbs, e.g. OE *frēosan-*(*ge-*)*froren* > PDE *freeze-frozen*
- ✦ Models for the new pattern are plentiful among verbs whose root-final consonants were not subject to Verner's Law (Garrett 2008:131).
- ✦ Choice of these models over the dominant weak model is largely predictable at time of leveling.



# Example 2:

- ✦ (After open-syllable lengthening):  
Ger.: *leːsen-list* > *leːsen-liest* (/liːst/)
- ✦ No model for *eː-iː* alternation before this change.
- ✦ BUT: corresponding short vowel alternation in verbs with no open-syllable lengthening, e.g. *helfen-hilft*, could serve as a proportional model ( $e : i :: eː : X$ ,  $X=iː$ ).



# Example 3:

- ✦ late MHG: *sehen* - *sichst* (*sikst*) - *sicht* >  
Mod. Stand. Ger. *sehen* - *siehst* - *sieht*



## Proto-Germanic demonstrative

Sing.	M	N	F
N	sa	þat	sō, sjō
G	þes(a)	þes(a)	þezōz
D	þemmo	þemmo	þezāi
A	þan	þat	þō(m)

## Proto-Germanic 3rd sg. personal

Sing.	M	N	F
N	iz	it	si
G	is(a)	is(a)	izōz
D	immo	immo	izāi
A	in	it	ijō(m)



## Old High Ger. demonstrative

Sing.	M	N	F
N	dër	daʒ	diu
G	dës	dës	dëra
D	dëmu,	dëmu,	dëru
A	dën	daʒ	dea, dia,

## OHG 3rd sg. personal pronoun

Sing.	M	N	F
N	ër	iʒ	siu
G	ës (is)	ës (is)	ira
D	imu, imo	imu, imo	iru
A	inan, in	iʒ	sia, (sie)



# Interim Conclusions

- ✦ Garrett showed that total leveling rarely if ever occurs without a “proportional” model.
- ✦ The same appears to be largely true for partial leveling.



# BUT...(1)

- ✦ Kiparsky and others seem to be arguing that any instances of leveling without a model is proof of an innate uniformity preference.



# A more problematic example?

- ✦ MHG *sitzen* - *gesëzzen* > Nürnberg dialect: *sitsn* - *gsetsn*
- ✦ Models: MHG *bit(t)en* - *gebëten*; *ligen* - *gelëgen*
- ✦ But why would innovators follow this rare pattern.



# Non-proportional mechanisms in (partial) leveling (1)

- ✦ **“Folk-etymological” reanalysis** based on mishearing and/or phonological reanalysis of input forms:
- ✦ Speakers produce *gsesn*; learners either: 1) think they heard, or 2) think the speakers intended to say *gsetsn*.
- ✦ This can account for innovations that eliminate idiosyncrasies while preserving some aspects of the old form.



# Non-proportional mechanisms in (partial) leveling (2)

- ✦ **Contamination** (Andersen's “paradigmatic assimilation”):
- ✦ Speaker intends to produce one form; related forms are also activated and may interfere with production.
- ✦ Unlike other analogical mechanisms, always results in related forms becoming phonologically more similar to each other (i.e. leveling).



- ✦ We occasionally encounter changes that increase stem allomorphy without any clear model:
- ✦ e.g. umlaut in the pres. indic. pl. of MHG modals:  
*kunnen* > *künnen*; *durfen* > *dürfen*; *mugen* > *mügen*;  
etc.



# BUT...(2)

- Even if all initial analogical innovations, including leveling, require a “proportional” model...
- ... an innate uniformity preference could still play an important role by making leveling innovations more likely than extensions of alternations to catch on and become established. (This is arguably how all “preferences” influence the course of language change.)
- After all, don't we still have to account for the fact that leveling changes are more common than extension of alternations?



# Why...

- ✧ ...would paradigms show such a strong cross-linguistic tendency to be uniform (and inflectional morphology show such a strong tendency to be affixal) if not due to an innate preference?



# An alternative hypothesis, part 1

- The cross-linguistic prevalence of uniform paradigms and affixal inflection has an “evolutionary” explanation (in the sense of Blevins 2004):
- inflectional affixes develop from grammatical function words, which typically occur with all relevant lexical items; stem alternations develop from conditioned sound changes, which typically affect only relatively few lexical items.



# An alternative hypothesis, part II

- ✦ Historical tendencies to level stem alternations and extend affixal marking reflect not innate preferences but rather learned **higher order generalizations** (cf. **hierarchical Bayesian models**; Wurzel's parameters of “**system congruity**”; etc.)



# Conclusions

- ✦ We do not need to posit an innate preference for paradigm uniformity to account for either how (partial or complete) leveling innovations arise or for why they are so prevalent.
- ✦ The only factor that truly inherently favors reduction of allomorphy is contamination, but this seems to play a very minor role in leveling, and is hardly what proponents of an innate uniformity preference seem to have in mind.



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