A closer look at the analogical spread of the High German consonant shift

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GLAC 21 – Provo, Utah
May 8, 2015

Prosodic origins of the HGCS

- p, t, k > pf, ts, kr /\̄V
- Intervocalic shift after short stressed vowels motivated by prosodic preference for bimoraic stressed syllables.

Prosodic conditioning across word boundaries

- Regular phonetic (post-lexical) shifting would be expected word-finally:
  - when a vowel-initial word follows:
    e.g. hwat ist → hwaz ist
  - But when a consonant-initial word or pause follows, e.g. hwaz sculun uuir tuon (Tatian), shift (t>ts) must be attributed to leveling of external-sandhi alternation.

Leveling of external-sandhi alternations

hwat-hwaz; pat-paz; it-iz, etc.

shifted variant originally occurred only when a vowel-initial word followed (Paul 1879:554)
sandhi alternation leveled in favor of shifted consonants in most dialects

Wermelskirchen and beyond

- Post-vocalic shifted consonants always and only after short vowels is what we find in the modern dialect of Wermelskirchen.

My primary interest today is in the next step in the “progression” of the shift: to \̄V
(so that the shift now applies to all postvocalic non-geminate p, t, k)

Unshifted post-vocalic consonants in OHG (1)

(aside from the Hildebrandslied)

- t never shifts when immediately followed by r this unshifted t is leveled in paradigms, so it also occurs in forms that always had a vowel between the t and the r.
- post-vocally, the r triggers gemination of the unshifted t (after short and long vowel):
  bittar, snottar, (h)lut(t)ar, eittar, etc.
Unshifted post-vocalic consonants in OHG (2)

- Unshifted t in *that* (7x) in Central Franconian (Trierer Capitulare), and *dat* (2x) in the Wessobrunner Gebet. (Aside from one occurrence of *thaz* in the T.C., these are the only tokens of pronominal forms in Gmc. -t in these two texts.)
- *gesat* 'gesetzt' (1x) in T.C.
- *antluti* 'face' beside *antluzzi* (and *annuzzi*)

Unshifted post-vocalic consonants in OHG (3)

- Unshifted k in Cl.-1 weak verb forms reflects leveling of geminates (44 tokens):
  - *-decken*; *-klecken*; *-lecken*; *-recken*; *-scricken*;
  - *-smecken*; *-stecken*; *-wecken*

  Two types: *bithékitaz*; *bithactes* (g also occurs [6x] in the latter type).

  Otherwise only one occurrence of: lícíiscun 'bodily' (Freisinger Paternoster)

Unshifted post-vocalic consonants in OHG (4)

- Two unshifted p's in Isidor:
  - *scaep* 'sheep'; *ubærhlaunpissi* 'infraction'
- *uf* consistently spelled *<ph>* in Isidor (2x) and the Monsee Fragments (6x); these texts otherwise use *<ph>* for word-final b: *screip* 'schrieb', bëlep *'bleib' (3x), lauph 'Laub', liph 'Leib' (2x); MF also has *uurphun* 'warfen', *uurphut* 'warfet'.
- One p in Otfrid:
  - *inslúpta*; pret. of *intslüfen* 'escape' (apparently a leveled geminate – one ms. also has 3s pres. *bislippit*.

Leveling within inflectional paradigms

Strong verbs of classes I, II, IV, V, and VI, as well as the preterite-present verb *wissen*, had ablaut patterns with short root vowels in some forms and long vowels in others.

I: *bīzan* - *bēiz* - *bīzsum* - *gibīzsan* 'bite'

II: *giazan* - *gāz* - *gu33um* - *giga3san* 'pour'

IV: *brēchan* - *brach* - *brāchum* - *gibrāchan* 'break'

V: *mē3zan* - *māz* - *māzum* - *gimē3zan* 'measure'

VI: *bachan* - *buh* - *buohum* - *gibalchen* 'bake'

pret.-pres.: *wīzan* - *weiz* - *wizzum* - (giwīs) 'know'

Leveling among derivationally related words

Examples:

- *sprēhan* → *sprāha*; *sprāhus*, etc.
- *ē3zan* → ēźi; ēźida, etc.
- *fīzan* (3p pret. *flīzun*) → *flīz*; *fīzīg*; *fīzīgheit*, etc.
- *grīfan* (3p pret. *grīffun*) → greifōn
- *sūfan* (3p pret. *sūffun*) → soufen
- *swizzen* (pret. *swīsta*) → sweiz
Other ünchen alternations in derivationally related words

sweǐz 'sweat (n.)' – swizzen 'to sweat'
heǐz 'hot' – hizza 'heat (n.)'
siakh 'sick' – suht 'sickness'
roufen – rupf 'pluck' (?)

Analogical spread beyond paradigms

"the progression of the shift was at first motivated by paradigmatic analogy that later extended to a general rule" (Davis 2008a:203)

Schuchardt's "rein lautliche Analogie"

"I expressed the notion some years ago that Italian (and general Romance) ie, uo = Vulgar Latin ĝ, ĕ was originally conditioned by a following i or u as it still is in some dialects: vieni, buono, buoni. First it would have been extended by conceptual analogy: viene, buona, until a point was reached where no such support was necessary: pieta, ruota." (1885:7-8, Wilbur's translation)

Paul's response to Schuchardt's idea

"an absurdity that cannot even be contemplated. Where would the proportional equation come from?"

["... ein Unding, was sich überhaupt nicht denken lässt. Wo käme die Proportionsgleichung her?" ] (1886:6)

Database

currently 159,425 word tokens, with complete phonological segmentation

xml allows:
- unlimited annotation of phonological and larger elements
- full power and flexibility of XQuery (using BaseX)

Based on Annis version of the Referenzkorpus Altdöchisch (http://www.deutschdiachronisch.de/)

All of Otfrid, Tatian, Isidor, Murbach Hymns, Monsee Fragments, and Steinmeyer's Kleinere Sprachdenkmäler (except the Georgslied, but including the Benediktiner Regel and the Physiologus)

Sample word element

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    <stem derivBase="förlassan" affix="-nissi">
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      <seg VC="V" str="u" pGmc="o">o</seg>
      <seg VC="C" pGmc="r">r</seg>
    </stem>
    <stem derivBase="förlassan" affix="-nissi">
      <seg VC="C" pGmc="l">l</seg>
      <seg VC="V" str="s" pGmc="ē">ē</seg>
      <seg VC="C" pGmc="t">t</seg>
    </stem>
  </stem>
</word>
Tokens of shifted postvocalic $p$, $t$, $k$ in database that are:
- directly attributable to prosodically motivated shift in /$\bar{V}$(#)$V$ environment: 3928
- attributable to leveling of sandhi alternations after short vowels (=Wermelskirchen): 7903
- attributable to leveling in (inflectional or derivational) paradigms with $\bar{V}$$-\bar{V}$ alternations: 849
- Remnant (after non-alternating long vowels): 4299

What kind of analogy...

...are we dealing with in the extension of the shift – beyond paradigms – “to a general rule”?

Is it the kind Kiparsky describes here?:

"the voiceless aspirated palatal /ch/ of Sanskrit happened to occur, when medial, mostly as a geminate [cch]; the few simple occurrences were later geminated, generalizing the rule 'Aspirated palatals, when medial, are geminated'" (Kiparsky 1992:58)
the kind of "proportional" extension of a pattern of variation described by

Paul (1920§293):
"Low German water=High German wasser = eten-essen = laten-lassen, etc."

Vennemann (1972:185-186):
and others (see Murray, in press; Fertig, in press)?

Selected references (1)

The only difference being...
...that here the variants that provided the model for further extension had themselves arisen within dialects through analogical change:

Stage 1: paradigm leveling:
*driban (past partic.) : *driban (inf.) = *bitsan : X, X = *bitsan (which now co-existed with older *bitan)

Stage 2: Extension to lexical items with non-alternating V:
(conservative) *bitan : (innovative) *bitan = *lätan : X, X = *lätan

Some potentially relevant Germanic alternations

OHG suohhan ~ suohan < *sökjanan ~ *söhtë ’seek’ (and cf. cognates of wecken, decken, etc. in OE and OS)

OHG sioh ~ sueka ~ *suhtiz ’sick, sickness’

OHG scepfen (scuaf) ~ giscof < *skopjanan (<*sköp) ~ *gaskofiz ’create, creation’
OHG (hl)oufan – (hl)aufan < *(hl)oupanan – *(hl)outiz (?) ’run’
similarly: OHG (hl)uofan – (hl)uof ’call’, (w)uofan – (w)uof ’weep’

Selected references (2)