

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

David Fertig
University at Buffalo (SUNY)
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1

Prosodic origins of the HGCS

- $p, t, k > pf, ts, kx / \text{ʔ} _ V$
- Intervocalic shift after short stressed vowels motivated by prosodic preference for bimoraic stressed syllables.

2

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.

3

Leveling of external-sandhi alternations

hwat-hwaz; þat-þaz; 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

4

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 $\text{ʔ} _$
(so that the shift now applies to all postvocalic non-geminate p, t, k)

5

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-vocalically, the r triggers gemination of the unshifted t (after short and long vowel):
bittar, snottar, (h)lüt(t)ar, eittar, etc.

6

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.
- ◀ *antlutti* 'face' beside *antluzzi* (and *annuzzi*)

7

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

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

8

Unshifted post-vocalic consonants in OHG (4)

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

9

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.

10

I: *bīzan* – *beiz* – *bi3zum* – *gibi3zan* 'bite'
II: *gio3an* – *gō3* – *gu3zum* – *gigo3zan* 'pour'
IV: *brēchan* – *brach* – *brāchum* – *gibrochan* 'break'
V: *mē3zan* – *ma3* – *māzum* – *gimē3zan* 'measure'
VI: *bachan* – *buoh* – *buochum* – *gibachan* 'bake'
pret.-pres.: *wi3zan* – *weiz* – *wi3zum* – (*giwis*) 'know'

11

Leveling among derivationally related words

Examples:

sprēhhan → *sprāhha*; *sprāhhus*, etc.

ē3zan → *ā3i*; *ā3ida*, etc.

flīzan (3p pret. *flī3zun*) → *flī3*; *flī3īg*; *flī3īgheit*, etc.

grīfan (3p pret. -*grīffun*) → *greifōn*

sūfan (3p pret. *sūffun*) → *soufen*

swizzen (pret. *swi3ta*) → *swei3*

12

Other Ǫ~ǫ alternations in derivationally related words

sweiz 'sweat (n.)' – *swizzen* 'to sweat'

heiz 'hot' – *hizza* 'heat (n.)'

sioh 'sick' – *suht* 'sickness'

roufen – *rupfen* 'pluck' (?)

13

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)

14

Schuchardt's "rein lautliche Analogie"

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

15

Paul's response to Schuchardt's idea

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

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

16

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 Altdeutsch* (<http://www.deutschdiachrondigital.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*)

17

Sample word element

```
<word edSpelling="forlaznessi" wordTokenID="1459" refToken="1459" lemma="firlāznessi">
<annis id="4101720" tok="forlaznessi" hgcsRel="main" edition="forlaznessi[1-1]" lemma="firlāznessi[1-1]"
ling="forlaznessi[1-1]" inflection="SG_ACC[1-1]" line="9[1-5]" document="Fränkisches Taufgelöbni[1-14]"
posLemma="NA[1-1]" inflectionClassLemma="JA_NEUT[1-1]" pos="NA[1-1]" inflectionClass="JA_NEUT[1-1]"
translation="Vergebung (der Sünden)[1-1]" lang="goh[1-1]" clause="CF_U_Int[1-1]" />
<stem affix="-nissi">
<stem derivBase="firlāzan" affix="fir">
<seg VC="C" pGmc="f">f</seg>
<seg VC="V" str="u" pGmc="">u</seg>
<seg VC="C" pGmc="">z</seg>
<stem derivBase="lāzan">
<seg VC="C" pGmc="">ā</seg>
<seg VC="V" str="s" pGmc="ē1">ā</seg>
<seg VC="C" pGmc="t">z</seg>
</stem>
</stem>
<seg VC="C" pGmc="">n</seg>
<seg VC="V" str="u" pGmc="">e</seg>
<seg VC="C" pGmc="">ss</seg>
<seg VC="V" str="u" pGmc="">i</seg>
</stem>
</word>
```

18

Shifted (non-geminated) *t* after stressed vowels

- total: 9,229
- after short vowels: 7,134
 - of which in pronominal forms:
 - da3*: 4,507
 - ë3*: 1180
 - (h)wa3*: 293
 - total: 5,980

19

Shifted (non-geminated) *k* after stressed vowels

- total: 6,851
- after short vowels: 4,286
 - of which in pronominal forms:
 - ih*: 1,967
 - mih*: 466
 - dih*: 287
 - sih*: 536
 - total: 3,256

20

Shifted (non-geminated) *p* after stressed vowels

- total: 914
- after short vowels: 323
 - of which:
 - uf*: 97

21

		<i>t</i>	<i>k</i>	<i>p</i>	Totals
word medial	ǃ_V	819	782	176	1777
	ǃ_C	139	16	49	204
word final	ǃ_#V	1541	591	19	2151
	ǃ_#C	3625	2328	47	6000
	clause final	1009	658	32	1699
TOTALS		7133	4375	323	11,831

22

Tokens of shifted postvocalic *p*, *t*, *k* in database that are:

- directly attributable to prosodically motivated shift in /ǃ__(#)V environment: **3928**
- attributable to leveling of sandhi alternations after short vowels (=Wermelskirchen): **7903**
- attributable to leveling in (inflectional or derivational) paradigms with ǃ-ǃ alternations: **849**
- Remnant (after non-alternating long vowels): **4299**

23

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)

24

Or is it more like...

- 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):
Noam = [nowm] : [nowəm] = *home* [howm] : X, X = [howəm]
- and others (see Murray, in press; Fertig, in press)?

25

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.) = **bītsan* : X,
X = **bītsan* (which now co-existed with older **bītan*)

Stage 2: Extension to lexical items with non-alternating \bar{V} :

(conservative) **bītan* : (innovative) **bītsan* = **lātan* : X,
X = **lātsan*

26

The leading "hold outs"

	Lexical item (+derivatives)	n=		Lexical item (+derivatives)	n=
1	<i>ouh</i> 'auch'	961	9	<i>buoh</i> 'book'	118
2	<i>ūz</i> 'out'	414	10	<i>touf(en)</i> 'baptize'	95
3	<i>lāzan</i> 'lassen'	385	11	<i>fuoz</i> 'foot'	90
4	<i>rīhi</i> 'Reich'	345	12	<i>(h)loufan</i> 'laufen'	84
5	<i>līh</i> 'body, like'	315	13	<i>(h)ruofan</i> 'rufen'	79
6	<i>heiʒan</i> 'heißen'	199	14	<i>suoz</i> 'sweet'	75
7	<i>suohhen</i> 'seek'	164	15	<i>muozan</i> 'müssen'	74
8	<i>zeihhan</i> 'Zeichen'	138	16	<i>slāfan</i> 'sleep'	73

27

Some potentially relevant Germanic alternations

- OHG *suohhan* – *suohhta* < **sōkjanan* – **sōhtē* 'seek' (and cf. cognates of *wecken*, *decken*, etc. in OE and OS)
- OHG *sioh* – *suht* < **seuka* – **suhtiz* 'sick, sickness'
- OHG *scepfen* (*scuof*) – *giscaft* < **skapjanan* (**skōp*) – **gaskaftiz* 'create, creation'
OHG *(h)loufan* – *(h)lauft* < **hlaupanan* – **hlauftiz* (?) 'run'
similarly: OHG *(h)ruofan* – *(h)ruoft* 'call'; *wuofan* – *wuoft* 'weep'

28

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29

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30