The restorative powers of persistent alternations: The interaction of syncope and lenition/loss of /x/ in German and West Saxon verb forms

David Fertig
University at Buffalo (SUNY)
fertig@buffalo.edu
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Part I:
The explanandum

Strong contracted verbs in Old English

sēon 'see'	(Early) West Saxon	Anglian
IND 1SG	sēo	sēa(?)/sīo(m)
2SG	siehst	sīs(t)
3SG	siehð	sīð
PL	sēoð	sēað/sēas (?)
SBJV SG	sēo	sē(a) (?)
SBJV PL	sēon	sē(n)
IMP SG	seoh	seoh (?)
1/3SG PST IND	seah	sēh

Class-I **weak** contracted verbs in Old English

þȳn/þȳwan/þēon ‘press’	
IND 1SG	**þȳ**
2SG	**(þȳst)**
3SG	**þȳð**
PL	**þȳð**
SBJV SG	**þȳ**
SBJV PL	**þȳn**
IMP SG	**(þȳ)**
1/3SG PST IND	**þȳde/þȳwde**

< PGmc *þūxiþ(i)*

Relevant sound changes

1. Lenition and loss of /x/ between vowels (and other sonorants), followed by contraction of vowels in hiatus:
   ˈVxV > ˈVhV > ˈVV > ˈVː

2. Syncope of unstressed short vowels in final syllables:
   CVC(C)# > CC(C)#

Part II:
Sound-change-based accounts of the <h> (/x/) in the 2/3sg present indicative of strong contracted verbs in West Saxon

Attempts to account for /x/ in the WS 2/3sg as **straightforward sound change …**

…entail the following chronological order of the relevant sound changes:

1. syncope

2. lenition/loss/contraction

Positing **exceptional** early syncope in the relevant forms

> "In W-S and to some extent in Kt. […] there was very early syncopation of *i* in the 2nd and 3rd sg. pres. indic. of strong verbs, so that, if *χ* preceded, it was brought into contact with *s* or *þ* before it became *h*." (Campbell 1959:186)

> "where /x/ remains, for example, *ġesihst*, *ġesihð*, if these forms are not to be explained analogically […], then it must be supposed that exceptionally syncope occurred before lenition in these cases" (Hogg 1992:275)

Why exceptional early syncope in the relevant forms? (1)

> “wahrscheinlich, dass auch jene kürzeren Formen der 2. 3. sg. präs. ursprünglich nur in der Stellung vor dem enklitisch antretenden Pronomen berechtigt waren, und die Synkope wäre dann als Synkope eines Mittelvokals begreiflich” Walde 1900:125n.1; cf. Hedberg 1945:281–283; Ringe & Taylor 2014:292)

Why exceptional early syncope in the relevant forms? (2)

> “syncope in 2, 3sg. pres. indic. forms of strong and class I weak verbs could be explained only by the survival of the disyllabic PGmc endings *-isi, *-iþi into prehistoric OE and their shortening by syncope and apocope operating in that order.” (Ringe and Taylor 2014:289)

General problem with these first two accounts of exceptional early syncope as an explanation for survival of /x/

Predict no difference in present indicative between strong (*sēon–sie**h**ð*) and class-I weak (*þȳn–þȳð*) verbs.

Why did exceptional early syncope result in survival of 2/3sg /x/ in **strong** verbs only?

> "The occurrence of [forms with *h* in the 2nd and 3rd sg. pres. indic. of strong verbs but not of weak verbs] suggests that in the weak verbs the past *bȳde* influenced the pres. indic." (Campbell 1959:329n.1)

Problem with Campbell's account

It would necessarily push the date of exceptional early syncope in the 2/3sg pres. indic. of **light** stem verbs – like *sēon* and other contracted verbs of strong classes V, VI, and VII – back before medial-syllable syncope in the past tense of **heavy** stem class-I weak verbs – otherwise the past tense of *þȳn* would be *þȳhte*, not *þȳ(w)de* (and would thus not be a possible analogical source for pres. indic. forms without /x/.

Positing exceptional early syncope in **strong** verbs only

> “the strong pres. 3 sg. inflection is historically **-iþ*, whereas the weak inflection after heavy stems (and all the relevant weak verbs have heavy stems) is **-īþ* < **-ij-iþ*, under Sievers’ law” (Fulk 2010, abstract)

Problems with Fulk's account

1. There is no independent evidence for survival of long iː reflexes from Sievers' Law anywhere in West Germanic.

2. The account would seem to predict no OE syncope in the 2/3sg present indicative of **heavy**-stem class-I weak verbs, or at least less syncope in heavy-stem than in light-stem verbs.
(Cf. Hedberg (1945:296): "syncope is as common among [the short-stemmed verbs] as among the long-stemmed verbs.")

Is syncope more common in strong verbs than in class-I weak verbs in WS?

"There are in W-S more unsyncopated forms of 2nd and 3rd sg. pres. indic. in the weak than in the strong verb. These are especially frequent after liquids and nasals." (Campbell 1959:323)

"The dialect distribution of syncopated forms of the pres.ind.2&3sg. [of class-I weak verbs], and the variant inflexions encountered, are like those for strong verbs […]. Thus, generally, there is regular syncope after heavy stems in Ælfrician WS and IKt, usual non-syncope in AngI, and a mixture of forms in EWS and in anonymous LWS texts." (Hogg 1992:264)

Part III:
What about analogy?

Analogical restoration of <h> (/x/) in the WS 2/3sg …

…entails the following chronological order of the relevant sound changes:

1.lenition/loss/contraction

2. syncope

Hypothesized analogical development

sēon 'see'	Prehistoric West Saxon (pre-syncope	Attested Early West Saxon (post-syncope)
IND 1SG	sēo	sēo
2SG	*sīest →	siehst
3SG	*sīeð →	siehð
PL	sēoð	sēoð
SBJV SG	sēo	sēo
SBJV PL	sēon	sēon
IMP SG	seoh	seoh
1/3SG PST IND	seah	seah

[…] in WS, also Kt, in the 2nd, 3rd sg.pr.ind. of contracted strong verbs, such as […] *sēon* ‘see’, […] /x/ would be expected to lenite and then disappear, thus: **siuxist* > **siexist* > ** sīe-ist* > **sīest* > LWS ***sīst*, similarly LWS ***sīð*. But the usual LWS forms are of the type *sihst*, *syhst* ‘thou seeest’. **It seems most probable that /x/ has been analogically restored** on the model of the pret.sg. *seah* ‘he saw’. (Hogg 1992:274, emphasis added)

Part IIIA:
A parallel analogical change in late Middle High German?

“Wenn im Spätmittelhochdeutschen nach Abwerfung des auslautenden *e* aus *zæhe*, *geschæhe*, *hœhe*, etc. *zæch*, *geschæch*, *hœch* entsteht, so liegt wohl schwerlich ein lautlicher Übergang des *h* in *ch* vor; die Formen haben sich vielmehr der Analogie des bereits vorher bestehenden Wechsels *hôch* — *hôhes*, *geschehen* — *geschach* etc. gefügt. Ebenso wird es sich verhalten bei *sicht*, *geschicht* […] aus *sihet*, *geschihet*.” (Paul 1920:120)

“Eine andere Art von Proportionengleichungen beruht auf dem Lautwechsel, […]. Die Bedeutung der formalen Elemente bleibt dabei ganz aus dem Spiel. Der Lautwechsel muss […] sich in Fällen zeigen, die hinsichtlich des Funktionsverhältnisses nicht mit einander zu tun haben, und sich dadurch als unabhängig von der Bedeutung erweisen.” (Paul 1920:108)

“im Mhd. [ist] es eine durchgreifende Regel […], dass einem *h* im Silbenanlaut in der Stellung nach dem Sonanten der Silbe der Laut unseres *ch* entspricht, also *rûher* — *rûch*, *sehen* — *sach* […] (*sichst*, *sicht*).” (Paul 1920:118)

Part IIIB:
Regularity in disguise: The OE /x/–∅ alternation in noun, adjective, and verb inflection

a-stem masculine nouns

	stān ‘stone’	sċōh ‘shoe’
SG N	stān	sċōh
A	stān	sċōh
G	stānes	sċōs
D	stāne	sċō
PL N	stānas	sċōs
A	stānas	sċōs
G	stāna	[sċōna]
D	stānum	sċōm

Root-stem feminine nouns

	bōc ‘book’	furh ‘furrow’	þrūh ‘trough’
SG N	bōc	furh	þrūh
A	bōc	—	—
G	bēċ	fyrh/[fūre]	þrȳh
D	bēc	fyrh	þrȳh
PL N	bēċ	—	—
A	bēċ	[fūra]	[[wlōēh]] ‘fringe’
G	bōca	fūra	—
D	bōcum	fūrum	þrūm

Strong adjectives

‘high’	M	(‘good’)	F		N	
SG N	hēah	til	hēa	tilu	hēah	til
A	hēane	tilne	hēa	tile	hēah	til
G	hēas	tiles	hēare	tilre	hēas	tiles
D	hēam	tilum	hēare	tilre	hēam	tilum
I	hēa	tile	—		hēa	tile
PL N	hēa	tile	hēa	tile/-a	hēa/hēah	tilu
A	hēa	tile	hēa	tile/-a	hēa/hēah	tilu
G	hēara	tilra	hēara	tilra	hēara	tilra
D	hēam	tilum	hēam	tilum	hēam	tilum

Note: Root-final *h* is lost in <u>all</u> **weak** adjective forms.

“Normal” vs. contracted strong verbs

Early West Saxon	weorpan ‘throw’	sēon
IND 1SG	weorpe	sēo
2SG	wierpst	siehst
3SG	wierpþ	siehð
PL	weorpaþ	sēoð
SBJV SG	weorpe	sēo
SBJV PL	weorpen	sēon
IMP SG	weorp	seoh
1/3SG PST IND	wearp	seah

Regularity in disguise, summary (1)

Grammars and handbooks give separate paradigms for nouns, adjectives, and verbs with the *h*–∅ alternation, implying that these patterns are irregular.

On the surface, they certainly look highly irregular.

The regularity of the /x/–∅ alternation is not apparent from examining the affected paradigms in isolation.

Regularity in disguise, summary (2)

But…

… all of the forms in these paradigms are 100% predictable given:
1. a known base form that retains the root-final /x/;
2. the relevant pattern of inflectional endings;
3. the rule that /x/ is deleted between sonorants (whereby the following sonorant may not be present in the resulting surface form because deletion of /x/ entails contraction of vowels in hiatus).

The base form in the OE verbal paradigm

- Albright's **SINGLE SURFACE BASE hypothesis**: For each lexical category in a language, learners figure out which form in the paradigm is – overall – the optimal **base** from which other forms can best be predicted by morphological and phonological rules.
  - The base must be the same for all items in a lexical category, e.g. all verbs.

- For Old English verbs, the **imperative singular** is unambiguously the optimal base. This happens to be the **one form that invariably retains root-final /x/** by regular sound change. (Two verbs, *hōn* 'hang' and *fōn* 'take', do not have *h* in the past indicative singular.)

(Potential) objections to this analogical account (1)

The analogical restoration of /x/ in the 2/3sg introduces an alternation into the present indicative, which previously uniformly lacked root-final /x/. This would seem to be at odds with Paradigm Uniformity principles.

Responses:

1. This is a purely phonologically conditioned alternation; there is no evidence – from nouns, adjectives, or verbs – that it is ever sensitive to morphosyntactic categories in any way.

2. Stem alternations that set the 2/3sg off from the rest of the present indicative are ubiquitous (system-congruous) in OE, especially post-syncope.

(Potential) objections to this analogical account (2)

"Regularity in disguise" makes for an odd kind of phonologically conditioned alternation – loss of /x/ +contraction usually swallows half of its own conditioning environment, so that it's not obvious from looking at the affected forms – or even the entire paradigms that contain affected forms – why the rule has applied to them.

Response:

Yeah, maybe it's a little odd, but the evidence clearly indicates that it is productive, and purely phonologically conditioned. (Feedback especially welcome here!)

(Potential) objections to this analogical account (3)

The imperative singular is not a plausible base because it has relatively low token frequency and is morphosyntactically peripheral.

Responses:

1. In Albright's theory, morphosyntactic basicness is irrelevant, and the base form need not have particularly high token frequency (as long as it occurs often enough for learners to reliably learn it).

2. Claims of low-token frequency for the imperative are rarely backed up by any empirical evidence, and the potential special relevance of child-directed speech is rarely considered.

(Potential) objections to this analogical account (4)

When two sound changes occur chronologically in counterbleeding order, the later change generally renders any alternation that had resulted from the earlier change phonologically opaque (e.g. umlaut and subsequent loss of the conditioning high front segments).

Why didn't syncope make the /x/–∅ alternation phonologically opaque?

Responses:

1. This is an old and much broader question, cf. King 1971:4: "Why do allophones sometimes remain and sometimes revert?"

2. The relationship between /x/-loss+contraction and syncope is not counterbleeding but rather **mutual bleeding**: Forms affected by /x/-loss are phonetically immune to syncope.

Conclusions

- Analogical restoration is a highly plausible way of accounting for the <h> (/x/) in 2/3sg present indicative strong verb forms like *siehst* and *siehþ.*
- The presence of this root-final consonant in these forms should thus not be treated as evidence for the relative chronology of syncope and /x/-loss.

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