

Old English high vowel deletion in stocking feet

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Hypothesis: Metrical feet wear socks

- **Simplified bracketed grids** (Idsardi 1992; Halle and Idsardi 1995):
 - Prosodic boundaries are entities.
 - They can be present underlyingly, or inserted or projected by rules.
 - They need not be paired: not every (need have a), nor vice versa.
- **Separator theory** (Hall 2001; Reiss 2003; Hall 2005):
 - Metaphorically speaking, metrical feet wear socks, not shoes.
 - Instead of a left (and a right), we have only a separator |.
- The version of separator theory pursued here is that of Hall (2001, 2005):

line 2 = word stresses and word boundaries: |x
line 1 = stressed moras and foot boundaries: |x |x |
line 0 = moras and syllable boundaries: |xx|x|x|x|xx|

The Old English facts

Foot structure

- The **Germanic Foot** proposed for OE by Drescher and Lahiri (1991) comprises:
 - an obligatory strong minimally bimoraic left branch (H, LH, or LL)
 - an optional weak monomoraic right branch (L)

$$\left\{ \begin{array}{l} (L)H \\ LL \end{array} \right\} (L)$$

- Some words of one foot (Drescher and Lahiri 2005: 80):

x	x	x
x	x	x
xx x	x x x	x xx x
wór.da	wé.ru.da	cý.nin.ga
‘words’ (GEN. PL.)	‘troops’ (GEN. PL.)	‘kings’ (GEN. PL.)

Stress

- The main stress is on the initial syllable of each word (with the exception of certain extrametrical prefixes).
- Secondary stresses occur at the beginnings of non-initial feet.
- The final syllable of a word is never stressed.
- Alternations showing secondary stress on non-final foot heads (Drescher and Lahiri 2005: 80):

x	x	x	x
x	x x	x	x x
xx xx	xx xx x	x x xx	x x xx xx
ó.ðer	ó.ðer.ne	æ.ðe.ling	æ.ðe.lín.ges
‘other’	‘other’ (M. ACC. SG.)	‘prince’	‘prince’ (GEN. SG.)

High vowel deletion

- A high vowel is deleted when it occurs in a supernumerary light syllable at the end of a foot.
- Examples in which deletion occurs (Drescher and Lahiri 2005: 80):

x	x	x
x	x	x
xx x x	xx x	x x x
hēa.fu.de	wór.du	wé.ru.du
↓	↓	↓
hēafde	wórd	wérud
‘head’ (DAT. SG.)	‘words’ (NOM./ACC. PL.)	‘troops’ (NOM./ACC. PL.)

- Examples with no deletion (Drescher and Lahiri 2005: 80):

x	x	x
x	x	x
xx xx	x x	xx x x
wór.dum	ló.fu	ní.te.nu
‘words’ (DAT. PL.)	‘praises’ (NOM./ACC. PL.)	‘animals’ (NOM./ACC. PL.)

- Among other things, the structure Drescher and Lahiri assign to the Germanic Foot neatly explains the otherwise mysterious relation between the weight of the first syllable and the possibility of deletion in the last in pairs such as wór.du and ló.fu or wé.ru.du and ní.te.nu.

The challenge

- Although it is relatively straightforward to parse Germanic Feet using only a single type of boundary symbol, the representations thus assigned give no good local way of identifying which foot-final high vowels to delete.
- For example, the **u** in the second syllable of hēa.fu.de is supernumerary; it is foot-final because there is no room for another syllable to follow it in the same foot. But the **u** in the second syllable of wé.ru.dum is not supernumerary; it is foot-final only because dum must begin a new foot:

x	x
x	x
xx x x	x x xx
hēa.fu.de	wé.ru.dum
↓	↓
hēafde	wérudum
‘head’ (DAT. SG.)	‘troops’ (DAT. PL.)

- With two types of boundaries, we could insert a right boundary when the current foot must end, and a left boundary when a new foot must begin:

(hēa.fu)de vs. (wé.ru(dum

(Cf. Idsardi 1994 for a somewhat different account in the same framework.)

- In separator theory, the only way to identify a delible high vowel *post hoc* is to count the moras preceding it in the foot.

The solution

- The problem vanishes if **high vowel deletion occurs during footing** rather than afterwards. (Cf. Itô (1989) on epenthesis during syllabification.)

The algorithm

- The procedure below assigns appropriate foot structures, doing high vowel deletion *en passant* (in step 1(d)ii), and assigns foot- and word-level stresses:
 1. **Parse Germanic Feet** (stop when you try to go beyond the right edge of the word):
 - (a) Start at the left edge of the word, and project the first boundary.
 - (b) Skip over the next two grid marks to the right.
 - (c)
 - i. If now at a boundary, stay there;
 - ii. otherwise, proceed to the next boundary to the right.
 - (d)
 - i. If at the beginning of a heavy syllable (i.e. if / __ xx), project the current boundary;
 - ii. **otherwise, if the vowel to the right is high, delete it and its grid mark, and conflate and project the two boundaries that are thereby made adjacent;**
 - iii. otherwise, go to the next boundary to the right, and project it.
 - (e) Go to step 1(b).
 2. **Feet are left-headed:** Project each line-0 grid mark that immediately follows a line-1 boundary (unless it is in the last syllable of the word).
 3. **Words are left-headed:** Project the leftmost line-1 boundary, and the line-1 grid mark to its immediate right.

Examples

- High vowel deletion in hēa.fu.de:

STEP:	1(a)	1(b), 1(c)i	1(d)ii	1(d)ii	2	3
line 2:						x
line 1:					x	x
line 0:	xx x x	xx x x	xx x x	xx x	xx x	xx x
CURSOR:	△	△	△	△	△	△

- No high vowel deletion in wé.ru.dum:

1(a)	1(b), 1(c)i	1(d)i	1(b)	2	3
				x	x
x x xx	x x xx	x x xx	x x xx	x x xx	x x xx
△	△	△	△	△	△

- Parsing an LHL foot in cý.nin.ga:

1(a)	1(b)	1(c)ii	1(d)iii	2	3
				x	x
x xx x	x xx x	x xx x	x xx x	x xx x	x xx x
△	△	△	△	△	△

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