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Against Old English 'short' diphthongs

Abstract: Since the earliest grammars, Old English has been analysed as having a length contrast in diphthongs, containing both regular, bimoraic ones, side by side with cross-linguistically unique monomoraic ones. The supposedly monomoraic diphthongs [io eo æɑ] arose through back umlaut and breaking. Unsurprisingly, they have become the source of possibly the greatest controversy in OE phonology, which still remains unresolved. The present paper refutes the main arguments for a length contrast in OE diphthongs. Instead, it argues for a generative phonological analysis, where the diphthongs constitute monomoraic monophthongs in the underlying representation, and bimoraic diphthongs in the surface representation.

Keywords: Old English, short diphthongs, syllable weight, back umlaut, breaking.

Since the earliest grammars, Old English has been analysed as having a length contrast in diphthongs, containing both regular, bimoraic ones, side by side with cross-linguistically unique monomoraic ones. The supposedly monomoraic diphthongs [io eo æɑ] arose through processes known as back umlaut and breaking, cf. the data in (1) and (2). Unsurprisingly, they have become the source of possibly the greatest controversy in Old English phonology (systematically summarised in Lass & Anderson 1975: 75-79), which still remains unresolved. It ought to be noted, however, that the problem of 'short diphthongs' in Old English is so complex that it cannot be solved comprehensively in a journal article. Instead, the present paper attempts at suggesting a solution within generative phonology. Namely, the diphthongs are suggested to constitute monomoraic monophthongs in the underlying representation, and bimoraic diphthongs in the surface representation.

(1) Old English back umlaut[1]

	before /u/	before /ɑ/
/i/	**sifun > *siofun > siofon* 'seven'; *writ* 'a writing' ~ *gewriotu* 'writings'	**niða- > *nioða- > nioðemest* 'lowest'; *lifian* 'to live' ~ *liofað* 'he lives'
/e/	**hefun > *heofun > heofon* 'heaven'; *ete* 'eat (pres. subj. sg.)' ~ *eotu* 'I eat'	*fela* ~ *feola* 'many (indecl.)'; *etan* ~ *eotan* 'to eat'
/æ/	*fæt* 'vessel' ~ *fatu* (nom. pl.); *hwæt* 'active' (nom. sg.) ~ *hwatum* (dat. sg./ pl.)	*hwæle* 'whale' (dat. sg.) ~ *hwalas* (nom. pl.); *fære* 'go' (imp. sg.) ~ *faran* (inf.)

(2) Old English breaking

(a) before /r/:	Pre-OE **hærd* > OE *heard* 'hard', Pre-OE **sterra* > OE *steorra* 'star', OE *birhtu* ~ *beorhtu* (< **biorhtu*) 'brightness';
(b) before /l/:	Pre-OE **æll* > OE *eall* 'all', OE *self* ~ *seolf* 'self', Pre-OE *silfr > OE *siolfor* 'silver';
(c) before /w/:	Pre-OE **þǣw* > OE *þēaw* 'custom', Pre-OE **mēwle* > OE *mēowle* 'maiden', OE *hiw* ~ *hiow* 'shape';
(d) before /x/:	Pre-OE **sæh* > OE *seah* 'he saw', Pre-OE **næh* > OE *nēah* 'near', Pre-OE **fehtan* > OE *feohtan* 'fight', OE *wiht* ~ *wioht* 'creature' (Kentish), OE *līht* ~ *līoht* 'light, n.' (Kentish).

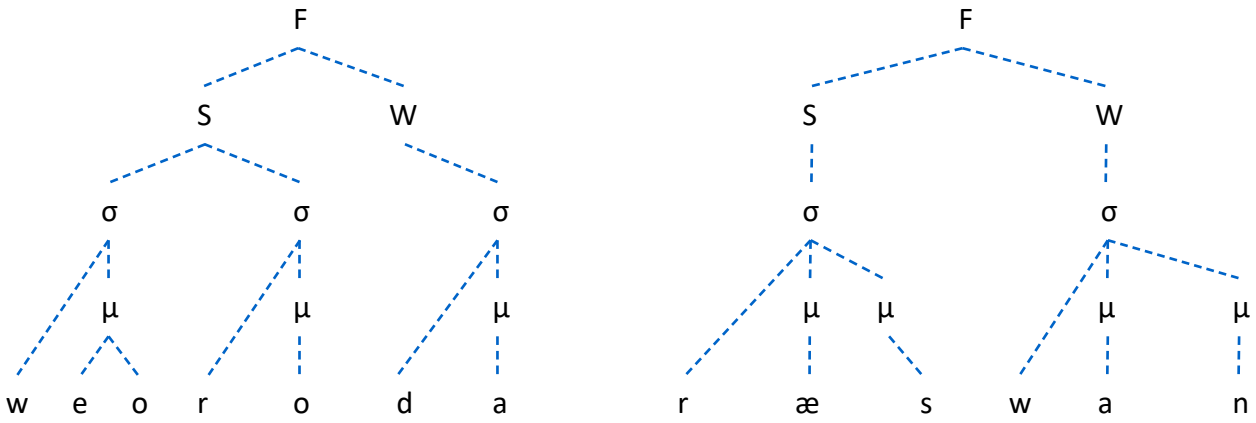
The source of the controversy lies in that those diphthongs seemingly function in the language like short vowels. For instance, the assumption of 'short' diphthongs allows for a fully regular scansion of lines such as *Beowulf* l. 60b: *weoroda rǣswan* 'the counsellors of troops'.[2] The half-line scans as a perfect Sieversian (1893) A-type verse, with the first lift resolved over the initial two syllables (ĹX̑ X | H́ X) if and only if the initial syllable of *weoroda* remains monomoraic.[3] The relevant foot structure in the 'Germanic foot' system of Dresher & Lahiri (1991) is shown in (2) below.

1 Standard descriptions of back umlaut and breaking include Luick (1921: §§ 133-153, 220, 224-234), Campbell (1959: §§ 139-163, 205-221), Lass & Anderson (1975: 74-112), and Hogg (1992: §§ 5.16-5.27, 5.103-5.107).

2 Quotations from *Beowulf* follow Dobbie's (1953) edition. Macrons have been added above long monophthongs and indisputably bimoraic diphthongs.

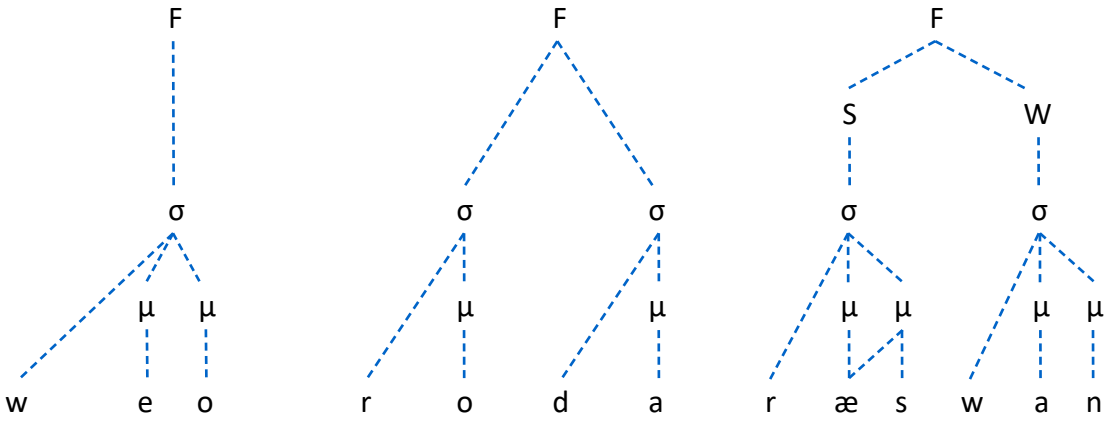
3 The notation uses the following symbols: H – heavy syllable, L – light syllable, X – syllable of unspecified weight, ´ – accented syllable, | – foot boundary.

(2) Prosodic structure of *Beowulf* l. 60b *weoroda rǣswan* 'the counsellors of troops', according to the 'Germanic foot' theory of Dresher & Lahiri (1991)



The majority of Old English poetical half-lines belong to this type, which may be described as two consecutive trochees. Any aberration from the basic pattern would be linguistically marked, and especially so in the b-verse, which always adheres to the metrical types far more strictly than the a-verse. However, the basic pattern of two consecutive trochees would founder in the quoted line if the diphthong received two moras, as in (3).

(3) Prosodic structure of *Beowulf* l. 60b *weoroda rǣswan* 'the counsellors of troops', without 'short' diphthongs



The prosodic structure of (3) is (H́ | L̀ X̲ | H́ X), which cannot be easily accommodated within any of the types defined by Sievers.[4] Therefore, such half-lines have constituted primary evidence for positing short diphthongs as the surface representation of the results of back umlaut and breaking

4 The grave accent over L̀ signifies secondary stress, as opposed to primary stress marked with the acute accent.

on short vowels. However, not all instances of the relevant digraphs in poetry yield more regular scansion if interpreted as monomoraic nuclei. Sievers (1893: § 77) already pointed out that at times these must be analysed as phonetically long, though without examples of poetic half-lines where that is the case. Nonetheless, examples can be easily found; for instance *Beowulf* l. 489 *Site nū tō symle / ond onsæl meoto* 'Now sit down to the feast and unseal the food (i.e. start eating)'. If *meoto* 'food' is analysed to have a monomoraic diphthong, the verse scans as (X X H́ | Ĺ X). In Sieversian classification, such verses belong to the C-type, whose canonical form is (X H́ | H́ X). In this case, the verse has the first dip expanded by a single syllable, which is allowed in the off-verse, and suspends resolution in the second lift. Such a half-line structure occurs frequently enough to have gained recognition as one of the possible subtypes (see for instance Fulk 2001). However, if the initial syllable of *meoto* is bimoraic, then the verse would scan as (X X H́ | H́ X), without the need for suspended resolution in the second foot. What is more, Sievers (1893: § 77) also notes that some diphthongs resulting from back umlaut or breaking of short vowels were long in all contexts, e.g. PrGmc **faw-* > OE *fēawa* 'few'. Hence, metrical data cannot be taken as unambiguously supportive of the theory of 'short' diphthongs.

The other argument commonly adduced in favour of 'short' diphthongs in Old English is that their later English reflexes apparently pattern together with etymological short vowels rather than long ones, as shown in (4).

(4) Later reflexes of Old English 'long' and 'short' diphthongs

	long in OE	short in OE
/i iː io/	OE *wīf* 'woman' > PDE *wife* /ˈwaɪf/; OE *fīond* 'enemy' > PDE *fiend* /ˈfiːnd/	OE *brim* 'surface of the sea' > PDE *brim* /ˈbrɪm/; OE *siolfur* 'silver > PDE *silver* /ˈsɪlvə/
/e eː eo/	OE *dēman* 'to judge' > PDE *deem* /ˈdiːm/; OE *dēop* 'deep' > PDE *deep* /ˈdiːp/	OE *men* 'men' > PDE *men* /ˈmen/; OE *heofon* 'heaven' > PDE *heaven* /ˈhevn/
/æ æː æɑ/	OE *rædan* 'to counsel; to read' > PDE *read* /ˈriːd/; OE *drēam* 'joy' > PDE *dream* /ˈdriːm/	OE *sæt* 'sat' > PDE *sat* /ˈsæt/; OE *weallan* 'to well' > PDE *well* /ˈwel/

The examples in (4) have been chosen so that no phonological processes would change vowel length after the Old English period. The data above show that etymologically bimoraic vowels and diphthongs, both those inherited from Proto-Germanic and those newly created through breaking, emerge in Present Day English with either the long vowel /iː/ or its Great Vowel Shift cognate /aɪ/, both uncontroversially bimoraic. The two vowel phonemes /iː aɪ/ constitute the only two possible PDE reflexes of OE etymologically bimoraic front vowels and diphthongs beginning with a

front vowel whenever no process changed the vowel length.[5] On the other hand, etymologically monomoraic diphthongs seem to survive in PDE with short vowels, cf. the stressed syllables in *silver*, *heaven*, *well* – just as do the PDE reflexes of etymologically monomoraic vowels, for instance, *brim*, *men*, *sat*.

However, the latter generalisation takes into consideration only part of the data. While OE *heofon* > PDE *heaven* has kept the initial syllable monomoraic, the very similar OE *beofor* 'beaver' > PDE *beaver* /ˈbiːvə/ has lengthened its stressed syllable. No generalisation can account for both PDE reflexes of OE words, because of their mutually contradictory development. Previous research (for instance, Luick 1921: §§ 391-394; Dresher & Lahiri 1991: 281-282) suggests that words such as *beofor* underwent Open Syllable Lengthening, a Late Old English / Early Middle English process of mora insertion into the stressed syllable: ˈ(C)V$^{\mu}$CV$^{\mu(\mu)}$- > ˈ(C)V$^{\mu\mu}$CV$^{\mu(\mu)}$-. On the other hand, words such as *heofon* simply failed to undergo the lengthening.

This account may be largely correct, but it glosses over major dialectal discontinuities between Early Old English and Present Day English. In fact, Early Old English is mainly attested in Anglian (i.e. Northumbrian and Mercian) dialects, Late Old English in West Saxon. No standard can be discerned for Early Middle English, while in Late Middle English there emerged the London standard, based mainly on the Midland variety, a direct descendant of OE Anglian, yet with some Kentish features. Crucially, the three OE dialect families – Anglian, West Saxon, and Kentish – differ in their treatment of the diphthongs under consideration. Therefore, the argument from the later standard English reflexes of the OE 'short' diphthongs cannot be valid, because the standard dialects do not descend from each other in an unbroken line.

The Present Day English reflexes of the 'short' diphthong examples in (4), especially *siolfur* and *heofon*, point to the attrition of the diphthongisation rules, since the modern forms, *silver* and *heaven*, preserve the OE front vowel intact, as if no diphthongisation took place. This has prompted Daunt (1939) to interpret the phenomenon in question not as phonological diphthongisation, but as purely graphical addition of a diacritic in the form of a back vowel letter, whose function was to mark the 'back' quality of the following consonant. The logic behind such reasoning is that if breaking and back umlaut left no diachronic trace, then maybe they did not constitute sound changes. Because of the dialectal discontinuities described above, it is difficult to adduce credible data from direct descendants of the dialects with more abundant diphthongisation, i.e. West Saxon and Kentish. Fortunately, the needed evidence can be found in place names preserved in medieval documents from the Southwestern dialectal area of Middle English (the direct descendant of OE West Saxon).

5 For description of the relevant shifts in long vowel quality, see the classic grammatical account in Luick (1940: §§ 479-501), as well as the famous discussion in Stockwell & Minkova (1988a; 1988b) and Lass (1988).

(5) Place name evidence for Southwestern ME reflexes of the 'short' diphthong spelled <ea>, after Kuhn & Quirk (1953: 150)

WS -*bearu* 'grove' > Estharabyar, Trendelbiare, Wydebyer;

WS *healh* 'place' > la Hyele, la Hyales;[6]

WS *fearn*- 'fern' > Fiernham;

WS *fealw*- 'fallow' > Vialepitte;

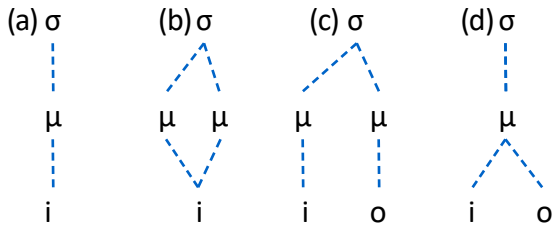
WS *dealla*- 'proud, eminent' > Dyalediche;

WS *pearroc*- 'enclosure' > Piarrecumbe.

All ME spellings in (5) represent the reflex of the 'short' diphthong <ea> [æɑ] with digraphs consisting of either <i> or <y>, followed by <e> or <a>. The obvious interpretation of these digraphs is that they stand for diphthongs whose first element can only be /i/, while their second element might be any of the ME non-high unrounded vowels /e ɛ a ə/. The spelling of the ME reflexes of the OE short monophthongs do not point towards any regular diphthongal development. Hence, the OE digraphs must have also represented diphthongs rather than monophthongs followed by a diacritic. They must have been bimoraic, since, to the best of my knowledge, no 'short' diphthongs have yet been posited for ME, or any other stage of the historical development of the English language.

Some scholars (for instance, Lass 1983: 53-58, followed by Hogg 1992: § 2.29) have attempted to save the theory of 'short' diphthongs by agreeing to the diphthongal quality of these vowels, but denying them the second mora, as in (6).

(6) The hypothetical fourfold contrast of vowel types in OE



6 The gloss for *healh* gives only approximate meaning for this ambiguous noun, discussed by the dictionary entries in Bosworth & Toller (1898) and Toller (1921).

Figure (6) shows the monomoraic monophthong (6a) /i/, the bimoraic monophthong (6b) /i:/, the bimoraic diphthong (6c) /io/, and the hypothetical monomoraic diphthong (6d) /io/. The latter structure has been traditionally interpreted as a sequence of a monomoraic vowel followed by a 'glide' of uncertain quality (Campbell 1959: § 139; Minkova 2014: 179-180). Yet such an understanding of the theory of 'short' diphthongs cannot be accommodated into the basic phonological assumptions about Germanic syllables. This is because Germanic languages are highly weight-sensitive, universally preferring the stressed syllable to be heavy. For stress-related issues, as well as other phonological processes, both CVV and CVC syllables must be interpreted as heavy. A CVV syllable is heavy due to its underlying two moras attached to the vowel, while a CVC syllable has one underlying mora attached to the vowel, plus a derived, second mora attached to the coda consonant through Weight-by-Position (Hayes 1989). Consequently, if a diphthong or vowel-glide sequence is not supposed to obtain a second mora, it requires the suspension of Weight-by-Position. Such a suspension has been posited for word-final consonants, so that final, unstressed syllables remain monomoraic; see, for instance, Kiparsky (1998: 6). However, both breaking and back umlaut operate (primarily) on stressed syllables, also in polysyllabic words, the canonical context for Weight-by-Position. Suspending it there would derive incorrect outputs for the whole system of OE phonology.[7]

Thus, the OE 'short' diphthongs need a representation that would encode both their diphthongal, and hence necessarily bimoraic structure, and their diachronic and synchronic propensity to pattern together with monomoraic vowels. Generative phonology offers a solution for such cases: these vowels ought to be represented as monomoraic monophthongs in the underlying representation and bimoraic diphthongs on the surface.

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7 For other systematic counterarguments against 'short' diphthongs, see White (2004).

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