Remarks on syllable quantity in late Old English and early Middle English

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Abstract The various types of lengthening and shortening of vowels in late Old English/early Middle English can be seen as an embryonic development in the English of that period towards the predictability of syllable quantity. The processes of gemination and stop epenthesis are interpreted in accordance with this view. Essential to predictable quantity is consonant gemination; it is shown here that its demise in Middle English is due to its failure to functionalize due to two further quantity changes, which rendered consonant quantity difference superfluous, open syllable lengthening and lengthening before sonorants and stop clusters.

The series of changes in vowel quantity which occurred in late Old English and early Middle English have been given particular attention in recent years. Despite the various treatments, however, certain aspects of quantity changes remain unsolved. For these one can offer various accounts but show little conclusively. Nonetheless each proposal has a purpose inasmuch as it contributes to the set of likely explanations of retractable phenomena and may help other scholars to arrive at an opinion of their own.

The quantity changes involved here concern both shortening and lengthening. The shortening of vowels before trisegmental clusters in Old English and before bisegmental ones in early Middle English is not something which poses a problem for the phonologist. Vowels tend to be short before syllable codas which are segmentally complex. The logical development of this is the complementary distribution of long and short vowels and long and short consonants as in most dialects of the Scandinavian languages.

1. Quantity in Old English

There is evidence in Old English from a variety of phenomena that a similar process was embryonic in that vowel length in late old English was tending towards predictability in quantity. This tendency can be confirmed by considering the following changes.

(1) Late Old English gemination

<table>
<thead>
<tr>
<th></th>
<th>Late Old English</th>
<th>Early Middle English</th>
</tr>
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<tbody>
<tr>
<td>a</td>
<td>næder</td>
<td>nædder</td>
</tr>
<tr>
<td>b</td>
<td>hlæder</td>
<td>hlædder</td>
</tr>
<tr>
<td>c</td>
<td>fōder</td>
<td>fodder</td>
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Here the shortening of the stem vowel triggered gemination of the initial consonant of the following syllable; seen in terms of syllable structure the change was:

\[(2) \quad C)VVSCaVC \rightarrow C)VaSCaVC\]

I assume that in these forms the syllable boundary ran through the geminate stop, an assumption which is made by other phonologists\(^4\) when the preceding syllable does not have any other segment in its coda. The change as formulated in (2) shows that the rhyme of the first (stressed) syllable has the same bimoric length in each case. The preservation of quantity can be given as the motivation for the gemination after the vowel shortening.

Normally the gemination of stops in late Old English is regarded as confined to the types in (1).\(^5\) But in fact it is more complex than that. There are instances of gemination which follow not vowel shortening but syncope. Consider the forms in (3).

\[(3) \quad \begin{array}{llll}
a & gaderian & \rightarrow & gadrian & \rightarrow & gaddrian & \text{‘to gather’} \\
b & bettera & \rightarrow & betra & \rightarrow & bettra & \text{‘better’} \\
c & nicor & \rightarrow & nicras & \rightarrow & niccras & \text{‘sea-monster’} \\
d & micel & \rightarrow & micle & \rightarrow & miccle & \text{‘much-oblique case’}\end{array}\]

What is noticeable here is that gemination follows on the formation of a certain type of internal cluster. This can be formulated as follows:

\[(4) \quad -PS- \rightarrow -PPS- \quad (P = \text{plosive}; S = \text{sonorant})\]

If one interprets this in terms of syllabification its motivation becomes clear.

\[(5) \quad -S$PS- \rightarrow -P$SPS\]

The plosive plus sonorant cluster of the formula in (4) and (5) arose from the loss of the intervening vowel on syncope. In the presyncope forms the plosive belonged to the first syllable.

\[(6) \quad -P$S$V$S- \quad (\text{syncope: } V \rightarrow \theta)\]

The assumption that the stop belonged to the first syllable is supported by the fact that this was the stressed syllable, a syllable type which shows a strong tendency to draw consonants into its coda.\(^7\) On syncope however a stop plus sonorant cluster arose. This type of cluster shows a strong bond, not only in English. It is a preferred syllable onset as it has a consonantally strong initial segment (a stop) and a resonant medial one (a sonorant). Its preferred status as an onset in English is confirmed by the large number of initial PS sequences in English. Syncope thus caused resyllabification (-PSS- $\rightarrow$ -SPS-) which, while conforming to preferred onset structure, was overall an unstable syllable structure. The resolution of the tension was to geminate the stop thus strengthening the coda of the stressed syllable without breaking up the preferred onset of the second syllable.
2. Stop epenthesis and vowel shortening in Middle English

Supportive evidence for this interpretation of gemination in (1) and (3) is also found from another phonological process in Old English. Consider the shifts in (7).

(7) a  bræməl → bræməl → bræmbel ‘bramble’
     b  ME slūmər → slumere → slumber ‘slumber’
     c  þīməl → þimel → þimbel ‘thimble’

In each of these forms the (stressed) stem vowel is shortened and afterwards an epenthetic homorganic stop develops. In terms of syllable structure this change is:

(8)  C)VVSS₁VS₂ → C)VS₁$VS₂ → C)VS₁$PVS₂

On shortening of the stem vowel the following nasal is drawn into the coda of the stressed syllable maintaining bimoric quantity. This leaves the following syllable without an onset. As the preferred structure of an onset shows an initial stop an epenthetic plosive arises to form the onset for the second syllable (see the third step in (8)). In accordance with the nature of stop epenthesis it involves the minimal phonetic means for providing an initial stop; this is a voiced homorganic plosive.

With both gemination and the vowel shortening which preceded stop epenthesis the net result was that the stressed syllable obtained a consonantal coda along with its short nucleus vowel. With gemination a segment was doubled thus strengthening the coda of the stressed syllable with a consonant (treating geminates as phonologically a sequence of two consonants) V$PS → V$Pα$PαS. Stop epenthesis was preceded by a former syllable initial nasal being drawn into the coda of the preceding syllable after the nucleus vowel of the latter was shortened before two consonants in polysyllable words in Old English anyway so that the VC$- which is found after gemination and stop epenthesis can be seen to conform to a pattern already established in Old English. But these changes while implying preferred quantity structures for Old English do not by any means make quantity predictable. The decisive situation was that obtaining for monosyllables. With these, vowel length was free: the structures VVC and VC occur abundantly in Old English. There is however a tendency in Old English to maintain and to increase syllable quantity. Maintenance of quantity can be seen for example with the process of vowel lengthening on loss of consonants. This stretches back to Anglo-Frisian times with the loss of a nasal before a voiceless fricative. In recorded Old English a palatal /g/ (= [j]) when pre-nasal and in the coda of a syllable was also lost. In both cases the preceding vowel was lengthened; but in each case the result without lengthening would have been a syllable rhyme of VC.

(9) a  gōs       ‘goose’   (cf. German Gans)
     b  regn  [re:jn] → [re:n] ‘rain’  (cf. German Regen)
3. Further quantitative changes

The second example of increase of quantity was instrumental in disrupting the embryonic predictability of quantity. The lengthening of vowels before clusters of a sonorant and homorganic stop lead to the development of heavy syllables (VVCC) as a regular feature of English. Furthermore a prerequisite for a language having a mutually exclusive distribution of vowel length (VVC or VCC) was to disappear in Middle English, namely phonological geminates. A characteristic of the transition of Old English to Middle English is the demise of consonantal

The standard textbooks on Middle English tend to be vague on this question. Mossé does not mention the matter; Jordan suggests that consonantal length was lost about 1400; Jespersen that this probably occurred in the 15th. century; Kurath accepts that the length distinction (intervocally after a stressed vowel) may have existed up to 1400. The upshot of this is that for all the quantity changes among vowels of the early Middle English period consonantal gemination still existed.

This fact poses a number of questions for quantity relations in the transitional period under consideration. If late Old English showed an active development towards the predictability of quantity in syllable rhymes (cf. the addition of stops to stressed syllable codas when the nucleus consisted of a short vowel) then why did consonant length not become associated exclusively with short vowels, resulting in the predictability of vowel length as in Scandinavian languages (except Danish)?

The answer to this would seem to lie with two other changes in late Old English/early Middle English which upset the balance of vowel and consonantal length which seemed to be developing.

3.1 Open syllable lengthening

The first is open syllable lengthening. Here the option of geminating short consonants after short vowels was not chosen but the vowel was lengthened instead.

(10)  
(a) OE wūdu → ME wōde ‘wood’  
(b) OE nāme → ME nāme ‘name’  
(c) OE nōsu → ME nōse ‘nose’

The height changes involved in open syllable lengthening are not a concern here as they are irrelevant to the issue of length of vowel vs. consonant. If one accepts that the original Old English forms in (10) were unbalanced in that they contained an overshort syllable rhyme /-V$/ then one can explain lengthening. Furthermore of the two possibilities for resolving the syllable structure of the Old English forms the one opted for, vowel lengthening, is more natural as long vowels are infinitely more common, not just in Old/Middle English, than long consonants. Note that, with the occurrence of vowel lengthening, consonantal length diminished in its function in Middle English phonology. If the functionalization of a distinction (consonantal length) is reduced then this in its turn accelerates the decline of the distinction itself.
3.2. Vowel lengthening before consonant clusters

The second blow to consonantal length was given by vowel lengthening again, this time in an environment where, according to preferred quantity distribution, a short vowel should persist. In late Old English vowels lengthen before certain clusters of two segments (a sonorant and a homorganic stop or sonorant.\textsuperscript{17}

\begin{enumerate}
  \item \textit{mind} → \textit{mīnd} ‘mind’
  \item \textit{clīmban} → \textit{clīmb} ‘climb’
  \item \textit{clīd} → \textit{chīld} ‘child’
\end{enumerate}

Although the consonants here are not the same (VC\textsubscript{1}C\textsubscript{2} → VVC\textsubscript{1}C\textsubscript{2}) the rise of a syllable type with a long vowel followed by two consonants diminished the likelihood of geminates acquiring a complementary distribution with simple consonants after short and long vowels respectively.

Notes


5 D. Malsch, \textit{op.cit}. 87.

6 K. Kuick \textit{Historische Grammatik der englischen Sprache}. (Stuttgart: Tauchnitz, 1940), 882f.

7 D. Fallows, \textit{op.cit}. 310 f.


R. Lass *op.cit.* 326ff.


See N. Eliason “Old English vowel lengthening and vowel shortening before consonant groups”, *Studies in Philology* (1948), 1-20 and B. Philips *op.cit.*