A note on Middle High German lengthening and related developments in diachronic perspective

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Abstract

The aim of this paper is to present a detailed analysis of the relevant material concerning lengthening of the Middle High German short accented vowels with a view to establishing the actual conditions under which this change operated. Special attention is given to the relevant, controversial developments in an open syllable, where lengthening is shown to have been regular not only before voiced consonants but also before the only available voiceless consonant, namely /t/. Apparent exceptions with a short vowel are shown to reflect phonological variants inherited from earlier stages of the language. The whole phenomenon of lengthening is discussed in a diachronic perspective which involves other changes, such as diphthongization, monophthongization, and shortening. Moreover, the conditioned mergers of the relevant short vowels with their long counterparts are presented in the wider context of the subsequent development of the Middle High German vowels, with special regard to the changes that affected /e/, /ɛ/, /æ/ and /e:/, /æ:/.

1   Introduction

Ever since Hermann Paul's formulation in 1884 the so-called "(early) New High German lengthening" (actually a Middle High German phenomenon) has been investigated with different aims. The main aspects of this development, namely causes and conditions, were dealt with by the Neogrammarians and their followers, but subsequent scholars found that not everything had been explained and that the not infrequent "exceptions" needed further investigation.[1] In 1969 and 1978 Charles V. J. Russ attempted to redefine the conditions under which the lengthening in question occurred and concluded that short vowels were not lengthened before MHG /t/, /m/, /n/, /l/ and that all exceptions to this rule "should be explained as due to other factors such as analogy, or spelling pronunciation" (1978: 76). A few years later Robert D. King (1988) discussed the question in generative grammar terms and essentially argued that the irregular treatment of vowels in an open syllable (especially before /t/) could be explained by assuming that Standard German accepted two different types of speech, one of which did not exhibit lengthening before the only available voiceless consonant, namely /t/. While admitting that King may well have been right in suggesting that irregularities before /t/ reflect competing

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[1] For a detail account of the relevant work of the neogrammarians and of other scholars up to 1988 see Kyes (1989).

styles of speech, Robert L. Kyes found that a "thorough search through the orthographic evidence, ambiguous though that evidence may be, might identify concrete data" to be placed in the service of further investigations on the causes and conditions of vowel lengthening in German (1989: 171). A decade later Lahiri and Dresher chose to concentrate on the causes of open syllable lengthening in West Germanic and arrived at the conclusion that the cause of open syllable lengthening "was an endeavour to maintain and maximize the Germanic foot" in Middle English, Middle Dutch and Middle High German, "in spite of other contradictory changes" (1999: 715).

The causes of open syllable lengthening cannot be treated here, since the aim of this study is to concentrate on the conditions under which the phenomenon took place. Moreover, Middle High German stands apart from the other Germanic languages with regard to the consonants that could follow a short vowel in an open syllable. For after the well-known pre-literary High German Consonant Shift and the changes /d/ > /t/ and /θ/ > /d/ the open syllable pattern of the language could exhibit only one postvocalic voiceless consonant, namely /t/ (cf. King 1988: 27), as well as a number of voiced consonants.

As will be seen from what follows, the controversy focuses on words with /t/ and, to a lesser extent, on words with /m/, /n/, /l/, but the whole question of the so-called "exceptions" to open syllable lengthening needs to be reconsidered by taking account of the occurrence of phonological variants inherited from earlier stages of the language. It is of course true that irregularities before certain consonants may well reflect competing styles of speech, but in most, if not all, cases the explanation should be sought in the occurrence of phonological variants. This is especially true not only of a "troublesome exception" like *Gatte* (Kyes 1989: 163), but also of other instances to be dealt with below.

The material to be examined in the following discussion is taken from standard dictionaries and grammars, as well as from earlier works on the subject. Each class of words (words with /d/ in an open syllable, for example) is here represented by a few instances, but within each class all apparent exceptions are mentioned and discussed.

2   Types of Middle High German lengthening

The so-called "(early) New High German lengthening" is a change that belongs to Middle High German, although its products were accepted by Standard German, the "Schriftsprache", only in the New High German period. This change affected the short vowels /i/, /y/, /u/, /e/, /ɛ/, /æ/, /a/, /o/ and /ø/, which merged with the corresponding long vowels. Short vowel lengthening took place in the following contexts:

– in the open syllable of disyllables;
– through contraction after the loss of a following medial consonant;
– in the closed syllable of monosyllables before final /r/;
– in closed syllables before /r/ + consonant (especially /d/, /t/, /s/, /ts/).

3   Open syllable lengthening

The well-known Middle High German open syllable lengthening in disyllables was regularly carried through before voiced obstruents. Examples: MHG *hebe* > *hēbe* 'Hebe', MHG *schade*

> *schāde* 'Schaden', MHG *boge* > *bōge* 'Bogen', MHG *heve* > *hēve* 'Hefe', MHG *rise* > *rīse* > 'Riese'.[2]

However, open syllable lengthening before /t/ is controversial, since it is sometimes assumed that in this case lengthening did not occur. Failure of open syllable lengthening before /t/ (and /m/) is suggested throughout the grammar by Paul/Klein (2007: 82, fn. 4 et passim), while Russ (1978: 75–76) explicitly states that "the regular development is that MHG vowels remain short before MHG *t*, e. g., MHG *site*, NHG *Sitte*". "Wherever there is a lengthened vowel", he continues, "it is due either to analogy with other forms, or to the fact that the words became spelt with a single *t*". In an earlier study, Russ had tried to explain the long vowels in instances like *Vater*, *Bote*, *geboten*, *Zote*, *beten*, *kneten*, *treten*, *jäten*, *waten*, *Spaten*, *Knoten*, *Kater*, and *Kröte* as due either to the analogy of related forms or to spelling pronunciations (1969: 85–87).

In what follows the relevant material will be critically analysed in detail with a view to showing that failure of open syllable lengthening before /t/ cannot be regarded as a regular development, since in Middle High German open syllable lengthening in disyllables took place not only before voiced consonants but also before /t/, which – as anticipated above – was the only available postvocalic voiceless consonant in an open syllable.[3]

3.1   Failure of open syllable lengthening before *-er*, *-el* and *-en*

Numerous cases of short vowel retention in an open syllable irrespective of the following consonant can easily be explained as due to the fact that open syllable lengthening was frequently prevented in words ending in *-er*, *-el* and *-en*. In these words two developments were possible during the Middle High German period.

In the first development, the endings *-er*, *-el* and *-en* preserved their unaccented vowel, so that the accented short vowel was lengthened, as in MHG *wi|der* > *wī|der* 'wider, wieder'.

In a second, alternative development the endings *-er*, *-el* and *-en* lost the unaccented vowel, so that they became *-ŗ*, *-ļ* and *-ņ*, the accented short vowel was preserved and the intervening consonant was lengthened (that is: geminated), thus producing a secondary closed syllable, as in MHG *wi|der* > *wid|dŗ* 'Widder'. Later, when all long consonants in medial position were shortened (degemination), any single consonant after a short vowel became *ambisyllabic*, in that it now belonged both to the accented syllable and to the unaccented syllable.[4] This change obviously affected both the old geminates, as in MHG *dik|ke* > *diķe* 'dick', and the new geminates, as in MHG *wid|dŗ* > *wiḍŗ* 'Widder'. The dating of degemination is somewhat uncertain (Paul/Klein 2007: 130–131), but in the line of development that led to Present-Day Standard German the relative chronology of the gemination in question and of the generalized degemination is clear.

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[2] Obviously lengthening took place also in words which exhibited an open syllable in earlier stages of the language, as in, for example, MHG *obeʒ* (OHG *obaz*) > *ōbeʒ* 'Obst'.

[3] But note the late Middle High German *makel* 'Makel' from Latin *macula*.

[4] For an early use of the term *ambisyllabic* see Giegerich (1992: 171–172) and cf. Eisenberg (1998: 129). For the use of a subscript dot to indicate an *aṃbisyllabiċ* consonant see Dudenredaktion (2009: 47).

Examples of short vowel retention in words ending in *-er*, *-el* and *-en* include not only short vowels before /t/, but also short vowels before /m/ and other consonants.

Examples before MHG /t/: *bleter > blettr* 'Blätter'[5], *breter > brettr* 'Bretter', *buter > buttr* 'Butter', *veter > vettr* 'Vetter', *weter > wettr* 'Wetter', *kitel > kittl* 'Kittel', *kutel > kuttl* 'Kuttel', *satel > sattl* 'Sattel', *vetel > vettl* 'Vettel', (*zedel >*) *zetel > zettl* 'Zettel', *geriten > gerittn* 'geritten', *riten > rittn* 'wir ritten', *schaten > schattn* 'Schatten', etc.

Examples before MHG /m/ and other consonants: *hamer > hammr* 'Hammer', *sumer > summr* 'Sommer', *himel > himml* 'Himmel', *komen > kommn* 'kommen', *zesamen > zesammn* 'zusammen'; *doner > donnr* 'Donner', *wider > widdr* 'Widder', *vülen > vülln* 'Füllen'[6], etc.

In some cases two explanations are possible. Thus, retention of a short vowel in MHG *keten* 'Kette' – adduced by Paul/Klein (2007: 88) – may be due either to the variant *kettn* or to the trisyllabic variant *ketene* (OHG *ketina*), which may be compared with an instance like MHG *betelen* 'betteln'. Similarly, retention of a short vowel in MHG *semel* 'Semmel' may be due either to the variant *semml* or to the trisyllabic *semele* (OHG *semala*), which may be compared with MHG *demere*, f. (OHG *demar*, n.) beside *demerunge* (OHG *demarunga*) 'Dämmerung'.

3.2   Variation before *-er, -el* and *-en*

As in the case of other phonological developments, the results of open syllable lengthening in disyllables were accepted by the New High German "Schriftsprache" through a process of irregular linguistic levelling, so that some kind of variation is only to be expected. Thus, the occurrence of forms without elision of the unaccented vowel is shown by nouns like *kugel > kūgel* 'Kugel', *schemel > schēmel* 'Schemel', *vater > vāter* 'Vater', as well as by verbs like *beten > bēten* 'beten', *nemen > nēmen* 'nehmen', etc. Moreover, the variation between forms with and without elision of the unaccented vowel favoured the prescriptive trends that led to such distinctions as *Widder* (MHG *wider > widdr*) on one side and *wider, wieder* (MHG *wider > wīder*) on the other.

In the case of verb infinitives, the forms with a long vowel before /t/ have prevailed because the prescriptive tendencies of the standard language favoured the full ending *-en*, not the variants with elision of the unaccented vowel. We thus find a long vowel in all the verb infinitives with /t/: *beten* (OHG *beten*), *kneten* (OHG *knetan*), *treten* (OHG *tretan*), *jäten* (OHG *jetan*)[7], and *waten* (OHG *watan*), etc. A similar explanation applies, before /m/, to *nehmen* (OHG *neman*), *schämen* (MHG *schemen, schämen*), *zähmen* (MHG *zemen, zämen*), *ziemen* (MHG *zemen, zimen*), etc., but a short vowel has prevailed in the frequently used *kommen* (OHG *komen*). Before other consonants (including /n/, /l/, and /r/) lengthening is the rule: *dehnen* (OHG *den[n]en*), *gewöhnen* (OHG *giwen[n]en*), *spielen* (OHG *spilēn*), *zählen* (MHG *zel[l]en*), *fahren* (OHG *faran*), *geben* (OHG *geban*), *haben* (OHG *habēn*), *leben* (OHG *lebēn*), *reden* (OHG

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[5] Now with *ä* on the analogy of *Blatt*.

[6] Note that *Troddel* (OHG *trādo, trāda*, MHG *trodel, tradel*) shows shortening in *trōdl > trodl*. As for *Söller*, it does not belong here, since the original trisyllabic form (OHG *solāri > soleri*) developed an early variant with a closed syllable: OHG *solre*, MHG *sölre*.

[7] The lengthening of /ɛ/ (< pre-literary **/e/) may give either /eː/ or /æː/, the product of the *i*-umlaut of OHG /aː/ from pre-literary **/eː/ (/ē¹/) – see Chapter 5, below.

redēn), *sagen* (OHG *sagēn*), *lesen* (OHG *lesan*), *wesen* (OHG *wesan*), etc. In originally trisyllabic verbs like MHG *krabelen* 'krabbeln', MHG *wabelen* 'wabbeln' retention of the short vowel is of course quite normal.

3.3   Alleged failure of open syllable lengthening in other cases

Of all the other instances adduced by Russ to show failure of lengthening before /t/ (1978: 75–76), only NHG *Sitte* can be regarded as a special case, for in this word the short vowel of MHG *site* (OHG *situ*) was retained or reintroduced on the analogy of the frequently used derivatives *sitelich* (OHG *situlīh*) 'sittlich', *unsitelich* (OHG *unsitulīh*) 'unsittlich' and **sitesam* (OHG *situsam*) 'sitsam', in which /i/ was followed by two unaccented vowels. For the old variant *sitt* see Grimm/Grimm (1965–2018: s. v. *Sitte*).

Another special case is the antecedent of NHG *Gatte* – adduced by Paul/Klein (2007: 82, fn. 4 and 87) –, a substantivized adjective that represents OHG **gigato* (MHG *[ge]gate*) from OHG *gigat*. The adjective was again substantivized as MHG *[ge]gat*, in which the short /a/ is well attested by the spelling *gatt*, later *gatte* – see Grimm/Grimm (1965–2018: s. v. *Gatte* and *Gattung*).

The remaining instances adduced by Russ (1969: 85) – namely *Vater*, *Bote*, *geboten*, *Zote*, *Spaten*, *Knoten*, *Kater*, and *Kröte* – should not be explained as due to the analogy of related forms, spelling pronunciations or other special causes.

The long vowel in *Vater* should not be explained as due to the spelling or to the influence of Lat *pater*, since (as mentioned above) this word varied between /a/ (*vater* > *vattr*) and /a:/, the latter by regular open syllable lengthening (*vater* > *vāter*), both variants being well attested – see Grimm/Grimm (1965–2018: s. v. *Vater*). The related *Gevatter* (Lat *compater*) shows retained /a/ before two unaccented syllables in MHG *gevatere* (OHG *gifatero*), which varied with the new formation *gevater*.

Bote (OHG *boto*) should not be explained as due to the analogy of forms like *geboten* (MHG *gebōten ~ gebottn*), since it underwent regular lengthening in an open syllable: MHG *bote* > *bōte*.

The long vowel in *Zote* is not due to the spelling, but reflects regular open syllable lengthening of /o/ in MHG *zote* (OHG *zota, zata*), whereas the phonological variant *Zotte* represents MHG *zotte* < OHG *zotta*, for which see Köbler (2014: s. v. *zata*).

The long vowel in *Spaten* need not reflect lengthening in a northern variant (MLG *spade* > *spāde*), since OHG *spata* would give a MHG form *spate* with regular open syllable lengthening to *spāte*.

The long vowel in *Knoten* is not due to the spelling, since it reflects regular open syllable lengthening in MHG *knote* (OHG *knoto*), just as the variant *knode* > *knōde* (OHG *knodo*) explains the long vowel of the obsolete forms *Knode* and *Knoden* – for which see Grimm/Grimm (1965–2018: s. v. *Knoten*)

The word *Kater* should not be explained as a dialectal loanword, since its long vowel reflects regular open syllable lengthening in MHG *kater* (OHG *kataro*), while the variant *katter* – for

which see Grimm/Grimm (1965–2018: s. v. *Kater*) – goes back to the MHG trisyllabic form *katere*.

The vowel of *Kröte* need not reflect a hybrid of MHG *krete* and *krote*, since it may go back to a rare form with rounding of /ɛ/ to /ø/ or, more probably, to an old variant *krotia* – for which see Grimm/Grimm (1965–2018: s. v. *Kröte*, 1c) – beside OHG *kreta*, *krota*. Whatever its origin, however, the short vowel of MHG *kröte* was regularly lengthened to /ø:/, just as MHG *krote* became *krōte* (cf. today's Austrian variant *Krot*). The not infrequent dialectal *Krott/Chrott* (MHG *krotte*)[8] may well reflect an OHG **krotta* beside *krota* – cf. OHG *zota*, *zotta*, above.

Another two "exceptions" deserve attention. King states that *Rotte* 'Saiteninstrument', borrowed from Old French *rote*, "did not lengthen, while *Twiete* from Middle Low German *twite* did" (1988: 27). But the Middle Low German original has a long vowel (*twîte*), and the loanword from Old French varies between MHG *rote* and *rotte*. As for *Ritter* (King 1988: 29), it has /i/ from Middle Low German *riddere*, whereas *Reiter* exhibits the reflex of MHG /i:/ in *rīter* and *rīten* (OHG *rītan*).

To sum up: The relevant material shows that failure of open syllable lengthening before /t/ cannot be regarded as a regular development, since all the alleged instances of failure exhibit either a secondary closed syllable (words ending in -*er*, -*el* and -*en*) or an open syllable in which the short vowel was regularly lengthened before /t/. Only *Sitte* and *Gatte* can be regarded as special cases. The former has MHG /i/ on the analogy of related forms; the latter has MHG /a/ from the variant *gatt*.

4   Lengthening in Middle High German

Having thus analysed the relevant material with regard to open syllable lengthening in disyllables, we may now proceed to consider all types of lengthening in Middle High German.

As anticipated above, short vowel lengthening took place in the following contexts:

– in the open syllable of disyllables;
– through contraction after the loss of a following medial consonant;
– in the closed syllable of monosyllables before final /r/;
– in closed syllables before /r/ + consonant (especially /d/, /t/, /s/, /ts/).

4.1   Lengthening in the open syllable of disyllables

Short vowels in the open syllables of disyllables were lengthened to identity with the corresponding long vowels, before both voiceless and voiced consonants, as in MHG *hase* > *hāse* 'Hase' and MHG *bote* > *bōte* 'Bote' (cf. Chapter 3, above). In uncontracted forms with two or more unaccented syllables the short vowel was normally retained, as in MHG *betelen*, 'betteln', MHG *demere* 'Dämmer' beside *demerunge* 'Dämmerung', etc.

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[8] The variant with a short vowel is well attested in recent dialects. Thus, for example, *Krott* occurs in Alsatian German (Martin/Lienhart 1899: s. v. *Krott*) and *Chrott* is recorded in Swiss German (Schweizerisches Idiotikon 2010–: s. v. *Chrott* I).

Open syllable lengthening seems to account also for the long vowel in the closed syllable of monosyllables, since it is generally assumed that the original short vowels were here analogically replaced by the corresponding long vowels. A well-known example is MHG *tac*, *tag* 'Tag', which is explained as having /a:/ on the analogy of its inflected forms, as in *tages* > *tāges*. However, it has been suggested that vowel length in words like MHG *tac*, *tag* was the result of a genuine phonological change, and that "monosyllabic lengthening" and open syllable lengthening were two independent innovations which originated in different areas (Seiler 2009). Such an explanation of lengthening in monosyllables ending in a single consonant may well be true for certain dialects, but in the line of development that led to Present-Day Standard German analogy appears to be the correct explanation, since in colloquial speech uninflected forms like *Bad*, *Glas*, *grob*, etc. may have a short vowel, whereas the respective inflected forms regularly exhibit a long vowel – cf. Dudenredaktion (1990: 56).

Open syllable lengthening appears to have preceded the monophonemization of /sk/ to /ʃ/ and of /xx/ to /x/, since instances like MHG *waschen* (< OHG *was|kan*) 'waschen' and MHG *machen* (< OHG *mah|hōn*) 'machen' preserved their short vowels in closed syllables – cf. an instance like MHG *ezzen* (< OHG *ez|zan*) 'essen'. Open syllable lengthening was already operative in late Old High German, at least in certain dialects (Paul/Klein 2007: 80–81), whereas /sk/ was still realized as a sequence [sx ~ sç], which in Middle High German developed to /ʃ/ – cf. Braune/Heidermanns (2018: 189).

Various explanations have been offered for open syllable lengthening (Paul/Klein 2007: 81), but the simplest of all is that the increasing stress on root syllables strengthened the tendency to lengthen vowels in the accented open syllable of disyllables. The increasing stress on root syllables is attested by the progressive weakening (and subsequent conditioned loss) of unaccented vowels. The tendency to lengthen vowels in the accented open syllable of disyllables is a well-known fact, which is clearly attested in both High and Low German dialects (cf. Schirmunski 1962: 183)

4.2   Lengthening through contraction after the loss of a following medial consonant

This change accounts for the long vowel in words like MHG *stahel* > *stāl* 'Stahl', MHG *vihe* > *vī* 'Vieh', etc.

4.3   Lengthening in the closed syllable of monosyllables before final /r/

This change accounts for the long vowel in numerous monosyllables, such as MHG *der* > *dēr* 'der', MHG *für* > *fūr* 'für', etc. But note that *gar* (OHG *garo*) may reflect MHG *gare* beside *gar*.

4.4   Lengthening in closed syllables before /r/ + consonant (especially /d/, /t/, /s/, /ts/)

This change accounts for the long vowel in words like MHG *erde* > *ērde* 'Erde', MHG *fart* > *fārt* 'Fahrt', MHG *ars* > *ārs* 'Arsch', *harz* > *hārz* 'Harz', etc.

Lengthening before final and preconsonantal /r/ seems to be due to the conditioned weakening and vocalization of the velar consonant in certain types of speech, in which the duration of the short vowel was prolonged in the transition to the following weakened or vocalic element. That

OHG /r/ was realized as a velar [ɹ]-sound is indirectly shown by the fact that this consonant, like OHG /x/, caused a "weak *i*-umlaut of /a/" (OHG *arn*, *arni* < **arani*-, MHG *ärne* > *ern[d]e* 'Ernte')[9] instead of the "strong *i*-umlaut of /a/"[10] (OHG *festi* < **fastja*-, MHG *veste* 'fest'). On the phonetic features of /r/, both Braune/Heidermanns (2018: 114, fn. 4) and Kostakis (2019) adduce supporting evidence from Gothic, but the former postulates an alveolar realization, while the latter argues convincingly for a velar realization.

To sum up: The relevant material shows that lengthening was an important development in the Middle High German period. Open syllable lengthening and lengthening before final and pre-consonantal /r/ were two independent innovations. The former – which appears to have preceded the monophonemization of /sk/ to /ʃ/ and of /xx/ to /x/ – was due to increasing stress on the root syllable of disyllables. The latter was caused by some degree of weakening of the following velar /r/.

5   The conditioned mergers resulting from lengthening

The lengthening of /i/, /y/ and /u/ resulted in conditioned mergers with the new monophthongs /i:/, /y:/ and /u:/ from /iə/, /yø/ and /uo/ (see Chapter 6.2, below), not with the old monophthongs /i:/, /y:/ and /u:/, because these vowels were already slightly diphthongized (see Chapter 6.1, below).

Examples:

/i/ > /i:/ as in MHG *rise* > *rīse* > 'Riese' and MHG *liebe* = *lībe* 'Liebe';

/y/ > /y:/ as in MHG *zügel* > *zǖgel* 'Zügel' and MHG *füeren* = *fǖren* 'führen';

/u/ > /u:/ as in MHG *tugent* > *tūgent* 'Tugend' and MHG *fuoʒ* = *fūʒ* 'Fuß'.

The lengthening of /e/, /ɛ/, /æ/, /a/, /o/ and /ø/ resulted in conditioned mergers with /e:/, /æ:/, /a:/, /o:/ and /ø:/.

–   The lengthening of /e/ (the product of the 'strong *i*-umlaut of OHG /a/') is always to identity with /e:/, which results from the split of pre-literary */ai/ into OHG /ai / (> ei/) and /e:/.

Example: /e/ as in MHG *weren* > *wēren* 'wehren' lengthened to /e:/ as in MHG *lēren* 'lehren'.

Note 1: In instances like *zählen* (OHG *zel[l]en*), *[du] färst* (OHG *ferist*) and the like ⟨e⟩ representing /e:/ by lengthening of /e/ has been replaced by ⟨ä⟩ (representing /ɛ:/ or /e:/) on the analogy of related forms (*Zahl*, OHG *zala*; *fahren*, OHG *faran*).

Note 2: In plural forms like *Schläge* (OHG *slegi*), *Zähne* (OHG *zeni*) and the like, ⟨e⟩ representing /e:/ has been replaced by ⟨ä⟩ (representing /ɛ:/ or /e:/) as a generalized marker of the plural number in words with /a:/ in the singular (*Schlag*, OHG *slag*; *Zahn*, OHG *zan*).

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[9] Certain dialects do not exhibit umlauted vowels before /r/ + consonant (Braune/Heidermanns 2018: 46, n. 2b), but the obsolete *Arne* and the dialectal *Arn* reflect the OHG variant *aran* > *arn* – see Köbler (2014: s. v. *aran*) and cf. Lloyd/Springer (1988: s. v. *aran*).

[10] The terms 'strong *i*-umlaut of /a/' and 'weak *i*-umlaut of /a/' here replace the traditional (and misleading) terms 'primary umlaut' and 'secondary umlaut' – see Cercignani (2022: 45).

– The lengthening of /ɛ/ (< pre-literary */e/) may give either /e:/ or /æ:/, the product of the *i*-umlaut of OHG /a:/ from pre-literary */e:/ (/ē¹/).

Examples:

/ɛ/ as in MHG *leben* > *lēben* 'leben' lengthened to /e:/ as in MHG *lēren* 'lehren';

/ɛ/ as in MHG *geberen* > *gebären* 'gebären' lengthened to /æ:/ as in MHG *māre* 'Märe, Mär'.

The lengthening of /æ/ (the product of the 'weak *i*-umlaut' of OHG /a/) is always to identity with /æ:/.

Example: /æ/ as in MHG *mähelen* > *mālen* '[ver]mählen' lengthened to /æ:/ as in MHG *māre* 'Märe, Mär'.

Note 1: The word *Ähre* (OHG *ahir*) belongs here. It goes back to an old plural form in *-ir* which replaced the original singular form (OHG *ah*), because the word was generally used in the plural. The plural form *äher* shows contraction after the loss of the intervening /h/ in an inflected form: *ähere* > *āre*.

Note 2: The word *ähnlich* (OHG *analīh*) belongs here, since it has OHG, MHG /æ/, caused by an *i*-vowel in the second following syllable (MHG *änelich*), as well as retained OHG, MHG /a/, because the *i*-vowel in the ending *līh* may or may not cause umlaut (MHG *anelich*).[11]

– The lengthening of /a/ is always to identity with /a:/, which goes back to pre-literary */e:/ (/ē¹/).

Example: /a/ as in MHG *wagen* > *wāgen* 'Wagen' lengthened to /a:/ as in MHG *wāgen* 'wagen'.

– The lengthening of /o/ is always to identity with /o:/, which results from the split of pre-literary */au/ into OHG /au / (> /ou/) and /o:/.

Examples:

/o/ as in MHG *kole* > *kōle* 'Kohle' lengthened to /o:/ as in MHG *kōl* 'Kohl'.

/o/ as in MHG *tor* > *tōr* (*tores* > *tōres*) 'Tor, Tür' lengthened to MHG *tōr* 'Tor, Narr'.

– The lengthening of /ø/ is always to identity with /ø:/, the product of the *i*-umlaut of OHG /o:/.

Example: /ø/ as in MHG *höle* > *hōle* 'Höhle' lengthened to /ø:/ as in MHG *hōren* 'hören'.

5.1 Subsequent developments of the *e*-vowels

In late Old High German or early Middle High German, the vowel /æ/ (the product of the weak *i*-umlaut of /a/) was raised to identity with the reflex of OHG /ɛ/. This change must have occurred after lengthening, since the lengthened reflex of OHG /æ/ merged only with /ɛ:/, whereas the lengthened reflex of OHG /ɛ/ merged with either /ɛ:/ or /e:/ (see above). At least in certain types of speech belonging to the Central German and Upper German (East Franconian) areas the new /ɛ/ and the pre-existing /e/ (the product of the strong *i*-umlaut of /a/) subsequently merged in a single phoneme, the antecedent of Present-Day Standard German /ɛ/. Thus, words

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[11] For other special cases see Cercignani (2022: 52f.).

like MHG *geslähte* (OHG *gislahti*) 'Geschlecht', MHG *recht* (OHG *recht* < **rehta*-) 'Recht', and MHG *feste* (OHG *festi* < **fastja*-) 'fest' came to exhibit the same phoneme.

The long vowel /æ:/ (the product of the *i*-umlaut of /a:/) was similarly raised to /ɛ:/, as in MHG *spæte* (OHG *spāti*) 'spät'. Moreover, in certain types of speech belonging to the Central German and Upper German (East Franconian) areas (Reichmann 2000: 1630) the resulting /ɛ:/ merged with the reflex of OHG /e:/, as in MHG *mēr[o]* (OHG *mēr[o]*) < **maizō*) 'mehr'. However, in other types of speech belonging to the Upper (but in part also to the Central) German area the product of the *i*-umlaut of /a:/ preserved its identity, and the distinction between /ɛ:/ and /e:/ made its way into the New High German "Schriftsprache" as early as the 16th century. The persistence of this distinction was certainly encouraged by morphological/etymological considerations (FNHDG: §L 20), but would have been impossible without the linguistic levelling between regional varieties which led to the coexistence in Present-Day Standard German of words in which MHG /ɛ:/ is represented either by /ɛ:/, as in *zäh* (MHG *zǣh[e]* < OHG *zāhi*), or by /e:/, as in *leer* (MHG *lǣre* < OHG *lāri*).[12]

To sum up: All types of lengthening resulted in conditioned mergers with the corresponding long vowels, which in the case of /i/, /y/ and /u/ were the new monophthongs /i:/, /y:/ and /u:/ (see Chapter 6.2, below). The lengthening of /ɛ/ may give either /e:/ or /æ:/, a circumstance that should be considered in the wider context of the subsequent development of the *e*-vowels.

6   Other (related) changes in the Middle High German period

As in the case of lengthening, the so-called "(early) New High German diphthongization and monophthongization" belong to Middle High German, although their products were accepted by the "Schriftsprache" only in the New High German period. The same applies to the so-called "New High German shortening".

6.1   Diphthongization

As anticipated above, lengthening of MHG /i/, /y/ and /u/ resulted in conditioned mergers with the new monophthongs /i:/, /y:/ and /u:/ from OHG /iə/, /yø/ and /uo/, not with the old monophthongs /i:/, /y:/ and /u:/, because these vowels were already slightly diphthongized.

The old front rounded /y:/ represents umlauted /u:/, umlauted /iu/ (/iy/ > /y:/) and non-umlauted /iu/ (/iy/ > /y:/). Soon after its rise, the phoneme /iy/ from umlauted /iu/ generally merged with /y:/. Before the end of the Old High German period a similar merger affected /iy/ from non-umlauted /iu/ in vast areas of Alemannic and Franconian – see Wiesinger (1970: 233f.).

The diphthongization of the three vowels /i:/, /y:/ and /u:/ is reflected in Present-Day Standard German, as can be seen from the table here below. The line of development presented here does not take into account the dialectal and chronological diffusion of diphthongization, for which see Paul/Klein (2007: 74–77) and FNHDG (1993: 64–67). The reconstruction of the intermediate stages is of course only tentative.

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[12] Etymology can in most cases contribute to explain the present distribution of /ɛ:/ ("long ä") and /e:/ ("long e") – cf. Cercignani (2022: 49–55).

OHG		Line of development	PSG
/iː/	*wīb*	/iː/ > /ɪi/ > /ei/ > /ɛɪ/ > /aɪ/	*Weib*
/yː/ < /uː/ + [-i]	*lūten*		*läuten*
/yː/ < /iu/ + [-i]	*liuti*	/yː/ > /ʏy/ > /øy/ > /œʏ/ > /ɔɪ/	*Leute*
/yː/ < /iu/	*hiutu*		*heute*
/uː/	*hūs*	/uː/ > /ʊu/ > /ou/ > /ɔʊ/ > /aʊ/	*Haus*

Note 1: The verb *lūten* (written *luten*, *liuten*) goes back to a form *hlūdjan.

Note 2: The *äu* in *läuten* is due to the analogy of the *au* in *laut* and *Laut*, the historical spelling of OHG MHG *liuten* being *leuten* – see Grimm/Grimm (1965–2018: s. v. *läuten*).

During the New High German period the diphthongal reflexes of /iː/, /yː/ and /uː/ merged with the older diphthongs /ei/, /øy/ and /ou/, but in Middle High German and early New High German the two series of diphthongs were still in opposition.[13] The two series are kept apart also in recent dialects which, however, show a complex situation with regard to geographical and positional distribution.

The table here below shows the line of development of the diphthongal reflexes of /iː/, /yː/ and /uː/. The relevant examples include occasional minimal pairs based on diphthongal pronunciations.

MHG eNHG			NHG		PSG	
līb	/ɪi/ ↔ /ei/	*leib*	/ei/~/ɛɪ/	*leib, leib*	/aɪ/	*Leib, Laib*
strūben	/ʏy/ ↔ /øy/	*ströuwen*	/øy/~/œʏ/	*streuben, streuen*	/ɔɪ/	*sträuben, streuen*
rūch	/ʊu/ ↔ /ɔu/	*rouch*	/aʊ/	*rauh, rauch*	/aʊ/	*rau[h], Rauch*

Note 1: The spelling with the old (chiefly southern) variant *ai* in *Laib* was suggested by 17th century grammarians to graphically distinguish the word from *Leib* – cf. MHG *sīte* 'Seite' and MHG *seite* 'Saite'.

Note 2: The *äu* in *sträuben* instead of *eu* appears to be due to the analogy of the obsolete and dialectal adjective *straub* 'struppig' – cf. Grimm/Grimm (1965–2018: s. v. *straub*).

6.2   Monophthongization

As anticipated above, lengthening of MHG /i/, /y/ and /u/ resulted in conditioned mergers with the new /iː/, /yː/ and /uː/ resulting from the monophthongization of OHG /iə/, /yø/ and /uo/.

The diphthong /iə/ represents an earlier /io/ < /eo/ < */eu/, as well as an earlier /ia/ < /ea/ < /ę̄ː/ (/ē²/). The monophthongization of the three diphthongs in question is reflected in Present-Day Standard German, as can be seen from the table here below.

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[13] For the evidence of the Middle High German dialects see Paul/Klein (2007: 74–76 and the literature cited there).

OHG		Line of development	PSG
/iə/ < /io/, /ẹ:/	*lioba, mieta*	/iə/ > /i:/	*Liebe, Miete*
/yø/	*füoren*	/yø/ > /yə/ > /y:/	*führen*
/uo/	*fuoz*	/uo/ > /uə/ > /u:/	*Fuß*

Note 1: After the monophthongization of /iə/, the spelling *ie* was retained as a typical sign of "long *i*", which then came to be used also in words with /i:/ resulting from the Middle High German lengthening of /i/. Examples: *Liebe* (OHG *lioba*, MHG *liebe* > *lībe*) and, with analogical *ie*, *Riese* (OHG *risi*, MHG *rise* > *rīse*).

Note 2: The verb *füoren* (written *fuoren*) goes back to an older **fuorjan* < **fōrjan*. Cf. OHG *füozzi* (written *fuozzi*) > MHG *füeze* > NHG *Füße*. The use of *h* in today's *führen* is due to the analogy of words in which medial and final /h/ was lost and *h* retained as a typical sign for length. Examples: *zehn* (OHG *zehan*, MHG *zehen* > *zēn*) and, with analogical *h*, *lehren* (OHG MHG *lēren*).

The monophthongization of /iə/, /yø/ and /uo/ did not result in mergers with the older monophthongs /i:/, /y:/ and /u:/, because these vowels were already slightly diphthongized (see Chapter 6.1, above). The table here below shows the persistent oppositions between the two series.

OHG			MHG			PSG		
lioba	/iə/ ↔ /i:/	*līb*	*liebe*	/i:/ ↔ /ɪi/	*leib*	*Liebe*	/i:/ ↔ /aɪ/	*Leib*
füoren	/yø/ ↔ /y:/	*strūben*	*füeren*	/y:/ ↔ /ɣy/	*strūben*	*führen*	/y:/ ↔ /ɔɪ/	*streuben*
fuoz	/uo/ ↔ /u:/	*hūs*	*fuoʒ*	/u:/ ↔ /ʊu/	*hous*	*Fuß*	/u:/ ↔ /aʊ/	*Haus*

6.3   Shortening

The new monophthongal phonemes (especially /i:/ < /iə/) shared with other vowels the Middle High German shortening before certain consonant and consonant clusters, which must have been typical of certain types of speech belonging to the Central German area – cf. Paul/Klein (2007: 83–84).

As in other cases, the results of this change were accepted by the New High German "Schriftsprache" through a process of irregular linguistic levelling, in which the partially competing lengthening prevailed over shortening.

Before /xt/ the change has been accepted in numerous cases: not only in *āhten* (<*anhtja) 'ächten', *dīhte* (< **þīhta-* < **þenhta-*) 'dicht', etc., but also in *lieht* > *līht* (OHG *lioht*) 'Licht', *viehte* > *vīhte* (OHG *fiohta*) 'Fichte', etc. Yet, the long vowel has been preserved in *līhte* (OHG *lioht*) 'leicht', *sīhte* (<* *sinhtja-*) 'seicht', etc.

In some cases, the change has been accepted also before preconsonantal /r/, where shortening is in sharp contrast to lengthening, at least before /s/ (cf. Chapter 4.4, above). Relevant examples are instances like *lērche* (OHG *lērihha*) 'Lerche', *hērsen* (OHG *hērisōn*) 'herrschen', etc., as well as *dierne* > *dīrne* (OHG *diorna*) 'Dirne', *gienc* > *gīnc* (OHG *giang*) 'ging', etc.

In other cases, shortening took place in the secondary closed syllable of forms with *-r̩*, *-l̩* and *-ŋ* (from *-er*, *-el* and *-en*), where the intervening consonant was geminated and later degeminated

when all medial geminates were reduced to singletons (cf. the parallel failure of lengthening before -r̩, -l̩ and -n̩ in Chapter 3.1, above). Relevant examples are instances like *nāter > nattr > natr* 'Natter', *jāmer > jammr > jamr* 'Jammer', etc., as well as *muoter > mūter > muttr > mutr* 'Mutter', *rüeʒel > rǖʒel > rüʒʒl > rüʒl* 'Rüssel', etc.

To sum up: As indicated above, all the changes presented in Chapter 6 are to a certain extent important when considering lengthening. Of special interest, however, is shortening before pre-consonantal /r/, which in some cases is in sharp contrast to lengthening in similar contexts. Shortening in words ending in -*er*, -*el* and -*en* is another change that deserves attention, since it provides a close parallel to failure of lengthening in words with the same endings.

7   Conclusions

A detailed critical analysis of the relevant material has shown that failure of open syllable lengthening before /t/ (and /m/) cannot be regarded as a regular development and that open syllable lengthening should be regarded as regular not only before voiced consonants but also before the voiceless consonant /t/ (Chapter 3). Words ending in -*er*, -*el* and -*en* have been treated in detail as the most important case of failure of open syllable lengthening, irrespective of the intervening consonant (Chapter 3.1). With regard to words of this type, due attention has also been given to variation between regular lengthening and retention of the relevant short vowel in secondary closed syllables (Chapter 3.2). The alleged failure of open syllable lengthening before /t/ in other cases has been shown to be explicable by having recourse to phonological variants inherited from earlier stages of the language (Chapter 3.3). Open syllable lengthening has been treated in the wider context of lengthening, with special attention to lengthening before final and preconsonantal /r/ (Chapter 4). The conditioned mergers resulting from lengthening have been given ample space (Chapter 5), with special regard to the subsequent development of the *e*-vowels (Chapter 5.1). Other changes, such as diphthongization, monophthongization, and shortening, have also been treated in connection with lengthening (Chapter 6).

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