Interpreting Middle English Spelling Evidence Using Evidence from Modern Dutch

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Abstract

During the Middle English period, the digraphs <ai>, <ay>, <ei>, <æi>, denoting reflexes of the Old English long monophthongs *ǣ*, *ē* and *ā*, and <oi>, <eo> and <ou>, denoting reflexes of the Old English long monophthong *ō,* appear in written material. These spellings alternate with expected <a>, <e>, <æ> and <o>. While the <i> in <ai>, <ay>, <ei>, <æi> and <oi> might mark vowel length or raising, this paper investigates the possibility that digraphs were used to denote a diphthongal realisation, based on the analysis of spelling and rhyme data extracted from two Middle English texts from the West Midlands. Secondly, a new methodological approach is explored by comparing the possible diphthongisation in Middle English to a sound change involving the diphthongisation of the long monophthongs /eː/, /oː/ and /øː/ in certain varieties of Modern Dutch. The presence of a process causing diphthongisation of long monophthongs in Modern Dutch suggests the possibility of a similar process affecting long monophthongs in Middle English. The spelling evidence discussed in this study supports the claim that the tendency to diphthongise long mid monophthongs in varieties of Modern Dutch is also found in Middle English.

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1. Introduction

Textbook descriptions of sound change often focus on the initial and final stages and do not reveal the full course of change. Sound changes are typically non-linear and create a wide range of different realisations at the dialectal and idiolectal level. As Lass (2000, pp. 77-78) notes, sound change is a multidimensional process of sequential and overlapping changes and may progress differently in different groups of speakers or different dialectal areas. The study of the medial stages of a sound change can, thus, provide a more profound understanding of the process of language change and the variation that is created by these changes.

This paper will investigate the variation characterising the sound changes affecting the long mid-to-low front and back monophthongs of Middle English (ME). The wide range of spellings that denote ME reflexes of Old English (OE) *ǣ*, *ā*, *ē* and *ō* suggests their development was characterised by extensive variation. Spellings in <a(a)> and <o> occur for reflexes of OE *ā*, <æ> and <e> for OE *ǣ* and *ē*, and <o(o)> for OE *ō*. These spellings denote the expected long monophthongal ME reflexes of OE *ǣ*, *ā*, *ē* and *ō*, but spellings in <ai>, <ei>, <ay>, <ey> and <æi> for OE *ǣ*, *ā* and *ē*, and <ou>, <oi> and <eo> for OE *ō* also occur, which suggests unetymological diphthongal variants coexisted alongside the monophthongal variants. There is uncertainty as to how the <i> in spellings like <ai>, <ei>, <oi> or <æi> should be interpreted. It could be that scribes used <i> as a diacritic to mark length (see Stenbrenden, 2019), but given that they had other orthographical conventions available to them to mark vowel length, e.g. the doubling of vowels, and spellings in <ai>, <ei> etc. were used for etymological diphthongs, the use of such spellings could denote diphthongal variant realisations of etymological long monophthongs.

Through the investigation of the results found in synchronic variationist studies on the diphthongisation of long monophthongs in Modern Dutch, a language related to English, new insights into how these ME spellings should be interpreted could be revealed. The tendency to

diphthongise long monophthongs found in some varieties of Dutch suggests that this tendency could also have been present in ME. The Uniformitarian Principle (Lass, 1997) argues that processes do not change, i.e. something occurring today could have occurred in the past as well. Thus, the claim could be made that a sound change, similar to the one currently developing in Standard Dutch, could have existed in ME. As historical phonology relies on spelling evidence and no audio recordings are available, it is difficult to establish what the qualities of sounds were in ME. Crosslinguistic evidence comparing a current sound change in progress in a related language to spelling evidence found in ME could provide a new perspective.

The investigation of the possible existence of diphthongisation of long monophthongs in ME would not only allow for a deeper insight into language change and the phonology of ME but would also provide insight into the extent to which English was influenced by Scandinavian languages. As the presence of diphthongs like <ei> in cognates where OE would have had a long monophthongal vocalism (e.g. OE *hāl*, ME *heil* cf. Old Norse *heill*) are often viewed as evidence for Scandinavian influence (Cole, 2018), finding evidence for internally developed diphthongs would provide a new understanding of the possible origin of words containing diphthongs that were monophthongal in OE.

The goal of this study is to describe the variation found in the orthography of long monoophthongs in ME, in order to investigate whether evidence can be found for a tendency to diphthongise long monophthongs in ME similar to the one found in Standard Dutch, through the analysis of two ME texts from the West Midlands extracted from *the Linguistic Atlas of Middle English* (*LAEME*). This study will benefit our understanding of the variation found in medial stages of language change, the phonology of ME and the influence that Scandinavian had on English.

2. Theoretical background

While essentially accurate, descriptions of sound changes that are limited to the initial, final and sometimes medial stages of the change, which can often be found in works on language change, ignore the variation that characterises different stages of a sound change. An oversimplified account of sound change states that between the initial and final stages, there is a period of time in which both the conservative variant and innovative variant co-occur alongside each other (Lass, 2000, pp. 77-78). At first, the innovative realisation will occur incidentally. Then, a stage is reached where both realisations appear roughly equally. Eventually, the innovative realisation will outnumber the conservative realisation, before the conservative realisation vanishes entirely. In reality, however, sound change is a multidimensional process that does not simply affect one entire category, but often affects particular lexical units first before spreading throughout all occurrences of the phonemic category in the lexicon (Lass, 2000; Chen, 1972). Each word, thus, essentially follows the process described in the oversimplified model of sound change, and the change of a category can be characterised by a sequence of similar processes affecting individual words or groups of words. Guy (2017) suggests that sound change should be described as "x is realised as y with a certain probability" (p. 373), with the probability fluctuating depending on the phonetic environment of the sound and over the course of the change. Additionally, sound change is not multidimensional at the lexical level only, but at the socio-geographical level as well (Chen, 1972). One community, socioeconomic or geographical, might be affected by a sound change at an early stage, while another might only be affected by the time the change has completed in the first.

Not only does the realisation of the affected sounds differ per socio-geographical group and over time, variation can be found within the forms of the innovative variants as well. In fact, Guy (2017) argues that change would not exist without variation. A predictor of

idiolectal variation is the phonetic environment of the sound affected by change (Guy, 2017). Conventional realisations are produced when the environment meets certain conditions, while innovative realisations are produced when the environment meets other conditions. The conditions that cause a speaker to select a sound from the available options might change throughout the course of the sound change. While an innovative realisation might be produced under certain conditions at the start of the process, these conditions might expand so that, later on in the process, innovative pronunciations are also used in environments where conventional realisations were used at an earlier stage of the change. The set of conditions that cause speakers to select one realisation over the other might also differ between different groups of speakers. Guy (2017) notes that even these sets of conditions are not categorical; speakers might prefer one variant over another in certain conditions, but there is often no complete absence of one variant within these conditions. However, the context of a sound can predict quite accurately what realisation will appear. The sound changes that affected ME, described below, illustrate the issues explained here.

As we can only infer the sound patterns of ME from orthographic data, it is extremely difficult to determine what ME would have sounded like exactly. Lass (1997) explores some of the problems that arise in finding evidence based on written records. Scribes could, for example, use established scribal tradition rather than deviating from the norm to convey phonological innovation. An example of this can be found in ME, in which <a> was used to denote the reflex of OE $\bar{a}$ for a long time after it was thought to have raised and rounded (Stenbrenden, 2016, p. 61[1]). Another problem is that orthography represents sounds at a phonemic level, and phonetic innovations or variations might not be expressed. Thus, it is often assumed that, by the time the scribe starts to represent changes in sounds in his writing, the change has already largely unfolded in spoken language (Lass, 1997). However, as

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[1] In this paper, the discussion of the development of ME long vowels mainly relies on and references Stenbrenden (2016), as this is currently the most up-to-date and extensive study on ME long vowels.

orthographic evidence is the only available source that can reveal something about ME phonology, its use in historical phonology is inevitable. In order to interpret orthographic evidence, some assumptions have to be made. Each letter in the Latin alphabet traditionally represents a certain sound. It might, thus, be assumed that OE and ME spelling reflect these representations (Stenbrenden, 2016, p. 38). Furthermore, there is no reason to assume that a change in spelling would reflect anything other than a change in pronunciation (Stenbrenden, 2016, p. 39). Another factor that could shed light on sound change is rhyme. When two words occur in rhyming position, it might be concluded that the sounds in the rhyming syllables are similar. However, with regard to sounds that are undergoing a change, scribes could possibly be more inclined to use spellings that are convenient in creating rhyme when words are in rhyming position. In a way, such spellings are not entirely reliable, due to the influence of rhyme. Words in rhyming position that could reflect a sound change should, thus, be investigated closely.

The development of OE *ā* in the ME period shows no clear course of development. Generally, it is agreed upon that [ɑ:] eventually changed into [ɔ:], which is reflected in spelling variations of the reflex of OE *ā*. For example, OE <stan> became ME <ston>. It is thought that this sound change started in East Anglia and the South East and then spread across the South. During the fourteenth century, reflexes of OE *ā* vary widely. In the South and the East Midlands, <o> dominates, but <a> still appears (Stenbrenden, 2016, p. 49). In the West Midlands, <a> is remarkably numerous (Stenbrenden, 2016, p. 49). The reason for this is debated, but it is likely that the sound change had not been completed in this area (Stenbrenden, 2016, p. 49). Data reveals that even in the late fifteenth century, <a> had not completely disappeared in the South (Stenbrenden, 2016, p. 52). However, the wide range of spelling variants used to denote ME reflexes of OE *ā* suggests greater variation than conservative [ɑ:] competing with novel [ɔ:]. Although either <a> or <o> dominated

depending on the area and time, the forms <e>, <u>, <oo>, <æ>, <oi>, <ai>, <ei>, <ea>, <eo>, <ou> and <oa> appeared as well (Stenbrenden, 2016, pp. 65-75). The wide range of spellings that occur in some areas might reflect a variety of pronunciations. Additionally, geographical variation occurs. In the South and the Midlands, the reflex of OE *ā* was raised and rounded to [ɔː], while in the North, it was fronted and raised to [æː] or [ɛː], although the fronting and raising was not reflected in spelling (Lass, 1992). However, there is no clear isogloss between North and South that distinguishes between [ɔː] and [æː] or [ɛː], and spelling evidence suggests fronting and raising occurs in the East, West and Central Midlands as well (Stenbrenden, 2016, pp. 60-61)

Like the development of OE *ā*, the development of OE *ō* witnesses a division between North and South. In the South, *ō* was raised to [uː]. In the North, *ō* was first fronted to [øː] and then raised to [üː] (Stenbrenden, 2016, p. 197). Stenbrenden (2016, pp. 200-201; 205-208; 210; 215-217) reports that the forms found for *ō* in early ME are <e>, <oe>, <oi/oy>, <ou>, <ow>, <ov>, <u> and <uo>. In late ME, the forms <ou> and <ow> are the most frequent, along with <u>, <v> and <w>. Other forms that appear are <ov>, <oi/oy>, <uo>, <ui/uy>, <y> and <wo> (Stenbrenden, 2016, p. 199). In the North, traditional <o> is most frequent during the early ME period. In the late thirteenth century, the first signs of fronting appear. Consequently, these forms, such as <u> and <ou> became more frequent. Spellings indicate that the process of raising in the South began in the West Midlands and in the East in the first half of the thirteenth century (Stenbrenden, 2016, p. 48).

OE *ǣ* originated from two different West Germanic vowels, *ai* and *ā*, respectively. It is thought that *ǣ[1]*, from West Germanic *ai* was [æː] in most OE dialects. In Kentish, however, it is believed to have been [eː] (Stenbrenden, 2019). OE *ǣ[2]*, from West Germanic *ā*, was [æː] in Saxon dialects and [eː] in Anglian and Kentish (Stenbrenden, 2019). During the ME period, <æ> disappeared and scribes resorted to different spellings to reflect both OE *ǣ*'s. The new

spelling forms suggest that the reflexes of both OE $\bar{æ}$'s were raised to [ɛː] or [eː] in most dialectal areas, as indicated by orthographic evidence (Stenbrenden, 2016, p. 97). Stenbrenden (2016, p. 84) reports that during the early ME period, the appearance of spellings with <a> gradually declines, implying that the sound was raised. Eventually, in later texts, evidence for further raising towards [iː] is found (Stenbrenden, 2016, p. 94). While reflexes of the two OE $\bar{æ}$'s are not consistently distinguished in orthography, evidence has been found that some orthographic forms appear more often than others for each $\bar{æ}$. The forms <a>, <æ> and <ea> appear more often for $\bar{æ}^1$, while <e(e)> appears more often for $\bar{æ}^2$ (Stenbrenden, 2019). This suggests they might have had different realisations, namely that the quality of $\bar{æ}^1$ was more open than that of $\bar{æ}^2$ (Stenbrenden, 2019). All spelling variations of the reflex of OE $\bar{æ}$ found by Stenbrenden (2019) are <a>, <æ>, <ǣ>, <e(e)>, <eo>, <ea>, <ia>, <ai/ay>, <ei/ey> and <æi>.

The <ai/ay>, <ei/ey> and <æi> spellings that occur for reflexes of OE $\bar{æ}$ and $\bar{a}$, which appear in the North and the West Midlands (Stenbrenden, 2019), and the reflexes of OE $\bar{o}$ <oi/oy>, <ou> and <eo> are unexpected, as they reflect the reflex of a long monophthong. The reason behind the choice for these unetymological diphthongal spellings is unclear. Stenbrenden (2019) suggests that, while these types of spellings might indicate a diphthongal realisation, it is likely that <i> might also have been used as a diacritic device indicating a closer realisation or vowel length. However, as the same digraphs are used to represent etymological diphthongs, the possibility that <ai/ay>, <ei/ey>, <æi>, <eo>, <ou> and <oi> denote diphthongs cannot be disregarded.

Through formal evidence, the presence of diphthongs in words that originally contained a monophthong is often ascribed to Old Norse influence, when the cognate of the Scandinavian word has an etymological diphthong (Pons-Sanz, 2015), e.g. OE *hāl*, ME *heil* cf. Old Norse *heill*. Another example is the origin of the third person plural pronouns, which

is generally considered to be Scandinavian due to the diphthong /eɪ/, which was found in the Old Norse pronouns *þeir*, *þeira* and *þeim*, but not in OE demonstrative pronouns *þa*, *þara* and *þam* (see Cole, 2018). If evidence for diphthongisation of long mid-to-low front vowels can be found, this would create new insights into the extent to which English was influenced by Old Norse. The presence of diphthongs could then be accounted for through internal change, or a combination of internal change and Scandinavian influence. Some problems exist regarding the assumption that <ei> in an etymologically monophthongal word signifies Scandinavian origin. Stenbrenden (2016, p. 61) found that the earliest occurrences, before the thirteenth century, of digraph spellings for OE *ā* appear in the South East, West and Central Midlands, rather than in the North. Cole (2018, p. 189) notes that Scandinavian influence would have been unlikely in these areas at the time.

As Cole (2018, p. 199) notes, a similar tendency to diphthongise long mid monophthongs can be found in varieties of Modern Dutch. These 'potential diphthongs', as Collins and Mees (2003, p. 127) call them, are the vowels /eː/, /oː/ and /øː/, which are denoted by the spellings <e(e)> for [eː], <o(o)> for [oː] and <eu> for [øː]. The realisation of these vowels, however, ranges from monophthongal to diphthongal (Collins & Mees, 2003, p. 135). The diphthongal realisations are an innovation that is becoming increasingly prevalent. In the early twentieth century, these vowels were predominantly realised as monophthongs. Throughout the century, they were increasingly pronounced as diphthongs, with diphthongal realisation dominating monophthongal realisations tremendously by the end of the century (Hout & Gerritsen, 1997). Jacobi, Pols and Stroop (2007) found that the variation in diphthongisation between speakers is an indicator of age, location and socioeconomic status. Jacobi et al. (2007) also found that the range of variation found in younger speakers was larger than that in older speakers. This supports the claim that sound change is characterised by extensive variation.

Because of the aforementioned problems in interpreting written data, other methods are needed to provide support for an argument based on orthography. The Uniformitarian Principle suggests that anything that can be observed in the present would have been possible in the past. A probabilistic version of this principle states that "the general distribution of likelihood in a given domain was always the same in the past as it is now" (Lass, 1997, p. 26). Given this principle, it is feasible that a process of diphthongisation similar to the one occurring in modern Standard Dutch could have existed in ME.

This study seeks to examine the variation found in the reflexes of OE *ā*, *ǣ* and *ō* and attempts to find evidence for diphthongisation of these vowels, building on the suggestion that the patterns found in the spelling of these vowels reflects the variation found in the pronunciation of the Modern Dutch vowels /eː/, /oː/ and /øː/ (Cole, 2018, p. 199). This case study investigates the variation found in digraph variants of the reflexes of OE *ā*, *ǣ* and *ō* in two ME texts and compares the results to those reported in studies on diphthongisation in Modern Dutch. The present research contributes to a deeper understanding of the variation caused by sound change and the phonology of ME. Additionally, evidence for internally induced diphthongisation would have implications for the extent to which Scandinavian languages had an influence on English.

3. Method & Data

The data in this study were extracted from texts #246 and #278 from *LAEME* (Laing, 2013). The texts originate from Herefordshire and Worcestershire, respectively, where Stenbrenden (2019) found <ai/ay>, <ei/ey> and <æi> spellings for OE *ǣ* to be present. Additionally, Scandinavian influence is unlikely in this region, as suggested by Cole (2018, p. 189). The texts date from the second half of the thirteenth century. Although this study complements Stenbrenden's (2019) case study, in which a specific set of words was investigated, a different

approach was used in this study. As the objective was to examine the variation found in digraph variants of OE reflexes of *ā*, *ǣ*, *ē* and *ō*, the texts were scanned for digraph variants of etymological monophthongs. The spellings that were included for the ME reflexes of OE *ā* and *ǣ* are <ai/ay>, <ei/ey> and <æi>. The spellings <oi>, <ou> and <eo> were included for the ME reflex of OE *ō*. While this approach did not allow for an extensive analysis of all spelling forms, including monophthongal forms used to denote ME reflexes of *ā*, *ǣ* and *ō*, it ensured an overview of all lemmas in which the digraph spellings appear and eliminated the possibility of only including lemmas leading the sound change or words unaffected by the sound change. *The Oxford English Dictionary Online* (*OED*) was used to check the etymologies of words containing one of the relevant digraphs, to make sure that they did not contain an etymological diphthong. In cases where the etymology listed in the *OED* was not considered conclusive, the online *Middle English Dictionary* was consulted. Words that contained an etymological diphthong (e.g. ME <dai> < OE <dæg>; ME <mai> < OE <mæg>) and Scandinavian loanwords with diphthongal vocalisms were excluded (e.g. ME <swain> < Old Norse *sveinn*).

In the writing system used in text #246, <ei> in stressed syllables almost always indicates the reflex of a long vowel or diphthong ([æː], [eː], [eːo] and [eːa]). As the OE long mid diphthong [eːo], spelt <eo>, merged with [æː], and the OE long low diphthong [eːa] merged with [eː] during the transition from OE to ME, I interpret <ei> in this text as denoting a later tendency to diphthongise long monophthongs rather than a remnant of the OE diphthongs.

Once the data had been extracted, the lemmas in the data that appeared in rhyming position were analysed. The nearby word(s) in the rhyme sequence were listed and the etymologies of those words were checked in the *Oxford English Dictionary* in order to determine whether these words contained etymological diphthongs.

4. Results and Discussion

4.1. Results and Discussion: Spelling

Based on previous work by Stenbrenden, who found the forms <ai/ay> and <ei/ey> for reflexes of OE *ǣ* to be present in the West Midlands (2019), texts from this area were analysed. As predicted, <ai/ay> and <ei/ey> for reflexes of OE *ǣ*, *ā* and *ē*, alongside <æi> for OE *ǣ* and *ā*, and <eo>, <oi> and <ou> for OE *ō*, were found in the two texts that were analysed.

Table 1 illustrates the lemmas for which digraphs suggestive of unetymological diphthongal reflexes were found in text #246. Appendix A shows the full list of relevant lemmas, as listed in *LAEME*, and their spellings, including duplicates. A total of 114 unetymological diphthongs were found (see Appendix A). Of those, the spelling <ei/ey> was the most common (81 tokens). The spelling <æi> denoting a reflex of OE *ǣ*, *ā* or *ē* was not present in this text.

Table 1. Lemmas in text #246 in which digraphs indicative of an unetymological diphthong appeared (no duplicates).

Spelling	Lemmas in which diphthongal spellings appeared
<ai>/<ay>	*bepæ:can, betæ:can, biddan, give, weila:wei[2]*
<ei>/<ey>	*these, adread, adrencan, aræ:can, be, be:tan, behold* (pret. sg)*, beseech, biddan, bread, -lead, cennan, death, do, ere, faran, fiend, flesh, foot, glad, ha:tan, heath, herd, here, hither, læ:tan, le:asung, lord, overwendan, ræ, red, send, staff, stream, tear, there, thief, tooth, weila:wei, year*
<eo>	*do, into, wo:p,*

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[2] ME *weilawei* and *wailawail* is an interesting example because it derives from OE *wā* 'woe' and has been associated with Old Norse influence (see Dance, 2003, p. 441) but is already recorded in OE as *weg la weg* which indicates that native diphthongal variant reflexes of OE *ā* could and *did* develop.

<oi>	*good, do, wroth, forsooth, ungood, stand, god, sto:r, gold, go, ghost, god, cross, good, cloth*
<ou>	*roof, frost*

Lemmas in which digraphs suggestive of an unetymological diphthongs appeared found in text #278 are shown in Table 2. A full list of spellings for these lemmas in this text can be found in Appendix B. 45 lemmas in which digraphs suggestive of an unetymological diphthong appeared were found in this text (see Appendix B). The form <eo> as a reflex of OE $\bar{o}$ was the most common (14 tokens). The form <oi> did not appear as a reflex of $\bar{o}$ in this text.

Table 2. Lemmas in text #278 in which digraphs indicative of an unetymological appeared (no duplicates).

Spelling	Lemmas in which diphthongal spellings appeared
<ai>/<ay>	*atwealdan, bath, belæ:fan, he:an, le:c, loth, mæ:nan, oath, ya:*
<ei>/<ey>	*be, lady, seal*
<æi>	*any, bere:afian, foot, hie, le:asung, lead, mæ:nan, manræ:den, ræ:d, ræ:san*
<eo>	*brother, sooth, for, behove, soon, forth-, nose, loss, fore-, bod, lose*
<ou>	*good, word, to-*

In both texts, diphthongal spellings for the lemmas in Tables 1 and 2 appear alongside monophthongal spellings. In text #246, the word *red*, for example, appears as <reid>, but <dairet> '*dayred*' and <rede> also appear. *Glad*, for which the form <gleit> occurred, was also spelled as <glade> throughout the text. Similarly, *into* is spelled <into> and <inte>, alongside <inteo>. The same pattern applies to text #278, in which *oath* is spelled <aides>,

but also <æd> and <ades>. *Good*, which appeared as <goudne>, is primarily spelled <god> throughout the text. The alternation between spellings suggestive of monophthongal and diphthongal realisation suggests variation in the realisation of OE long monophthongs in ME.

As can be concluded from Appendices A and B, the digraphs suggestive of a diphthongal realisations appear before a wide range of consonants, including stops (e.g. <baid>, <fæit>), fricatives (e.g. <læisinge>, <bilaiuen>), nasals (e.g. <mæ:nan>) and liquids (e.g. <seil>, <heir>). This implies that if these digraphs denote unetymological diphthongs, diphthongal reflexes of etymological monophthongs are not confined to a particular phonological environment. Additionally, if diphthongal spellings are to be taken at face value, it may be concluded that the phonological environment does not affect the openness or quality of the diphthong, as each digraph appears in roughly the same phonological environment.

While it is impossible to determine exactly what sounds were represented by the spelling system of ME, some clues point towards evidence of diphthongisation. Unetymological diphthongal spellings were found in environments where diphthongisation would be expected. It has been established that postvocalic *l* and *r* trigger breaking in OE (Campbell, 1959, pp. 54-60). Some spellings that were found seem to indicate breaking before *l* or *r*: for example <goil> *gold*, <seil> *seal*, <bifeore> *before*, <areirede> *area:ran* and <heir> *here*. Some examples of this were, strikingly, also found in unstressed syllables, such as <pileir> *pillar*, <oueir> *over* and <fadeir> *father*. Breaking before *r* is also found in Modern Dutch (Botma & van Oostendorp, 2012, p. 149), which causes words like *hier* 'here' to be realised like [hiːər] by some speakers rather than the standard pronunciation [hiːr]. Additionally, an example of breaking caused by a velar fricative also appeared: <wouh> *wo:h*. It is generally recognised that velar fricatives could have caused breaking in OE (Howell, 1991, p. 1). Similarly, in Old Frisian, the consonant clusters /χχ/, /χs/ and /χt/ caused the vowels *e* and *i* to become diphthongised (Bremmer, 2009). The fact that digraphs appear

in environments in which a glide might be expected suggests that scribes used these spellings to denote diphthongal realisations, and it could, thus, be argued that the same digraphs in lemmas where a diphthong would not be expected could have been used to reflect diphthongal variants.

Another innovative spelling form that appeared included a medial *h* between two vowels, where a long vowel would be expected. Examples of these include <fehid> *feet* and <clohit> *cloth*. These forms were also noticed by Lass and Laing (2010) in a study on *h* in ME. While intervocalic *h* might seem to indicate a syllable break at first sight, Lass and Laing note that this is unlikely as it appears in monosyllabic constituents and hypothesise that *h* is null in these contexts. However, it could be argued that *h*, while null, could be a diacritic marker indicating a break between the two morae of the long vowel, suggesting a possible change in vowel quality at this point.

4.2. Results and Discussion: Rhyme

Table 3 presents an overview of the lemmas containing digraphs suggestive of an unetymological diphthong that occur in rhyming position in text #246. 21 words in which these digraphs were identified appeared in this position. These are in bold type face in the table. Of those, 6 pairs (i.e. 12 lexical items) of rhyme words contained two words in which unetymological digraphs appeared (e.g. <gleit> : <adreit>, <goid> : <doit>). Pairs that contain one lemma in which a digraph indicative of an unetymological diphthongal realisation appears and one in which the spelling suggests an etymological monophthongal realisation also appeared (e.g. <keint> : <send>).

Table 3. Lemmas in text #246 that appear in rhyming position (words in bold font contain digraphs suggestive of an unetymological diphthongal realisation).

Spelling	Lemmas in rhyming position	
<ai>	<saiste> *sehtan* ppl.	**<bitaiste>** *betæ:can* **sg. pret.**
	<haiste> *æ:ht*	**<bitaiste>** *bepæ:can*
	<stresten> *stretch* pl. pret.	**<bitaisten>** *betæ:can* **pl. pret.**
<ei>	**<gleit>** *glad*	**<adreit>** *adread* **ppl.**
	<arecheit> *aræ:can* **3.sg**	<hit> *hit* 3.sg
	<-leit> *-lead*	**<reid>** *red*
	<keint> *cennan* **ppl.**	<sent> *send* ppl.
	<heit> *heath*	**<deit>** *death*
	<heit> *ha:tan* **sg. pret.**	<fehid> *feet*
	<seine> *see* **inf.**	<tenne> *te:ona*
<ey>	**<streim>** *stream*	<ney> *nigh*
<oi>	**<goid>** *good*	**<doit>** *do* **3.pl**
	<doit> *do* **3.pl**	**<wroit>** *wroth*
	<forsoit> *forsooth*	**<loit>** *louen* **3.pl**
	<stod> *stand* sg. pret.	**<ungoid>** *ungood*

In text #278, only 4 pairs of rhyme words were found, as is represented in Table 4. As was the case in text #246, in the pair that contains two lemmas with digraphs indicative of unetymological diphthongs, the spelling for the vowels in both of these words is the same (<leose> : <neose>). Again, rhyme word pairs including one lemma containing a digraph indicative of an unetymological diphthong and one lemma containing a spelling suggestive of an etymological monophthong were found (e.g. <fæit> : <bet>, <oder> : <breoþer>)

Table 4. Lemmas in text #278 that appear in rhyming position (words in bold font contain digraphs suggestive of an unetymological diphthongal realisation).

Spelling	Lemmas in rhyming position	
<æi>	**<fæit>** *feet*	<bet> *better*
<eo>	**<breoder>** *brother*	<oder> *other*
	<oder> *other*	**<breoþer>** *brother*
	<neose> *nose*	**<leose>** *loss*

The rhyme patterns that were analysed are problematic to interpret. The rhyme word pairs which consist of two words containing spellings indicative of unetymological diphthongs, e.g. <gleit> : <adreit>, <goid> : <doit> and <leose> : <neose>, suggest that it is likely that the vowels in each pair were pronounced similarly, and that the use of a digraph cannot be ascribed to the scribe forcing rhyme by manipulating the vocalism in one of the rhyme words. These rhyme word pairs are suggestive of a tendency to diphthongise these lexical items. Rhyme word pairs consisting of two words containing a digraph spelling indicative of an unetymological diphthong also imply that diphthongal spellings were common for these lemmas. Other rhyme sequences in these texts, nevertheless, provide evidence against diphthongisation. In both texts, rhymes were found that contained two different vowel spellings in the rhyming syllable, such as <stod> *stand* : <ungoid> *ungood* and <fæit> *feet* : <bet> *better*. These indicate that the diacritic <i> does not denote a diphthong, but rather lengthening or raising. However, these examples could also imply that diphthongisation is not represented consistently in spelling. Additionally, there are two instances of <bitaiste> *betæ:can* rhyming with a word containing an etymological diphthong (<saiste> *sehtan* and <haiste> *æ:ht*). These pairs prove that the digraph in <bitaiste>, in this case, denote a diphthong.

4.3. Discussion: Diphthongisation of long monophthongs in ME and Modern Dutch

Cross-linguistic comparison with the results of studies of change in progress in varieties of

Modern Dutch militates in favour of the view that the monophthongal and diphthongal

pronunciations attested by the ME spellings reflect the variation that would have characterised

reflexes of the OE mid long monophthongs. The variety of spellings found in the Middle

English texts including digraphs suggestive of both monophthongal and diphthongal variant

pronunciations, if taken at face value, suggests a similar pattern to the one found in Dutch. As

discussed in section 2, variationist studies have found a tendency for Dutch speakers to

diphthongise the mid long monophthongs /e:/, /ø:/ and /o:/ (Collins & Mees, 2003, p. 127;

Jacobi, Pols & Stroop, 2007; van de Velde, van Hout & Gerritsen, 1997). Variation is found

within the openness of the onset of these potential diphthongs in Modern Dutch (Collins &

Mees, 2003; Jacobi et al., 2007). For the ME reflexes of the OE vowels *ā* and *ǣ*, spelling

forms range from <ei/ey> to <ai/ay>, with <æi> in between them. These forms could possibly

reflect the openness of the onset of the sound, with <ei> suggesting a closer onset than <æi>

and <ai>. This would parallel the variation found in the onsets of Modern Dutch potential

diphthongs. However, in Dutch, the wide variety of realisations has only been reported in

between groups; no studies have currently investigated whether this variation can also be

found within speakers. Idiolectal variation might be expected, though, as this is characteristic

of sound change (Guy, 2017).

      Related to the diphthongisation of the Dutch vowels /e:/, /ø:/ and /o:/ is the lowering of

the diphthongs /εi/, /œy/ and /ɔu/ in the variety of Dutch called *Polder Dutch* (van

Oostendorp, 2013, p. 451). Van Oostendorp states that it was the lowering of these diphthongs

that allowed the steady state vowels /e:/, /ø:/ and /o:/ to become diphthongised and argues that

the diphthongised realisations of these vowels come close to resembling the traditional quality

of the diphthongs /εi/, /œy/ and /ɔu/ (2013, p. 451). Wełna (2007) reports the merging of [ai]

and [ei] to [ai]. Such a sound change would closely reflect part of the chain of changes that led to the diphthongisation of Dutch /e:/, which could account for the possible diphthongisation of the reflexes of OE *ǣ, ē* and *ā*. However, more evidence is needed to confirm that this shift occurred in this dialect or idiolect particularly, and further research is needed to investigate whether a similar sound change could account for the possible diphthongisation of the reflexes of OE *ō*.

Finally, the spelling forms <ai>, <ay> and <æi> as reflexes of OE *ǣ* only appear in the West Midlands (Stenbrenden, 2019). This is also the case for the form <e(o)>, a reflex of OE *ō* (Stenbrenden, 2016, p. 199). Additionally, <ou> and <ow> are first found in texts from the West Midlands before appearing in other areas (Stenbrenden, 2016, p. 205). Because these digraph variants of reflexes of OE vowels are confined to this region, it could be suggested that a process of diphthongisation, restricted to the West Midlands, could have affected a set of vowels in the dialects spoken in this region. It appears unlikely that scribes in this region collectively departed from a conventional spelling system, and it seems reasonable to suggest that such a change in spelling confined to one region would be the result of a significant change in pronunciation in the regional dialect. The confinement of these forms to the West Midlands is comparable to the diatopic restriction of high levels of diphthongisation found in the urban areas of the Netherlands (Jacobi et al., 2007).

5. Conclusion

This paper aimed to provide evidence for a diphthongal realisation of the digraphs <ai/ay>, <ei/ey>, <æi>, <eo>, <oi> and <ou> denoting the ME reflexes of OE *ā, ǣ, ē* and *ō*, which appear alongside the expected spellings, <a>, <æ>, <e> and <o>. These digraph spellings suggest the tendency to diphthongise the reflexes of OE *ā, ǣ, ē* and *ō*. However, traditional

views state that the <i> found in these spellings acts as a diacritic marker indicating vowel length or raising, rather than a diphthong (e.g. Stenbrenden, 2019).

Evidence based on spelling suggested that there was a tendency for speakers in ME to diphthongise reflexes of the OE long monophthongs $\bar{a}$, $\bar{æ}$, $\bar{e}$ and $\bar{o}$, and that scribes were capable of using digraphs to denote diphthongal pronunciations. Some evidence was found for the use of <i> as a diacritic marker of length in rhyme words, although other rhyme data suggested diphthongisation. These contradicting results might suggest that there was a tendency to diphthongise long monophthongs that was not reflected in spelling consistently.

Similarities were found between the diphthongisation of long monophthongs in Modern Dutch and ME. Although this cannot be regarded as conclusive evidence, the processes attested in the related language of Modern Dutch demonstrate that comparable processes could have occurred in ME. Data indicated that diphthongal realisations of OE long monophthongs were found alongside monophthongal realisations in ME, reflecting the presence of monophthongal and diphthongal realisations of long monophthongs in Modern Dutch. Additionally, a sound change merging [ai] and [ei] (Wełna, 2007) parallels a shift in the vowel space in Modern Dutch, which allowed for the long monophthong [e:] to become diphthongised. These similarities between Modern Dutch and Middle English indicate that the possible process of diphthongisation suggested by digraphs in spellings of etymologically monophthongal words could have reflected the process of diphthongisation in Modern Dutch.

This study did not examine the use of digraphs as reflexes of OE long monophthongs over time, which limited the possibility to compare the possible process of diphthongisation to the findings of Dutch studies. However, as OE $\bar{æ}$ (Stenbrenden, 2016, p. 79) and $\bar{e}$ (Stenbrenden, 2016, p. 103) were eventually raised to /iː/ (Stenbrenden and $\bar{o}$ was raised to /uː/ (Stenbrenden, 2016, p. 197), the diphthongal realisations of OE long monophthongs might have characterised the development of these vowels at one point in time, but were never

developed any further. Another possibility is that the diphthongal realisation of these vowels was confined to the West Midlands, which this study focuses on. Future research could investigate whether diphthongal realisations of OE long monophthongs also occur in other texts from the West Midlands and other parts of the country. Additionally, this study proposed that certain sound changes could have facilitated the diphthongisation of long monophthongs, similar to the sound changes leading to the diphthongisation of /eː/, /øː/ and /oː/ in Modern Dutch. Further research is required to determine whether any sound changes in ME or OE could have led to the diphthongisation of long monophthongs.

References

Botma, B., & Van Oostendorp, M. (2012). A propos of the Dutch vowel system 21 years on, 22 years on. In B. Botma & R. Noske. (Eds.), *Phonological explorations: Empirical, theoretical and diachronic issues* (pp. 135-154). Berlin, Germany: De Gruyter.

Bremmer, J. R. H. (2009). *Introduction to Old Frisian: History, grammar, reader, glossary.* Amsterdam, The Netherlands: John Benjamins.

Campbell, A. (1959). *Old English grammar.* Oxford, England: Oxford University Press.

Chen, M. (1972). The time dimension: Contribution toward a theory of sound change. *Foundations of Language, 8*, 457-498.

Cole, M. (2018). A native origin for present-day English *they*, *their*, *them. Diachronica, 35*, 165-209. doi:10.1075/dia.16026.col

Collins, B., & Mees, I. (2003). *Phonetics of English and Dutch* (5th ed.). Leiden, The Netherlands: Brill.

Dance, R. (2003). *Words derived from Old Norse in Early Middle English: Studies in the vocabulary of the South-West Midlands texts.* Tempe, AZ: Arizona Center for Medieval and Renaissance Studies.

Guy, G.R. (2017). Variationist approaches to phonological change. In B. D. Joseph & R. D. Janda (Eds.), *The handbook of historical linguistics* (pp. 369-400). doi:10.1002/9781405166201.ch8

Howell, R. B. (1991). *Old English breaking and its German analogues.* Tübingen, Germany: Niemeyer.

Jacobi, I., Pols, L. C., & Stroop, J. (2007). Dutch diphthong and long vowel realizations as changing socio-economic markers. *Proc. 16th ICPhS* (pp. 1481-1484).

Laing, M. (2013). *A linguistic atlas of Early Middle English, 1150–1325* (version 3.2).

    Edinburgh, Scotland: The University of Edinburgh. Retrieved from:

    http://www.lel.ed.ac.uk/ihd/laeme2/laeme2.html.

Lass, R. (1997). The past, the present and the historian. In *Historical linguistics and language*

    change (pp. 4-43). Cambridge, England: Cambridge University Press.

    doi:10.1017/CBO9780511620928.003

Lass, R. (1997). Written records: Evidence and argument. In *Historical linguistics and*

    language change (pp. 44-103). Cambridge, England: Cambridge University Press.

    doi:10.1017/CBO9780511620928.004

Lass, R. (2000). Phonology and morphology. In R. Lass (Ed.), *The Cambridge history of the*

    English language (pp. 56-186). Cambridge, England: Cambridge University Press.

    doi:10.1017/CHOL9780521264761.004

Lass, R., & Laing, M. (2010). In celebration of Early Middle English 'h'. *Neuphilologische*

    Mitteilungen 111, 345-354.

Middle English Dictionary. (n.d.). Ann Arbor, MI: University of Michigan Press. Retrieved

    from https://quod.lib.umich.edu/m/middle-english-dictionary/dictionary

Oxford English Dictionary Online. (n.d.). Oxford, England: Oxford University Press.

    Retrieved from https://www.oed.com/

Stenbrenden, G. F. (2016). *Long vowel shifts in English, c.1050–1700: Evidence from*

    spelling. Cambridge, England: Cambridge University Press.

    doi:10.1017/CBO9781107295469

Stenbrenden, G. F. (2019) .The development of Old English ǣ: Middle English spelling

    evidence. In R. Alcorn (Ed.), *Historical Dialectology in the Digital Age* (pp. 113-132).

    Edinburgh, Scotland: Edinburgh University Press.

Van de Velde, H., Van Hout, R., & Gerritsen, M. (1997). Watching Dutch change: A real time

study of variation and change in Standard Dutch pronunciation. *Journal of*

Sociolinguistics, 1, 361-391. doi:10.1111/1467-9481.00021

Van Oostendorp, M. (2013). Holland and Utrecht: More recent developments. In F. Hinskens,

J. Taeldeman, & H. Steger (Eds.), *Language and space. An international handbook of*

linguistic variation. Vol. 3: Dutch (pp. 443-453). Berlin, Germany: De Gruyter

Mouton.

Wełna, J. (2007). The loss of [ei]:[ai] opposition in Middle English. *Studia Anglica*

Posnaniensia, 43, 3-16. Retrieved from

https://repozytorium.amu.edu.pl/handle/10593/19043

Appendix A.

Lemmas and spellings in which digraphs indicative of unetymological diphthongisation

appear in text #246.

Digraph	Spelling, lemma, tense (for verbs only)
<ai/ay>	<bipaiste> *bepæ:can* ppl.
	<bitaiste> *betæ:can* sg. pret.
	<bitaisten> *betæ:can* pl. pret.
	<bait> *biddan>* sg. pret.
	<gaif> *give* sg. pret.
	<weilaway> *weilawei*
<ei/ey>	<þeis> *these*
	<adreit> *adread* ppl.
	<adreinte> *adrencan* ppl.
	<arecheit> *aræ:can* 3.sg
	<areirede> *aræ:ran* sg. pret.
	<bein> *be* inf.
	<bein> *be* inf.
	<bein> *be* inf.
	<bein> *be* inf.
	<bein> *be* inf.
	<bein> *be* inf.
	<beit> *be 2.pl*
	<beid> *be* 3.pl
	<beit> *be* 3.pl
	<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<boeit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be* 3.pl

<beit> *be:tan* imp.

<biheild> *behold* sg. pret.

<biseich> *beseech* imp.

<beid> *biddan* sg. pret.

<breit> *bread*

<breit> *bread*

<bruþenleit> *bry:þenlead*

<keint> *cennan* ppl.

<deit> *death*

<deit> *death*

<deit> *death*

<þeit> *death*

<deit> *do* 3.sg

<deit> *do* 3.sg

<heir> *ere*

<heireþenne> *erethat*

<farein> *faran* ppl.

<feind> *fiend*

<veinde> fiend

<feind> *fiend*

<fleisc> *flesh*

<feid> *foot*

<feit> *foot*

<feit> *foot*

<yeil> *gieldan* imp.

<gleit> *glad*

<heit> *ha:tan* sg. pret.

<heit> *ha:tan* sg. pret.

<heit> *ha:tan* sg. pret.

<heit> *ha:tan* sg. pret.

<heit> *heath*

<heirde> *herd*

<heir> *here*

<heir> *here*

<heir> *here*

<heir> *here*

<heire> *here*

<leit> *læ:tan* imp.

<leit> *læ:tan* 3.sg

<leissingke> *le:asung*

<loueird> *lord*

<owirweint> *overwendan* 3.sg

<reid> *ræ*

<reid> *red*

<seint> *send* 3.sg

<steif> *staff*

<streim> *stream*

<teires> *tear*

<þeir> *there*

<þeif> *thief*

<teit> *tooth*

<weiliuei> *weila:wei*

<yeir> *year*

<yeir> *year*

<eo>   <deode> *do* sg.pret.

<inteo> into

<weope> *wo:p*

<neoseþurles> *noseþyrl*

<oi>   <goid> *good*

<goid> *good*

<goid> *good*

<doit> *do* 3.pl

<wroit> *wroth*

<forsoit> *forsooth*

<ungoid> *ungood*

<stoit> *stand* sg.pret.

<goid> *god*

<stoit> *stand* sg.pret.

<stoir> *sto:r*

<goil> *gold*

<stoir> *sto:r*

<goil> *gold*

<stoir> *sto:r*

<goit> *go* 3.sg

<goist> *ghost*

<goid> *god*

<crois> *cross*

<goid> *good*

<clohit> *cloth*

<ou>   <rouf> *roof*

<vours> *frost*

Appendix B.

Lemmas and spellings in which digraphs indicative of unetymological diphthongisation

appear in text #278.

Digraph	Spelling, *lemma*, tense (for verbs only)
<ai>	<atwailden> *atwealdan* inf.
	<baid> *bath*
	<bilaiuen> *belæ:fan* inf.
	<haines> *he:an*
	<laichen> *le:c*
	<laid> *loth*
	<mainen> *mæ:nan* inf.
	<aides> *oath*
	<þai> þ*a*
<ei>	<weis> *be* sg. pret.
	<leiuedi> *lady*
	<seil> *seal*
<æi>	<æine> *any*
	<biræiued> *bere:afian*
	<fæit> *foot*
	<hæiȝede> *hie* sg. pret
	<læisinge> *le:asung*
	<læiden> *lead* inf.
	<mæinde> *mæ:nan* sg. pret.
	<monræidene> *manræ:den*
	<ræide> *ræ:d*

	<ræisen> *ræ:san* inf.
<eo>	<breoderen> *brother*
	<seode> *sooth*
	<biheovede> *behove* sg. pret.
	<seone> *soon*
	<feord> *forth*
	<neose> *nose*
	<leose> *loss*
	<breoþer> *brother*
	<feore> *fore-*
	<beod> *bod*
	<breoder> *brother*
	<breoder> *brother*
	<breoder> *brother*
	<leosen> *lose* 1. pl
<ou>	<goud> *good*
	<wouh> *wo:h*
	<goudne> *good*
	<wourd> *word*
	<touwarde> *toward*
	<touward> *toward*
	<touward> *toward*
	<touward> *toward*
	<touward> *toward*