Open syllable lengthening in Middle Dutch: Evidence from verse

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ABSTRACT

OSL or Open Syllable Lengthening has been a controversial topic in Germanic phonology. Although all West Germanic (WGmc) languages underwent OSL during the medieval period, it is still not entirely clear when the process was completed in individual languages. Dutch historical grammars assume that OSL was complete by the beginning of the Middle Dutch period but metrical evidence suggests that it was not so in a late 13th century text The *Life of St Lutgart* (Fikkert 2000). This paper attempts to determine a more precise time line for the onset of OSL in Dutch. We examined two late 14th century Brabantic texts in the manuscript Marshall 29 (1375 AD), *Mellibeus* and *Saladijn* to ascertain when exactly OSL originated in (Brabantic) Middle Dutch. A combination of diachronic correspondences and a careful examination of the texts written in verse during the course of approximately 75 years, has helped us to establish the synchronic systems of 13th and 14th century Middle Dutch and furthermore, has allowed us to determine the onset of prosodic changes like OSL. Orthographic, rhythmic and metrical evidence from the three texts suggests that OSL was incomplete in the earliest period and was finalised in the late 14th century in Brabant, thereby refuting the assumption of standard grammars that OSL was completed before the onset of Middle Dutch in general.[1]

1. INTRODUCTION

OSL or Open Syllable Lengthening has continued to be a much debated topic in Germanic phonology. Although all West Germanic (WGmc) languages underwent OSL during the medieval period, it is still not entirely clear when the process was finalised in individual languages. This includes Middle English, Middle High German, Middle Low German and Middle Dutch (cf. Lahiri & Dresher 1999, Minkova 1982, 1985 and references therein). Modern Dutch still shows evidence of OSL particularly in a set of singular-plural noun pairs with a short vowel in closed syllables and a long vowel in open syllables; e.g., *god* [xɔt] –

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goden [xoːdə] ‘gods’, *dag* [dax] – *dagen* [daːxə]. It is generally assumed that at some point during the Middle Dutch (or *Middelnederlands*, MNL) period[2], short vowels in stressed open syllables were lengthened in disyllabic forms and ensuing paradigmatic alternations still prevail. Lengthening in open syllables occurred also in English and German. In Middle English (ME), for instance, OSL but was obscured in words of three syllables due to trisyllabic shortening e.g. *hāmor – hamores* ('hammer-hammers'). In MHG, on the other hand, medial geminate fricatives resulting from the second consonant shift blocked OSL in cases where English and Dutch show lengthening in open syllables, e.g. OE *open* [o], ME and Modern English *open* [oː], MNL and Modern Dutch *open* [oː], but OHG and MHG *offen* short [ɔ] .[3]

Since our focus is on Dutch, we should note that almost all the vowels with no nominative singular suffix such as *dag~dagen* show a V~V: pattern in Modern Dutch. Thus, Dutch has the clearest set of examples where several heterosyllabic words with original short vowels, appear with lengthened vowels since OSL was not obscured by any other obvious phonological processes. There has been no systematic levelling as in English other than a few

[2] Generally dated 1150-1550, cf. Sytsema et al.(2014).

[3] Views on why OSL has occurred differ. However, this is not the context to discuss the various theories regarding the source and cause of OSL; what is crucial is that it did occur in most West Germanic languages around the same period. There is plenty of evidence that Middle English (ME) as well as Middle High German (MHG) short stressed vowels were also lengthened although there are conditions in which the lengthening has become opaque on the surface. For instance, Trisyllabic Shortening in ME makes all stressed vowels short thereby eradicating evidence of OSL in the plural; cf. OE *hamor – hamoras*, ME *hāmor* (OSL) – *hamores* (TSS). Evidence from Modern English suggests that analogy levelled the lengthening in both directions; some words survived with long vowels e.g. *beaver*, while some remained short *hammer, ‘*devil’. In MHG, the Second Consonant Shift caused gemination of medial voiceless stops, thereby blocking the lengthening in the first syllable in forms where Old English and Modern Dutch do show OSL. e.g., OE *wæter* (V) – Modern Dutch *wāter* (V:) – OHG *wazzer* (V). OSL did take place in disyllabic forms with other medial consonants, (including nasals and fricatives) where the preceding syllable remained open, e.g. OHG *namo* (V) – OE *nama* (V) – Modern German *Name* (V:).

examples such as *sap~sappen*. [4] Furthermore, since Dutch did not have a rule of TS, all disyllabic words with open stressed syllables underwent lengthening and all of these have long vowels in Modern Dutch as in *vogel* [ō], *hamer* [ā], *water* [ā], *koning* [ō], *weduwe* [ē], etc.

Nevertheless, the timing of OSL in the history of Dutch remains uncertain. Generally grammars have assumed that OSL was complete by the time of the earliest MNL texts were written (Franck 1910: §13, Schönfeld 1947: §30, Van Bree 1987: 86, 91; Zonneveld 2000; Van Loey 1968: II, 2; Van Loon 2014). However, the texts in the MNL period cover a period of approximately 350 years (1200-1550, cf. Pijnenburg et al.: 1997 and Willemyns & Van der Horst: 1997). It is not obvious if evidence in support of OSL is available through the entire period. Indeed, Fikkert (2000), argues that OSL cannot convincingly be proven to have taken place in the 13th century *Life of St Lutgart*, one of the earliest text in this period.[5] She concludes on the basis of rhyme that there is no clear evidence that original long vowels rhyme with original short vowels which could have undergone OSL. Our intention here is to examine a range of texts in this period to glean further evidence (orthography, rhyme, metrical structure) which can allow us to pinpoint more precisely the onset of OSL. Since rhyming verse is the obvious source of such evidence, we chose three Middle Dutch texts covering a period of approximately 75 years.

The earliest text is the *Life of St Lutgart* along with two 14th century texts attested in the Manuscript Marshall 29 — *King Saladijn* by Hein van Aken, and *Mellibeus* by Jan van Boendale. The *Life of St Lutgart*, based on Thomas de Cantimpré's *Vita piae Lutgardis* was written in Middle Dutch by Willem van Afflighem (born in 1210) who was the abbot of the monastery of St Truiden. He completed the *Life of St Lutgart* in 1274. This work is known from just one manuscript dating back to around 1300 which contains books 2 and 3.[6] Lutgart,

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[4] Compare Modern Dutch *sap ~ sappen* from earlier MNL forms *saeps* (GENITIVE SINGULAR), *sape* (DATIVE / PLURAL); cf. *Middelnederlandsch woordenboek* 1885; also cf. Lahiri & Dresher (1999: 216, Appendix)

[5] Other texts before 1300 include the literary texts *Der naturen bloeme* by Jacob van Maerlant and his *Rijmbijbel*, the Arthur novel *Perchevael, Reynaert, Sinte Kerstine* and various fragments, all of which are published in Gysseling & Pijnenburg (1977). Cf. Van Oostrom (1992: 73) for an overview.

[6] Only books 2 and 3 of the *Life of St Lutgart* have survived in *Kopenhagen, Ny kgl. Saml. 168 43*.

a mystic born in Tongeren in 1182, entered the monastery in Aywières near Lièges in 1206. In a vision, the Holy Virgin granted her request never to be able to speak French, so that she did not have to become an abbess in a French speaking monastery. The book is the story of St. Lutgart's life. *Van den coninc Saladijn ende van Hughen van Tabaryen* ('About King Saladijn and Hughen van Tabaryen') is based on an Old French work *Ordène de chevaleri*e, *par Hues de Tabarie.* It relates the history of the captured crusader and knight Hughe van Tabaryen who is brought before King Saladijn. The King has an earnest desire to be knighted and requests the captured knight to make him one. Since only a free man is allowed to grant knighthood, King Saladijn releases his captive. This 'sproke' or tale by Hein van Aken perhaps goes back to the late 13th or early 14th century. *Mellibeus* is a dialogue between Mellibeus and his wife Prudentia concerning leading a moral life, based on *Liber consolationis et consilii* by Albertanus van Brescia. The work was completed in 1342. MS Marshall 29, in which *Saladijn* and *Mellibeus* are handed down, dates back to around 1375, and is about 75 years younger than the Lutgart manuscript (Kienhorst 2005: 799). This enables us to compare texts from different points in time within a reasonably circumscribed area.[7] All three texts are written in rhyming verse, which allows us to draw conclusions from rhyme and meter. Lutgart is written in iambic verse (cf. Zonneveld 2000, Fikkert 2000) and we will show that *Saladijn* is also iambic contrasting with the *Mellibeus* text which is in trochaic verse. In terms of the original versions of the manuscripts, the *Lutgart* manuscript available to us is around 1300 while van Afflighem has been known to have written it in 1274. The Marshall manuscript is dated around 1375, while the original texts are from around 1332 (*Mellibeus*) and 1300 (*Saladijn*).

For each text, we draw evidence from orthography, rhyme and meter: each aspect on its own would be insufficient. Since almost definitely OSL began during the medieval period of all the West Germanic languages, for purposes of comparison with earlier periods we refer not only to reconstructed Proto-Germanic forms but also to Old English and Old High

[7] In terms of geographical space, the places where the manuscripts originated are approximately in a triangle, around 60 km apart. Boenaldale comes from Antewerp while van Aken comes from Brussles, approximately 35 miles apart. *Lutgart* was written in the monastary of St Truiden which is in the east of Brabant, 59 miles from Antwerp and 40 miles from Brussles. There were no obvious geographical barriers between these places. Thus, although the changes could have proceeded in a diffuse fashion, the texts are geographically close enough to be considered to be situated in one area.

German where relevant, particularly since hardly any documented evidence of Old Dutch exists in literary texts.

The structure of the article is as follows: In section 2 we begin with a recapitulation of the Modern Dutch effects of OSL and then trace them back to the three texts. In section 3, we discuss spelling evidence, in section 4 evidence from rhyme and in section 5 evidence from metre.

2. OSL EFFECTS IN MODERN DUTCH. Modern Dutch contrasts short and long vowels and vowel length is clearly reflected in writing as we see in (1); short stressed vowels are indicated by a single grapheme and are always followed by two consonants in heterosyllabic words. Long vowels are written with two graphemes in closed syllables, but with just one grapheme in open syllables. In this table, we have pairs of nouns ending with an obstruent or a sonorant, four with short vowels and two with long vowels.

(1) Vowel length in Modern Dutch

	Singular	**Plural**	**Gloss**
a)	bok V	bokken V	‘billy goat’
	bal V	ballen V	'ball'
b)	maag V̄	magen V̄	‘stomach’
	boom V̄	bomen V̄	' tree'
c)	dak V	daken V̄	‘roof’
	hol V	holen V̄	‘hole’

In general, other than the effects of OSL, quantity of Proto-Germanic (PGmc) vowels has largely remained constant in Modern Dutch. In (a), both vowels are short because the medial consonant in the plural was originally a geminate, which blocked OSL. Degemination occurred throughout the phonological grammar later in Middle Dutch (Van Bree 1987: 155; Schönfeld 1970: 58, Van Loey 1968: 109; also see Lahiri & Dresher 1999). We discuss this in more detail later. In (b), the vowel is underlyingly long and remains so in both singular and plural. In (c), however, we see the effects of OSL in the plural. Thus, the vowel in the singular is short, but long in the plural. Consequently, there is a short-long vowel alternation

in some words in the nominal paradigm.[8] Evidence that original long vowels were retained in Dutch is provided in (2).

(2) Proto-Germanic long vowels[9]

	PGmc	**Old English**	**Modern Dutch**	**Gloss**
a)	*sprēkō- V̄	sprǣc V̄	spraak V̄	speech
b)	*drauma- V̄	drēam V̄	droom V̄	dream
c)	*blōda- V̄	blōd V	bloed V̄[10]	blood
d)	*baina- V̄	bān V̄	been V̄	bone, leg
e)	*swīna- V̄	swīn V̄	zwijn V̄	pig
f)	*hūsa- V̄	hūs V̄	huis V̄	house

That OSL applied whenever possible is obvious from original disyllabic words. Whenever the stressed vowel was in an open syllable (as in 3a and 3b), the vowel was lengthened irrespective of the quality of the following syllable. The long vowel has generally survived in Modern Dutch even when the word has become monosyllabic (3a, f). Original short vowels in closed syllables remain short as predicted (3c, d). However, as we mentioned earlier, in English, analogical restructuring, particularly due to the interaction with Trisyllabic Shortening, has led to many words having short vowels at present, even if they were orginally long in Old English (cf. 3e). In (3a) we see the effect of OSL maintained in English.

(3) Reflexes of Proto Germanic short and long stressed vowels in di- and trisyllabic stems in Modern Dutch

[8] Lahiri & Dresher (1999: 681-82) provide a complete list: *bad, dag, gat, glas, hof, blad, dak, dal, gebed, gebod, gebrek, god, lid, lot, pad, schip, smid, staf, tred, vat, weg, zwad* (a-nouns).

[9] The PGmc reconstructed forms are given on the basis of the following etymological dictionaries: Kroonen (2013), Philippa et al. (2009), Toller et al. (1964).

[10] The Modern Dutch equivalent of /ū/ < PGmc /ō/ is not pronounced as long. According to Van Loey (1968: §85) /ū/ was long in dialect in the 14th century. In Modern Dutch /u/ occupies two length positions just like long /a:/. Phonologically /u:/ behaves like a long vowel in most cases although it is phonetically short (Booij 1995: 15).

We regard /u:/ in Modern Dutch as long as we consider the phonological qualities of vowels.

	PGmc		Old English	Modern Dutch	Gloss
a)	$V_{OPEN\ SYLL}$	*nakwada-	nacod	naakt $\bar{V}$	naked
b)		*wat-r-	wæter	water $\bar{V}$	water
c)	$V_{CLOSED\ SYLL}$	*wulkan-	wolcen	wolk(en) V	cloud(s)
d)		*apla-	æppel	appel V	apple
e)	$\bar{V}$	*wēpna-	wǣpen	wapen $\bar{V}$	weapon
f)		*haub-id-	hēafod	hoofd $\bar{V}$	head

Other than original disyllabic words, with the addition of a vowel-initial suffix, monosyllabic (C)VC words would become disyllabic with the original stressed vowels in an open syllable. This is particularly evident in nominal paradigms with the addition of a plural suffix. It is precisely this category where one would expect OSL to have applied, leading to a vowel length alternation in the nominal paradigm. If however, the noun stems ended with a consonant cluster or a geminate, the vowel would remain short. Examples of these are given in (4) and a list of words is provided in footnote 7.

(4) Proto-Germanic monosyllabic CVC- and CVCC- stems ending in a geminate

	PGmc		Old English	Modern Dutch	Gloss
a)	*dag-az	VC-V	dæg	dag – dag-en V- $\bar{V}$	day
b)	*gud-a-	VC-V	god	god – goden V- $\bar{V}$	god
c)	*paddō-	VCC-V	padde	pad – padd-en V-V	toad
d)	*muþþō-	VCC-V	moððe	mot – mott-en V-V	moth

Thus, short vowels that were followed by an original geminate or one that was derived by a rule of gemination, never underwent OSL and have remained short even now in Modern Dutch. Examples of underlying geminates are visible e.g. in Old English *moððe* (4d). These short vowels would not have escaped OSL if degemination had preceded it. After degemination, double consonants were used in orthography in later stages of Dutch to indicate that these vowels remained short.

OSL was also evident in original disyllabic words with single medial consonants in both singular and plural forms. Apocope of final schwa, which followed degemination, was morphologically determined since all final vowels in the nominative singular were deleted (except for *weduwe*) and once apocope occurred after OSL, we would expect long vowels to appear in monosyllabic forms. This is precisely what we find (5); both singular and plural underwent OSL in Middle Dutch (e.g. $talu_{SG}$ – $tala_{PL}$ > $tāle_{SG}$ – $tāle(n)_{PL}$), the final schwa was deleted and the word was reanalysed with a long vowel, *taal* 'language'. The long vowel of the singular can only be explained if we assume that OSL applied in Middle Dutch when the word was still disyllabic.

(5) Apocope and OSL

Old English	**MNL**	**Modern Dutch**	**Gloss**
$nosu_{SG}$ – nosa-PL	nōse-SG – nōse(n)-PL	neus-SG - neuzen-PL [ø:]	nose
$talu_{SG}$ - tala-PL	tāle-SG – tāle(n)-PL	taal-SG - talen-PL [a:]	language
$sunu_{SG}$ - suna-PL	$sōne_{SG}$ - sōne(n)-PL	zoon-SG - zonen-PL [o:]	son
$hamor_{SG}$ - hamoras-PL	$hāmer_{SG}$ - hāmeren-PL	hamer-SG - hamers-PL [a:]	hammer

What remains uncertain is the period at which OSL really began in Middle Dutch. In the following sections we investigate three types of evidence to determine whether OSL had indeed taken place in the Brabantic texts discussed above: evidence from orthography (spelling), rhyme and metre. We find that there is clear evidence from rhyme and metre that OSL is established in Saladijn and Mellibeus, but not so in Lutgart. Evidence from spelling suggests that OSL has just begun in Lutgart.

3. SPELLING EVIDENCE. In the texts we have examined, vowel length was indicated in different ways. In closed syllables, length was marked by double graphemes or as a single vowel followed by lengthening <e>. Short vowels were always written with only one grapheme in closed syllables, e.g. *dag* 'day', *spel* 'play', *appel* 'apple', *bedde* 'bed'. The double consonants were geminates. However, unlike Modern Dutch spelling, we find variation in open syllables, which is the focus of our investigation. Recall, that in Modern Dutch, single vowels in open syllables are always long but are not written with a lengthening marker cf. *maag, magen* 'stomach'*; boom, bomen* 'tree'*; dag, dagen* 'day'*; god, goden* 'god'.

If OSL had taken place, one might expect vowel length to be indicated consistently in open syllables, either by a single grapheme or by lengthening markers. Furthermore, we would also expect that original long vowels and vowels that have undergone OSL, would be written in the same fashion. Comparing closed and open syllables, we find a difference in orthography between Lutgart on the one hand and Mellibeus and Saladijn on the other.

We first examine Mellibeus and Saladijn which are very similar to Modern Dutch spelling. Each text is written in a different hand but both show consistency in their spelling (Sytsema et al. 2014).[11] The only variation that occurs across the texts is confined to the orthography of a specific vowel in closed syllables, viz. the descendent of PGmc */au/ which is written as <oe> in Mellibeus but <oo> in Saladijn. Thus, Modern Dutch *groot* and *dood* are written as *groet* and *doet* in Mellibeus, but *groot* and *doot* in Saladijn. We first look at Saladijn where original long vowels are always written with two graphemes in closed syllables, either identical vowels or with an additional lengthening <e> (cf. 6a). In open syllables, original long vowels are consistently written with a single grapheme, the exception being when <r> follows <a> in Saladijn, where *jaere* (1x), *scaere* (1x), *vaere* (1x) are found alongside *iaren* (1x), *scaren* (2x) and *varen* (1x).[12,13] Apocope was not obligatory as yet and therefore we find the same word with and without a final schwa (6a); e.g., *sere ~ seer, dade ~ daet.* Thus, in a closed syllable, the long vowels were always written with two graphemes, while in an open syllable with one grapheme. We see the same alternation when a suffix is added; e.g., *groot ~ grot-e* (6a). Clearly, a single vowel in open syllable could represent an original long vowel. The word *lone* is interesting since when *es* 'it' encliticises to the host word, the ensuing form remains monosyllabic and the length of the vowel is indicated by two graphemes.

(6a) Proto-Germanic long vowels in Saladijn

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[11] Copyists may have used their own dialect (cf. Van den Berg & Berteloot 1991), as shows from the slightly different spelling that each of the two hands used in Marshall 29.

[12] Gussenhoven (2009: 187) observed a lengthening of short tense vowels within one foot in Modern Dutch [i,y,u] before <r>. The fact that the scribes make an exception for words with /r/ could be related to the fact that there was always a lengthening effect of this consonant.

[13] Note that PGmc **ē in* (7a) lengthened to <*ae*> before <r> as well as before <t>.

	PGmc	**Old English**	**Old Saxon**	**Saladijn**		**Gloss**
				Closed syllable	Open Syllable	
i	*sairō	sāre	sēro	seer	sere	‘very’
ii	*-haida-	hād	hēd	-heit	-hede(n)	‘-ness’
iii	WGmc *hēra-	hearra	hērro	heer	here	‘lord’
iv	*launa-	lēan-NOUN	lōn	loon=s < lon-e=es[14]	lone	‘reward’-NOUN, SUBJUNCTIVE (+it)
v	*grauta-	grēat	grōt	groot	grote	‘great’
vi	*laiz-jan-/ *laizō-	lǣran, lār-NOUN	lērian, lēra-NOUN	leer	lere	‘teach’-1SG ‘teaching’
vii	*dēdi-[15]	dǣd	dād	daet	dade	‘deed’-SG
	*stē-	—	stān	staen	(te) stane	‘stand’-INFINITIVE ‘stand’-GERUND

If we now examine original short vowels in open syllables in Saladijn, we find the same pattern as the original long vowels. PGmc short vowel in **guda* (6bi) as well as long vowel in * *dēdi* (6avii) are both written with a single grapheme in open syllables, *gode*, *dade*. They differ in closed syllables where one expects the original short vowel to remain short but the long vowel to surface with two graphemes; cf. PGmc short vowel in **guda* (6b i) as *god* in Saladijn but with a long vowel in **dēdi* as *daet.* Thus, one finds the orthography in Saladijn to be similar to that of Modern Dutch; Proto-Germanic short vowels remain short in closed syllables but long in an open syllable: *god ~ gode*. To distinguish vowel length in closed syllables, the original long vowels are unambiguously written with two graphemes. This leads

[14] From Saladijn line 15548 *God loons v heer menichfout* ‘may God reward you for this, lord, manyfold’

[15] PGmc /ē/ became /ā/ in West Germanic and this is the vowel quality reflected in Middle Dutch.

to orthographic alternations as in Modern Dutch: PGmc *au is reflected in Saladijn as /o~oo/ *groot ~ grote*. [16]

(6b) Reflexes of PGmc short vowels in open and closed syllables in Saladijn

PGmc		**OE**	**OS**	**Saladijn**		**Gloss**
				closed syllable	open syllable	
i	*guda-	god	god	god	gode	'god'
ii	*meda	mid	mid, midi	met	mede	'with'
iii	*nama-	nama, noma	namo	-	name	'name'
iv	*dag-az	dæg	dag	dach	daghelix	'day, daily'
v	*wega-	weg	weg	wech	-	'away'
vi	*langa-	lang, long	lang	langhe	-	'long'
vii	*rehtu-	riht	reht	recht	-	'straight'
viii	*andi-	and	endi	ende	-	'and'
ix	*mildi-	milde	mildi	melt, milde	-	'mild'

We find identical evidence in Mellibeus (cf. 7a and 7b). An original long vowel is spelt either with two identical graphemes or with a single grapheme followed by the lengthening <e> in closed syllables. In open syllables, however, there is invariably a single grapheme. The crucial comparisons are as follows. PGmc long vowels or diphthong as in */*au*/ appears in Mellibeus as *doet* (closed syllable) vs. *dode* (open syllable). In comparison PGmc short vowel */o/ (*guda*) is written in Mellibeus with a single grapheme in both open and closed syllables: *god, gode*. The fact that both short and long vowels are written with a

[16] Our focus is on vowel length. However, before OSL took place, original */u/ was lowered to /o/ in early Germanic, e.g. OE *god*, OS *god*, OHG *got* < PGmc. **guda-*, OE *hof*, OS *hof* < PGmc **hufa-*

single grapheme in open syllables suggest they were of the same length, particularly since in closed syllables, where the length is contrastive, the original long vowels are always written with a lengthening grapheme such as *doet, seer,* while original short vowels never have such a grapheme as in *god, spel.* [17]

(7a) Proto-Germanic long vowels in Mellibeus

PGmc	**Old English**	**Old Saxon**	**Mellibeus**		**Gloss**
			closed syllable	open syllable	
*dauþu- *dauda-	dēaþ-NOUN dēad-ADJ	dōth, dōd;	doet	doden	death-NOM.SG kill-INFINITIVE
*launa-	lēan-NOUN	lōn	—	lon-eSUBJUNCTIVE	reward
*grauta-	grēat-ADJ	grōt	groet	grote	great-ADJ
*skauni-	scēne-ADJ	skōni	scoen	scone	beautiful-ADJ
*klaiþa-	clāþ-NOUN	—	cleet	clede	cloth-NOM.SG cloth-NOM.SG
WGmc *hēra-	hearra- NOUN	hērro	heer	here	lord-NOM.SG
*stē	—	stān	staen	(te) stane	stand-INFINITIVE stand-GERUND
*wēni	wēn-NOUN	wān	waen	wane	imagination-NOM.SG
*laiz-jan-	læran, lār-NOUN	lērian, lēra-NOUN	leer	lere	teach-1SG teach-SUBJUNCTIVE

As in Saladijn, the original short vowels are always written with one grapheme: *god ~ gode* vs. *cleet ~ clede*. Thus, vowels lengthened by OSL in open syllables were consistently written with a single grapheme exactly as the original long vowels in open syllables.

[17] The only exception is the word *meer* from PGmc *maiza, which could be spelt *meere* or *mere* which could be due to the lengthening effect of /r/.

(7b) Original short vowels in open and closed syllables in Mellibeus

PGmc	**Old English**	**Old Saxon**	**Mellibeus**		**Gloss**
			closed syllable	open syllable	
*guda-	god	god	god	gode	god
*meda	mid	mid, midi	met	mede	with
*nama-	nama, noma	namo	-	name	name
*spila-	—	spil	spel	spela	play
*staba-	stæf	staf	staf	-	rod
*hluta-	hlot	—[18]	lot	-	fate
*langa-	lang, long	lang	langhe	-	long
*rehtu-	riht	reht	recht	-	straight
*skeldu-	sceld, scild	skild	scilt	-	shield

A much more interesting pattern is found in Lutgart, the oldest of our three texts. Fikkert (2000) claims that spelling is not really of much assistance and concludes that this text shows little evidence that OSL had already applied. Indeed, we find consistent graphemic differences between Lutgart and the other two texts as we will see below. First, in closed syllables, vowel length was exactly parallel to Saladijn and Melliebeus; original short vowels were written with one grapheme while original long vowels had a lengthening <e> (cf. 8a & 8b): short *god, dag;* long *loen, doet* etc. Second, in open syllables, original short vowels were also written with a single grapheme as in Saladijn and Mellibeus, e.g., *gode, dage*.[19]

However, a different pattern emerges for original long vowels in open syllables which were the only ones that show variability in spelling. Recall that in closed syllables, these

[18] OS. *hlōt* < PGmc **hlauti-*

[19] There is a single occurrence of one word with an original short vowel marked with a lengthening <e>, *daenen.*

*Comt **daenen**, gi gebenedide (< dan, OE thanon)*

vowels always had a lengthening marker, while in open syllables, both spellings were available (8a). Thus, both *rode/roede*, were permitted, while monosyllabic *roet* was always written as <oe>. This alternation, however, is not observable in original short vowels in open syllables. In the following tables where possible we have given Old English and Old Saxon forms which were probably closer in age to the ancestor of Middle Dutch. Our focus here is on the length of the vowels, not necessarily the quality which varies across languages.

(8a) Orthographic variants of Proto-Germanic long vowels in Lutgart

PGmc	**Old English**	**Lutgart**		**Modern Dutch**	**Gloss**
		Closed syllable	Open syllable		
*rauda-	rēad-ADJ.	roet	rode/roede	rood, rode	‘red’
*launa-	lēan-NOUN	loen	lone/loene	loon, lonen	‘reward’
*dauþu-	dēaþ-NOUN dēad-ADJ.	doet	dode/doede	dood, dode	‘dead’
*maiza-	māra, mǣra-ADJ.	meer	mere/meere	meer	‘more’
*klaiþa-	clāþ-NOUN	gecleedt	cleder/cleeder	kleden, kleding	‘clothes’
*wēni-	wēn-NOUN	waen	wane/waenen	wanen	‘imagine’

(8b) Proto-Germanic short vowels in closed and open syllables in Lutgart

	PGmc	**Old English**	**Old Saxon**	**Lutgart**	**Modern Dutch**	**Gloss**
open syllable in Lutgart	*dag-ōz	dagas	dag	dagen	dagen	day-PL
	*nusō-	nosu	—	nose	neus	‘nose’
	*guda-	god	god	gode	god	‘god’
	*nama-	nama, noma	namo	name	naam	‘name’
closed syllable in Lutgart	*dag-az	dæg	dag	dag	dag	‘day’-SG
	Latin *saccus*	sacc	sakk	sac	zak	‘bag’
	*spila-	—	spil	spel	spel	‘play, game’
	*fiska-	fisc	fisk	visch	vis	‘fish’

	*meda *medi	mid	mid	met	met	‘with’
	*fata-	fæt	fat	vat	vat	‘vat’
	*staba-	stæf	staf	staf	staf	‘rod’
	*andi-	and	endi	ende	ende	‘and’
	*rehta-	riht	reht	rechte	recht	‘straight’
	*hufa-	hof	hof	hof	hof	‘court’
	*wega-	weg	weg	wech	weg	‘way’

Why should the length marking of orginal long vowels in open syllables be variable? Understandably, in closed syllables contrastive vowel length was indicated graphemically with a lengthening <e> for long vowels. Thus a vowel length contrast existed in Lutgart. We have also established that the length contrast is neturalised in spelling in Saladijn and Mellibeus as in Modern Dutch, the interpretation being that the length of the vowel in open syllables is the same for both underlying short and long vowels. What of Lutgart?

Our interpretation is that unlike Saladijn and Mellibeus, OSL has not been fully established in Lutgart, but one can see its commencement. Overt marking of length in an open syllable suggests an effort to distinguish between short and long vowels in this position: *loene* (from original long) vs. *gode* (originally short). However, the very fact that the original long vowels are being marked only some of the time (*loene/lone*) suggests variability and the probable onset of neutralisation of length in an open syllable, applying in a diffuse fashion. Once OSL has been fully established, it would eliminate the necessity of marking length in *loene* and *doede* to differentiate them from *gode, dage*; both sets of words could be written without lengthening <e>.

To reiterate, the writing system does reflect the original length of PGmc vowels.[20] This is transparent in closed syllables as in *roet, doet* etc. In addition, it is only the original long vowels like *lone/loene* which show variation. If OSL had been fully established and this

[20] A reviewer raised the issue of whether texts available to us have changed or not. As we said earlier, the original texts have not survived. However, we are basing our arguments on the manuscripts available to us which we assume to be as close as possible to the original text. We have no reason to doubt this. It is entirely possible that in further copying, changes have been made; but here, our comments are based on consistent and systemtic findings.

is what the lengthening marker was indicating, then it would have been visible in original short vowels in open syllables such as *name*, which would have also shown the same variation, viz. **naeme*[21], and they do not. To reiterate, the variation is only limited to original underlying long vowels. Clearly as yet the neutralisation of length was not evident in Lutgart between original long and short vowels in open syllables.[22]

To summarise, all three texts, Lutgart, Saladijn and Mellibeus are consistent in the spelling of vowels in closed syllables where original long vowels are always spelt either with two identical graphemes or with a lengthening <e> and original short vowels are spelt with a single grapheme (see 9a). There can be no doubt about the length interpretation of these vowels since they all have the same quantity in Modern Dutch. The difference between the texts is only apparent in open syllables; all original short vowels in open syllables are written with a single grapheme (see 9b). However, the spelling of original long vowels, vary between single and double graphemes in Lutgart, but are consistently written with a single grapheme in Saladijn and Mellibeus (9c). In Lutgart, graphemes <o> and <oe> in open syllables both represent the long vowel derived from PGmc */au/; cf. *lone/loene*. The same holds for the other alternations such as <e>~<ee> and <a>~<ae> in open syllables where these long vowels are inherited from PGmc. However, original short vowels in open syllables are invariably written with one grapheme in Lutgart. Clearly, the writing system reflects the difference in the quantity of the vowels in open syllables; orginal long vowels vary in graphemic representation while original short vowels do not. This suggests that the original short vowels had begun to lengthen and perhaps there was allophonic lengthening. Thus,

[21] If this variation is a result of dialect differences between the scribe and the exemplar, then the variation would have shown in original short vowels as well. Throughout the history of Dutch there is no evidence that orignal long vowels were shortened in open syllables. Thus, the spelling variation in long vowels must reflect the fact that the scribe views indicating length marking in open syllables as redundant. In closed syllables, the scribe shows no variation; original short vowels are written with one letter while original long vowels have the lengthening <e>.

[22] A reviewer has raised the question of /i/ lowering in Middle Dutch. Given that long /i/ is usually lowered in Dutch (e.g. *schip – schepen* [i~e:]), could it not be the case that since Lutgart has words like *schepen* that it must have undergone OSL. However, Lutgart also shows evidence of original short /i/ vowels in words like *spel* from *spil-.

there a need was felt to mark clearly the original long vowels in open syllables (which were phonemically long) from the free variants of the short vowels which were sometimes lengthened and sometimes not. It is not the case that the original long vowels are sometimes pronounced as short.

In contrast, Saladijn and Mellibeus are entirely consistent in their writing of vowels in open syllables; both original long vowels and original short vowels are always written with a single grapheme (cf. 9b). Evidently, there was no necessity of distinguishing these vowels any longer in open syllables. Thus, the crucial interpretation of the onset of OSL rests on the graphemic alternation in open syllables for original long vowels (9c).

(9a) Spelling of original short and long vowels in closed syllables across three texts

PGmc	**Old English**	**Old Saxon**	**Lutgart**	**Mellibeus**	**Saladijn**
**guda* 'god'	god	god	te dragene over wilde **got**	van brabant dien **god** verhoghe	ende **god** spant der den koningen crone
**neman-* 'to take'	niman	niman	doe hi **vernam** dat si van rowe	doe*n* **nam** hi al sonder pine	hi **nam** orlof ende voer wech sciere
**meda* 'with, including'	mid	mid, midi	dat hijs **met** eeren mochte plegen	dat ic v **met** mire pine	ouer zee **met** groten scaren
**dauþu-*	dēaþ-NOUN dēad-ADJ.	dōth- NOUN dōd-ADJ.	so ijammerlic dat si die **doet** (begerde…)	om dat sijn lieue sone was **doet**	ende dat ghi recht al totter **doot**
**dēdi-*[23]	dæd	dād	ten inde al sonder arge **daet**	allene wreken har mes**daet**	en es niemen vroet in domme **daet**

[23] PGmc /ē/ became /ā/ in West Germanic and this is the vowel quality reflected in Middle Dutch.

**laiz-jan-/ *laizō-*	lǣran, lār-NOUN	lērian, lēra-NOUN	dis was die maget wel **geleert**	Seneca **leert** ons de manier al	wat dat bediet **leer** ic v
**klaiþa-*	clāþ-NOUN	-	dengenen die dat omme**cleet**	es een goet omme **cleet**	-

(9b) Spelling of original short vowels in open syllables across three texts

PGmc	**Old English**	**Old Saxon**	**Lutgart**	**Saladijn**	**Mellibeus**
**guda* 'god'	god	god	T Aiwires mettin **Godes** bruden	inden yrsten aenroepic **gode**	met **gode** es houeerde ghevee
**namōn-* 'name'	nama noma	namo	Lutgarden, die den **name** dreget	wildi des boecs **name** weten	dats soberheit een reyne **name**
**meda* 'with, including'	mid,	mid, midi	ende oc bi andren beesten **mede**	alle sine vriende ende maghe **mede**	wedewen ende wesen **mede**

(9c) Spelling of original long vowels in open syllables across three texts

PGmc	**Old English**	**Old Saxon**	**Lutgart**	**Saladijn**	**Mellibeus**
**klaiþa-*	clāþNOUN	-	Die witte **cleeder**, diet besochtte/ Dar droch die swarte **cleder** ane	Nuwe linen **cledere** scone ende witte	Also de motte die **cleder** knaget
**grauta-*	grēat	grōt	Onteleeden met so **groter** haest/ So seldi van der **groeter** plagen	Dat er **grote** ontfarmechede	Jeghen sine **grote** cracht

**dēdi-*[24]	dǣd	dād	Van sonden ende van mes**daden**	Altoes selt vorderen goede **dade**	Om dat si hem in **daden**
**skēpa-*	scēp	scāp	So was en **schaepere** en goet man/ Aldaer hi stont bi sinen **schapen**	—	—

In sum, our data shows that orthography of long and short vowels is generally regular. In Lutgart, the variation occurs in a specific category, viz., original long vowels in open syllables which are often spelt with double vowels; we interpret this as a way of ensuring that the difference in underlying length is still reflected in writing at least some of the time in order to distinguish any allophonic lengthening that may have begun to affect the short vowels in open syllables. In contrast, the Modern Dutch writing system is exactly parallel to Saladijn and Mellibeus where two graphemes are used in closed syllables to indicate length, while in open syllables both underlying short and long vowels are written with a single grapheme if they are long; eg. *god~goden* vs. *boom ~ bomen.* To indicate long vowels in closed syllables in Modern Dutch as well as in our three texts, two consonantal graphemes are used. In (10) we provide a summary of our results, where the shaded last row highlights the variation context.

(10) Graphemic representation illustrated with <a> and <o>

PGmc		**Lutgart**		**Mellibeus**		**Saladijn**	
*V	closed syllable	<a>	<o>	<a>	<o>	<a>	<o>
*V̄		<ae>	<oe>	<ae>	<oe>	<ae>	<oo>
*V	open syllable	<a>	<o>	<a>	<o>	<a>	<o>
* V̄	open syllable	<ae>~<a>	<oe>~<o>	<a>	<o>	<a>	<o>

[24] PGmc /ē/ became /ā/ in West Germanic and this is the vowel quality reflected in Middle Dutch.

Thus, PGmc vowels in closed syllables have not altered which is reflected in the spelling for all the texts: long vowels in closed syllables are written with two graphemes and short vowels with one grapheme. The difference lies in with long vowels in open syllables; when comparing Lutgart on the one hand, and Saladijn and Mellibeus on the other, it becomes clear that there is an attempt to ensure that original long vowels in open syllables are marked with an extra lengthening grapheme which is not the case for original short vowels in open syllables. Lutgart did have the means of indicating vowel length and consistently used it in closed syllables to mark original length. In Saladijn and Mellibeus the lack of contrast in open syllables suggests that lengthening of short vowels has taken place. We conclude that in Lutgart it was necessary to indicate length by adding a lengthening <e> to contrast with original short vowels in open syllables, where there could have been variable lengthening. As we shall see, further evidence suggests that OSL was securely embedded in Saladijn and Mellibeus, while it is possible that in Lutgart the difference between original long and short vowels in open syllables was probably in a state of fluctuation.[25]

(11) Vowel quantity - V, V̄; the shaded section highlights the differences across the texts

PGmc	**Lutgart**	**Mellibeus**	**Saladijn**	**Modern Dutch**
*V closed syllable	V	V	V	V
*V open syllable	V~ V̄	**V̄**	**V̄**	V̄
*V̄ closed syllable	V̄	V̄	V̄	V̄
*V̄ open syllable	V̄	V̄	V̄	V̄

Additional spelling evidence is found in Saladijn and Mellibeus, where some original short vowels appear as long in syllables closed by an inflectional suffix (12). This lengthening can only be explained by an analogical restructuring of the verb root after OSL.

[25]Exceptions are only found in words ending in *-r* where the *-r* had a lengthening effect and allowed *ijar* in Lutgart to be spelt with a single <a>. We would have expected the original long vowel in *ijar* < PGmc ***jēr***- to be indicated as long in writing. Probably under the lengthening influence of the following –r this was not considered necessary. The lengthening effect of –r is recognised by Van Bree (1987: 139) and by Gussenhoven (2009: 187), cf. footnote 10.

For example, the short stem vowel in PGmc * *makōn-* must have undergone OSL after which the verb root was reanalysed as long /ā/. Consequently, the past tense suffix /t/ is added to the restructured lengthened verb root to get *maect*.[26] Saladijn and Mellibeus both show the reanalysed long vowels for example in *vroomste/vroemt* and *(ghe)maect.* In contrast, in Lutgart, in these words the original short vowels are always spelt with one grapheme in closed syllables, which suggests that the root vowel has remained short as we see in (12). However, not all words show the same pattern. For instance, the stressed vowel of the verb *comen* is written with two graphemes in Saladijn when /t/ is added but not in Mellibeus. But the lengthening in *vroemt* and *maect* is observable in both. As a reviewer points out, a change in underlying vowel length often occurs word by word by lexical diffusion (Labov 1994). What is important is that OSL must have been properly established in Mellibeus and Saladijn otherwise these vowels would not show lengthening in a closed syllable.

(12) Proto-Germanic short vowels manifested as long in closed syllables in Saladijn and Mellibeus

PGmc	Old English	Old Saxon	Saladijn		Lutgart		Mellibeus		Gloss
*kuman-	cuman	kuman	**coomt V̄** (1x)	comen V̄	comt V (22x)	comen V	comt V (6x)	come n V̄	come
*frumō- *fruman-	fruma	fruma	**vroom V̄** (2x)	vrome V̄	--	vromen V	**vroemt V̄** (1x)	vrome V̄	devout
*makōn-	macian	makōn	**maect V̄** (7x)	maken V̄	makt V (21x)	maken V	**maect V̄** (41x)	make V̄	make

Thus, in terms of orthography there are two aspects to the claim that OSL had taken place in Saladijn and was nearly finished in Mellibeus but not yet well established in Lutgart. First, the original long vowels are distinguished from original short vowels in open syllables only in Lutgart where the former vary in orthograhpy; *loene/lone.* This does not occur in Saladijn and Mellibeus where all vowels in open syllables are written with a single grapheme although

[26] A reviewer comments that this could have happened to a particular verb. The relevant point is that we find lengthening marker in closed syllables from an original short vowel only in Saladijn and Mellibeus but not in Lutgart.

in closed syllables the original long vowels are written with a lengthening <e> or with two identical graphemes. Second, only in Saladijn and Mellibeus, orginal short vowels in verbs which must have lengthened in the infinitive (e.g. *vromen*) by OSL, are reanalysed as long and written with lengthening markers when they appear in closed syllables after the addition of consonantal inflectional suffixes; e.g. *vroomste*, *vroemt*. This is absent in Lutgart. A count of the variable spelling of the words with original long vowels in (6a) shows that more than half of them are marked with a lengthening marker in open syllables. It is thus possible that OSL was beginning to have an effect in Lutgart. The crucial difference however, is that one does not find any lengthening marker in open syllables in Saladijn and Mellibeus as we see in Lutgart, where the length of vowels in open syllables must been neutralised after the application of OSL. As we shall see, other evidence also points to the difference between Lutgart and the other two texts.

4. EVIDENCE FROM RHYME. Since our texts are written in verse, they provide us with the opportunity to compare rhyming words on the basis of vowel quality and vowel quantity. If OSL had already occurred, then original long vowels and vowels lengthened by OSL should rhyme. However, for rhyming evidence, we need to distinguish between rounded and unrounded vowels. Sytsema et al. (2014) have shown that round vowels of the same Proto-Germanic origins rhymed in Saladijn and Mellibeus even if they were spelt differently (13a, 13b), whereas vowels of different origin did not appear in rhyme pairs even if they were spelt the same (13b). Descendants of PGmc */ō/ were consistently spelt <oe>, whereas descendants of PGmc */au/ could be spelt <oe> or <oo>. Descendants from PGmc */ō/ never appear in rhyming pairs with descendants of PGmc */au/ from which we concluded that they must have been of different quality. This is true in all the manuscripts. Thus, in some texts in Marshall 29, *goet* rhymes with *vloet* (both from PGmc */ō/) and *groet* rhymes with *doot* (from PGmc */au/) but *groet* never rhymes with *vloet* or *goet* (Sytsema et al 2014). Later the spelling was levelled as we see in Modern Dutch. Saladijn and Mellibeus are consistent in their spelling.

(13a) Descendants of PGmc */ō/ PGmc and */au/ in Saladijn and Mellibeus

PGmc	**Old English**	**Old Saxon**	**Saladijn**	**Mellibeus**	**Modern Dutch**	**Gloss**

*gōda- *frōda-	gōd frōd	gōd frōd	15592 Dit dochte den coninc alte goet 15594 Her hughe sprac hi nv maect mi vroet	734 Raet nutelijc ende goet 735 Dien soudi doen waerdi vroet	goed [u:] vroed [u:]	‘good’ ‘wise’
*grauta- *dauda-	grēat dēad	grōt dōd	15610 He sprac hi dat ghi cleyne ende groot 15612 Ende dat ghi recht al totter doot	264 Een man hadde wilen rouwe groet 265 Om dat sijn lieue sone was doet	groot [o:] dood [o:]	‘great’ ‘dead’

Thus, round vowels of different Proto-Germanic origin never appear in rhyme pairs since they were qualitatively different, despite the fact that in Modern Dutch, these vowels are identical and do rhyme (13b).[27]

(13b) No rhyme pairs with vowels of different origin in Saladijn and Mellibeus

PGmc	**Old English**	**Old Saxon**	**MNL**	**Modern Dutch**	**Gloss**

[27] In the literature, the difference in vowel quality between original long and lengthened vowels is known as the difference between ‘scherplang’ (original long, /ê/, /â/, /ô/) and ‘zachtlang’ (lengthened after OSL /ē/, /ā/, /ō/). E.g. *dâden – schāde, bômen – kōmen*. The phonemic difference between the two was still maintained in the 19th century in the De Vries&Te Winkel spelling rules and dictionary (cf. Te Winkel 1863; De Vries&Te Winkel 1882; Van Bree 1987: §17.4, §18.3; §20.3) where single letters in open syllables /e/, /a/, /o/ are used for lengthened vowels and double letters in open syllables for the original long vowels /ee/, /aa/, /oo/. Van Bree (1987: §17.4) assumes that the difference between lengthened /ê/ and original long /ē/ was lost as early as the 16th century in some Holland dialects. The difference between /ô/ and /ō/ still exists in Brabant dialects (§18.2 and 18.3; Goossens et al. 1998: II.5 and III.4.2) /â/ and /ā/ must have coincided in the 16th and 17th century (Van Bree 1987: §20.3). In our texts, the difference between original long and lengthened vowels in open syllables is not indicated in spelling.

*guda- V	god	god	god [ɔ] /gode [ɔ:]	gode [oː]	god
*rauda- V̄	rēad	rōd	root [o:] /rode [o:]	rode [oː]	red

However, unrounded vowels would allow us to examine if OSL had occurred or not. We would expect original unrounded long and short vowels to rhyme if OSL had taken place and indeed, such evidence exists. In the following examples original /a/ and /a:/[28] occur in rhyme pairs as do /e/ and /e:/ in Saladijn and Mellibeus (14, 15).

(14) Rhyming pairs in Saladijn

PGmc	**Old English**	**Old Saxon**	**line**	**Saladijn**	**Gloss**
*dēdi- V̄	dēd, dǣd	dād	15613	Altoes selt vorderen goede **dade**	deeds
*skaþa- V	sceaða	skaðo	15615	Moeti bescermen hare **scade**	disadvantage
*-haida- V̄	hād	hēd	15569	Ende sijn so vol heilic**hede**	holiness
*sidu- V	seodu, sidu	sidu	15571	Ghi en wert van kerstenen **seden**	customs

(15) Rhyming pairs in Mellibeus

PGmc	**Old English**	**Old Saxon**	**line**	**Mellibeus**	**Gloss**
*rēdan- V̄	rædan	rādan	744	Maer alse quade wiue **raden**	to advise
*skaþa- V	sceaða	skaðo	745	Den sot valt hi in **scaden**	harm
*-haida - V̄	hād	hēd	1556	Can onmate ghierec**hede**	*suffix* -ness
*sidu- V	seodu, sidu	sidu	1557	Toe bringhen hets haer **sede**	customs

[28] PGmc did not have /ā/, we therefore looked at the WGmc /ā/ < PGmc */ē/.

Fikkert (2000) stated that rhymes with original short vowels in open syllables and original long vowels do not occur in Lutgart, suggesting that this was another piece of evidence against OSL having occurred in Lutgart. This is probably due to the fact that she was focusing on rounded vowels. For unrounded vowels, we do find some examples in Lutgart as well, but much less than in the other texts.

(16) Lutgart rhyming pairs

PGmc	**Old English**	**Old Saxon**	**line**	**Lutgart**	**Gloss**
*frēgō- V̄	NA	frāgon	10505	Van u, so soudic gerne **vragen**	to ask
*hagō- V	gehagian, onhagian	bihagon	10506	Wie sijn die mi dos wel **behagen**	to please
*wēni- V̄	wēnan	wānian	10262	Dat ic van rowen sterven **wane**	suspect-SUBJUNCTIVE
*ana V	on, an	an(a)	10263	Want desen kinde es comen **ane**	on

Each of the rhyme pairs in the three tables above consists of an original long vowel and an original short vowel. In these rhyme pairs, the short vowels must have lengthened in order to rhyme with the original long vowels, so in these cases the original long and the lengthened vowels must have merged.[29]

However, there are differences across the texts in the three different time periods. Although we find rhyme pairs with original short and long unrounded vowels in Lutgart, these rhymes are limited to a handful of examples. We sampled all rhyming words in the three texts (17). As we can see, although Lutgart is the longest text, it has only 42 short-long rhyming pairs (84 lines, 42 pairs, of which 32 are different word pairs; 50 individual words). In contrast, Saladijn has 25 short-long rhyming pairs involving 31 individual words which comes to 17%, and Mellibeus is in between.

(17) Short-long rhyming pairs in the three texts.

[29] Length is maintained in Modern Dutch, with possibly a few exceptions like *(on)gemak.*

	Lutgart [30] **20,000 lines**	**Saladijn**[31] **291 lines**	**Mellibeus**[32] **4000 lines**
rhyme pairs	42	25	77
proportion of all pairs	0.4 %	17%	3.9 %
individual words	58	46	33

As we can see, Mellibeus and Saladijn have a larger percentage of rhymes with original short and long vowels. Lutgart has less than 1% of such rhymes. In contrast, Saladijn, which consists only of less than 300 lines has 17% of these rhymes and the number of individual words are about the same as in Lutgart. Not only are there more words which participate in such rhymes, there are other differences. In Saladijn, for instance, we find four-line rhyming verses with original short and long words. For example, a word ending with *-hede* (<*haidu) rhymes with *mede* (< *meda), *sede* (<*sidu) and *lede* (<*lidu) in a single verse in Saladijn (18).

[30] Lutgart shows the following individual words in SHORT/LONG rhyme pairs: wale, male, tale, quale, halen, wane, ane, tranen, dwane, plagen, dagen, jagen, dragen, vragen, behagen, magen, gewagen, spraken, maken, saken, wraken, geraken, quamen, name, lichame, staden, laden, daden, genade, schade, badet, bestadet, laten, baten, maten, mede, dede, sede, heide, treden, genede, (ge)beden, stede, geleden, besneden, leven, schreven, geven, heven, dreven (words with medial –Vr have been disregarded to eliminate any possibility of lengthening through -r).

[31] Saladijn shows the following individual words in SHORT/LONG rhyme pairs: ane, stane, zwane, quame, name, betame, maken, saken, genaken, gheraken, laken, onghemake, sprake, ghebrake, dade, spade, scade, hede, seden, stede, ghestreden, dede, lede, mede, vermeten, vergheten, eten, ghespleten, gheuen, leuen, verheuen, verdreuen (words with medial –Vr- have been disregarded to eliminate any possibility of lengthening through -r).

[32] Mellibeus shows the following individual words in SHORT/LONG rhyme pairs:strale, wale, staen, ane, ghewagen, vragen, sake(n), wrake(n), sprake(n), onghemake, maken, bate, mate, sate, late, samen, quamen, namen, bequame, scade(n), rade(n), beraden, gheraden, stade(n), laden, daden, -hede, lede(n), vrede, stede, clede, sede, dede.

(18) Four rhyming lines in Saladijn

15649	Dat er grote ontfarmechede
15651	Wedewen ende wesen mede
15653	Bescermen haer lijf ende haer lede
15655	Dats der karitaten zede

A further point to note is that in Lutgart, the rhyming pairs almost always consist of a noun and some form of a strong verb (e.g. *genade* < *V̄ 'mercy' ~ *laden* < *V 'to load'), but there are no examples of two nouns. Since the vowel length varied in the morphology of strong verbs (e.g. OE *specan-*$_{INF}$ (V), *spæc-*$_{PAST.1,3P}$ (V), *spǣcon-*$_{PAST\text{-}PL}$ (V̄), *gespecen-*$_{PART}$ (V)), one could conjecture that the fact that the long-short rhyming pairs are restricted to such instances is due to morphological variation in length. Instead, we find rhymes of the same morphological class in Saladijn; compare for example the rhyming nouns *dade* < *V̄ 'deeds' ~ *scade* < *V 'disadvantage' (see 14). Such pairs are more reliable when drawing conclusions about original vowel length. In any event, Lutgart has fewer straightforward examples of original mismatching vowel length pairs which rhyme as noted in (17).

Summarising, for rounded vowels, we only find rhyme pairs of the same PGmc origin. When lengthened, short PGmc */u/ (WGmc */o/) became MNL /ɔː/, and did not have the same quality as the original */ō/ which became MNL/u:/, while PGmc */au/ became MNL /o:/. Sytsema et al. (2014) have argued that this is why rhyming pairs with original long and short round vowels in open syllables were not found in Middle Dutch. However, unrounded short and long vowels of different descent do have the potential to rhyme if OSL applied, since the lengthened unrounded vowels would have the same vowel quality as the original long vowels. We found that this indeed occurred in Saladijn and Mellibeus and to a much lesser extent in Lutgart. In Lutgart, not only are there fewer words participating in such rhymes, pairs belonging to the same syntactic class do not occur. This suggests that the process of OSL was more advanced in Mellibeus and in Saladijn where a much greater number of unrounded vowels had undergone OSL, whereas in Lutgart the process had probably just begun.

5. EVIDENCE FROM METRE

Evidence from metre is possibly the most interesting indication to determine whether OSL had occurred. Although it has been assumed that Lutgart is the only text with iambic metre in

Middle Dutch (cf. Fikkert 2000; Zonneveld 2000), we find that Saladijn is also written in iambic verse, whereas Mellibeus has trochaic rhythm (see 19). Adapting the metrical principles of Halle & Keyser (1966) which were drawn up to describe principles of iambic pentameter in Chaucer, Fikkert (2000) concludes that the same principles *mutatis mutandis* are applicable to Lutgart. She argues that Lutgart is written in regular iambic tetrameter, where each line consists of eight positions or syllables to which an extrametrical syllable may be appended for feminine rhymes. If there are more than nine syllables, elision of unaccented vowels, mostly schwa, takes place to maintain the number of eight or nine syllables. Metrical beats fall on even positions. Since linguistically heavy syllables or stress maxima are always in even positions, the metre is clearly iambic. A similar pattern is observable in Saladijn but not in Mellibeus. In Mellibeus, stress maxima fall on on odd positions. The different metrical patterns in our texts are illustrated in (19). Generally, there were four beats per line for all of these texts.

(19) Rhythmic patterns in Lutgart, Saladijn and Mellibeus

Lutgart – iambic	**Saladijn – iambic**	**Mellibeus – trochaic**
T Ai'wires 'binnen, 'daer si 'sent	Ghe'uiel dat 'tfolc voor 'ende 'ghinc	'Al tand'werpen 'daer ic 'wone
Hilt 'langen 'tijt in 'dat con'vent	Op 'enen 'dach men 'tstride 'vinc	'Maecte 'ic dit 'boexken 'scone
O'wi ho 'blide 'was Lut'gart	Dit 'dochte den 'coninc 'alte 'goet	'Die hi 'minde 'harde 'zere
Doe 'si ver'horde 'dese 'wart	Her 'hughe sprac 'hi nv 'maect mi 'vroet	'Doen dus 'henen 'was die 'here
Ende 'oc u 'beden, 'sonder 'waen Der 'silen 'sal in 'staden 'staen	Her 'hughe was 'vroe maer 'sala'dijn Dat 'hi al'dus den 'riddere 'fijn	'Salo'mon ons 'oec ghe'waget 'Also de 'motte die 'cleder 'knaget

As we can see, lines in Mellibeus start and end with a stressed syllable followed by an unstressed syllable, which makes the feet trochaic. Both in Saladijn and in Lutgart lines begin and end with iambic feet, with the beat generally falling on the second syllable with the inital syllable disregarded. Thus, the superheavy final syllable rhymes include *ghinc* and *vinc* or *goet* and *vroet*. Perhaps, the name Saladijn encouraged the poet to use an iambic pattern,

ending his rhymes frequently with such heavy syllables. Both Saladijn and Lutgart also contain feminine rhymes ending in schwa (cf. Zonneveld 2000).

(20) Feminine rhymes in Lutgart and Saladijn

Lutgart	**Saladijn**
11549 Al 'oppen'bare in 'sinen 'wane	15595 Wat 'tbedde be'diet dat 'v god 'lone
11550 Dat 'pijnlic 'ware hem 'tonder'stane	15597 V 'bedde te 'makene 'in gods 'trone

When examining metrical feet in verse, to establish the presence or absence of OSL, it is necessary to closely examine the syllables which can carry a beat. In Germanic in general, metrically strong syllables would be heavy syllables which would either be open syllables with long vowels or syllables closed with a coda consonant. However, metrical resolution occurred frequently in older Germanic languages (cf. Old English, Old High German, Gothic) equating a sequence of two light syllables (LL) or a sequence of one light and one heavy (LH) as a single foot; i.e. a sequence of LX equals H, where X equals L or H[33] (Russom 1987, Dresher & Lahiri 1991, Fikkert et al. 2006 and references therein). Thus, an LH sequence carries a single main stress (e.g. OE *wéreld* 'world', *cýning* 'king') and would constitute a single foot and never two feet, such that the final H in this sequence could never carry a beat. As we shall see, these sequences become crucial line finally in iambic verse, where the beat could not fall on the final H (e.g. *ning* of *cyning*) since this syllable is not a foot by itself but the word as a whole constitutes a single LH foot. However, before we discuss the relevance of LH feet for OSL, we need to discuss the similarities and differences across the three texts, particularly with respect to defooting.

[33] Here L=Light syllable, H=Heavy syllable, X=syllable of any weight; Dresher & Lahiri 2004, Lahiri 2015 show that the asymmetric feet continued for quite a long time in Middle English. We would assume that the foot became a moraic trochee in modern Dutch after the period in which these manuscripts were written.

In most verses, there are various possibilities of de-footing in words with HH sequences as we see in (21). Words with two heavy syllables need not carry two beats and one heavy syllable could be defooted for rhythmic purposes (for instance 21a and b; examples of verses are given in later).

(21) Possibilities of Defooting: H=Heavy, L=Light; underlined H indicates defooting, bold **H** indicates stress.

	Form	Expected	Attested		Gloss
a	HH	(**H**) (H)	(**H**) (H) and (H) (**H)**	ambacht, erming, archeit, vīant	trade, poor person, evil, enemy
b	HHL	(**H**) (HL)	(H) (**H**L) and sometimes (**H**) (HL**)**	ambachte, erminge	trade, poor person

However, where open syllables are concerned, there are varying possibilities. To appreciate the differences across the three texts, we need to discuss them with respect to the two metrical patterns, iambic and trochaic. We first turn to Lutgart and Saladijn and then discuss Mellibeus.

Fikkert (2000) argued that the LX=H type of resolution was still in effect in Lutgart. Our contention is that the words with LX feet are crucial to establish whether OSL has occurred or not. The argument is as follows: If OSL has occurred, then original short vowels in open syllables would become heavy and would pattern with other heavy syllables; i.e. the original L syllables would be treated as H. Thus, before OSL, a word with 'CVCVC structure would be treated as one foot with a first light syllable followed by a heavy syllable (e.g. LH=LX) with only a single beat on the first syllable; the second syllable cannot bear a beat since it is part of a single foot and cannot bear stress. If, due to OSL, the first vowel is lengthened to 'CV:̩CVC then the word would have two feet, HH, with potentially two beats or, after defooting, only one H would carry a beat. However, without OSL, a 'CVCVC word could only be a single trochaic foot.

Let us first consider footing possibilities in line **medial** positions in Lutgart and Saladijn. Typically, where two monosyllabic H feet were possible with two closed syllables, as in (21a, b), one could be defooted for rhyming purposes. In line final position, we have other considerations. An (L L) foot was permissible sentence finally with a final schwa (22a).

However, Fikkert noticed that in Lutgart, words like *coninc* (LH) and *coninge* (LHL) (with a closed penultimate syllable) always comprise of a single foot whereas words like *erming(e)* (HHL) consist of two feet, one of which could be defooted if needed. Examples are given below in (22).

(22) Footing of LH and HH feet in Lutgart – line medially

([L H])	([L H] L)[34]	(H) (H)	(H) (H L)
'co ninc	'co nin ge	'am ˌbacht	'am ˌbachte

Thus *ninc* can appear in a weak position, but never in a strong position in Lutgart, while *ambacht* can be (H) (H) or (H) (H), allowing the final syllable to be strong. Although the final syllable in *coninc* is heavy, the word has an LH sequence which is resolved into a single foot. That is, it carries only a single stress which is on the light syllable, not on the heavy. Thus, <ninc> in *coninc* can never carry a beat since the main stress is on <co> and the entire word constitutes a single foot. The final schwa in *coninge* can of course be ignored. The contrast between *coninc* and *ambacht* exists because the first syllable in the former must have been light. In (23) we have examples of both words in Lutgart where it is obvious that either syllable of *ambacht* can carry a beat, but the main beat is always on <co> in *coninc* and *coninge* and never on *ninc*.[35]

(23a) Defooting of H in HH, but not in an LH sequence in Lutgart

*(['L H])	(H) ('H)	('H) (H)

[34] Fikkert (2000) argues that the resolved moraic trochee of older Germanic languages was still valid which required that the trochee was placed at the left edge of a word and the head had to have two moras and could branch: **([μμ]$_{\text{HEAD}}$ μ)** (Dresher & Lahiri, 1991; Dresher & Lahiri 2005; Fikkert et al. 2006; cf. Idsardi 1994). Consequently, *coninge* would still be a single foot.

[35] Following a reviewer's advice we counted the number of occurences of medial *coninc* and its derivatives. There were in total 59 in Lutgart, always with an initial beat. In Saladijn we found medial *coninc* 18 times, 17 times with the beat on *'co* and once with the beat on *'ninc* and 1 occurrance line finally, also with the beat on *'ninc*. (23b).

'co ninc am 'bacht 'am bacht

10836	Die **'coninc** 'van din 'para'dise	LH(L) foot
14283	Si 'bat vor **'coninge** 'ende 'grauen	
4060	Dat 'sal v **'ambacht** 'wesen 'daer	HH words with defooting
5098-3	Dats 'mijn **am'bacht** in 'hemel'rike	

We find similar evidence of footing and defooting in HH sequences line medially in Saladijn.

(23b) Defooting of HH sequences in Saladijn

15586	Dat 'ghi al 'oncuus'heit ver'smaet	HHH > HHH
15587	Ende 'maect v 'alder '**scalcheit** 'scu	HH > H H
15698	Dats **'sober'heit** een 'reyne 'name	HLH
15532	Doe **'antwor'de** die 'coninc te 'hant	HHL > HHL
15532	Doe 'antwor'de die **'coninc** te 'hant	HH > HH
15526	'Doe **ant'worde** heer 'hughe na 'desen	HHL > HHL

Now we turn to the **end of a line**. Here we draw attention to the lack of certain types of end rhymes in Lutgart, which were perfectly acceptable in the Saladijn, and we will argue that the reason for this is the lack of OSL in the former. In an iambic metre, the final foot in the end rhyme can consist of one heavy (H**)** syllable or with a final schwa (HL) which is extrametrical. In iambic metre, as we observed above, the ideal final foot would be [L'H (ə)]. Fikkert observed that words like *coninc/coninge* never occur sentence finally in Lutgart, whereas clearly words like *ambacht* do. Since the final syllable can be either a defooted (H) or a (H) that carries a metrical beat, an (H)(H) sequence can appear sentence finally where one foot could be defooted due to clash; cf. *'ambacht* ('HH) vs. *am'bacht* (H'H). In contrast, <ninc> in *coninc* ('LH) has a heavy unstressed syllable and would not be allowed to be ignored. Thus, several issues arise: (i) <ninc> is a heavy syllable, but it could not bear stress since its preceding light syllable bore stress, 'LH; (ii) it could not be ignored since the final H is not a schwa; (iii) it could not be defooted since it is not a foot. Consequently, such words are incompatible and cannot be placed at the end of a line in an iambic metre. If, on the other hand, a word consists of two heavy syllables, such as *ambacht*, it may carry two stresses or

one can be defooted. When it appears sentence finally, the first foot is defooted and the iambic metrical pattern is satisfied.

Such a gap, disallowing LH(L) words (where the initial syllable was a single vowel in an open syllable) at the end of a line in an iambic rhythm, can only be explained if OSL had not yet taken place. Long vowels would constitute heavy syllables. Consequently, had OSL taken place, the initial syllable in *coning*, <co> would have been long [co:] and the subsequent (H) (H) sequence would not have been a single foot. Thus, with OSL, *cōning* would have behaved exactly like *ambacht*. We argue that OSL is well established in Saladijn, allowing for words like *coninc* line finally, but <u>not</u> in Lutgart.

(24) Original LH and HH words

(a) before OSL in Lutgart

(L H)	(H) (H)
co ninc	am bacht

(b) after OSL in Saladijn

(H) (H)	(H) (H)
co: ninc	an schijn

To confirm our hypothesis, we present examples with word final original HH sequences in Lutgart and Saladijn (where one H is defooted), followed by examples of original LH sequences in Saladijn which have become HH, but do not occur in Lutgart.[36] We predict that words like *coninc* would be allowed at the end of the line in Saladijn with a final beat on <ninc> where OSL has occurred but not in Lutgart. This is exactly what we find; in Lutgart *coninc* never occurs sentence finally, whereas it does in Saladijn, which suggests that OSL had taken place in the latter, but probably not in Lutgart. Examples are given in (25) and (26).

(25) Examples of final HH feet in Lutgart and Saladijn with final defooting

[36] Unlike Lutgart, we do not find words like *ambacht* 'trade' with two heavy closed syllables sentence finally in Saladijn. We have therefore given sequences of two H words like *heeft noot* 'has need'.

L 4941	Dats allewege dijn **ambacht**	HH > HH
L10436	So dat opgaven har **ambacht**	HH > HH
S 15758	Dat 'deedi 'wel te 'passe **an**'**schijn**	HH > HH
S 15495	In heydenisse een rijc **sou**'**daen**	HH > HH

However, unlike Lutgart, all original LH sequences in Saladijn behave like HH where either can be defooted and the second H can be strong position. This is impossible in Lutgart.[37]

(26) Original LH words with OSL sentence medially and finally in Saladijn

a)	15584	Her 'hughe 'dede den **'coninc** 'dwaen	HH > HH
b)	15502	Tenen 'tiden dat 'dese **co**'**ninc**	HH > HH
c)	15640	Nu 'gordt hi 'den **co**'**ninc** sijn 'zweert	HH > HH

As we can see, the fact that *coninc* can occur at the end of a line (26b, rhyming with *ghinc*) or with a beat on *ninc* line medially with a defooted *co:* (26b) in Saladijn suggests that OSL must have lengthened the initial vowel such that the word does not consist of two feet. Furthermore, even line medially since an 'LH word is a single foot, it can only bear a beat on the first syllable since the second heavy is treated as light. Thus, in Lutgart, unlike Saladijn, the word *coninc* occurs with a beat only on *co* and never on *ninc* (cf. 26c and 27).

(27) Original LH words without OSL sentence medially in Lutgart

a)	11675	so 'gaf die **'coninc** 'vanden 'trone	'LH
b)	1049	den 'hogsten **'coninc** 'onsen 'here	'LH
c)	10836	Die **'coninc** 'van din 'para'dise	'LH

[37] Although there are not many words like *coninc* 'king' as LH sequences, we found words like *besech* 'busy', *menech* 'many' and *blischap* 'joy'. These words also end with heavy syllables although not of the CVCC types as we find in *coninc.* Nevertheless, none of these types of words exist in Lutgart sentence finally although there are plenty sentence medially. If OSL had occured, then these would have been possible at the end of a line.

Now we turn to Mellibeus. Here, it is obvious that words like *coninc* consist of two heavy syllables and one or the other can be defooted, exactly like like original HH sequences such as *ambacht* and *wijsheyt*.

(28) Examples from Mellibeus with HH feet

1709	'Salomon 'leert ons 'die **co**'**ninc**	HH > H̲H
3081	Daer om sprac die **'coninc** Dauid	HH > HH̲
620	Wet 'dat es 'grote **wijs**'**heyt**	HH > H̲H
2228	'Want te 'haren **'ambacht** 'des sijt 'vroet	HH > HH̲

In sum, without exception, an initially stressed ('LH) foot could never occur sentence finally in an iambic verse since the final foot in iambic metre had to be (L'H). In Lutgart, words like *'coninc* could not be placed sentence finally, where the final heavy syllable had to remain unstressed, while they were permitted in Saladijn. This can only be explained if OSL had not occurred in Lutgart such that the parsing would lead to single feet with resolution as in *coninc* (['L H]), *coninge* (['L H] ə). Saladijn treats these words as having two feet ['H ˌH] or ['H ˌH ə] and can defoot the initial H.

6. CONCLUSION. Although it is well established that OSL occurred in Middle Dutch, the time of its commencement remains uncertain. We report evidence from orthography, rhyme and metre in three medieval Dutch texts written in verse during the course of approximately 75 years. A combination of diachronic correspondences and a careful examination of the verses helped us to ascertain the synchronic systems of 13th and 14th century Middle Dutch as can deduced from texts written in Brabant and established the timing of OSL. Of course, our evidence is based only on three texts. However, these were chosen for close scrutiny precisely because of their close geographical connections and the time in which they were written. Naturally, there are many gaps in such comparisons. However, for the phonological questions we are raising, rhyming texts are crucial and in this period and area no other author is available. Nevertheless, we could indentify striking similarities and differences in what could or could not occur in specific contexts.

Our conclusions are summarised below.

- Orthographic evidence: Although orthography has been generally considered to be unhelpful, a closer look at the texts suggests that Lutgart has largely escaped OSL,

while Saladijn and Mellibeus have not done so. Comparison between the vowels in the texts with reconstructed Proto-Germanic, as well as Old English, Old Saxon and Old High German when relevant, indicated that the original long and short vowels in closed syllables were distinguished systematically in all three texts. However, the orthographic evidence in open syllables differed. The writing system reflected that original long vowels, and short vowels in open syllables were written in the same fashion in Saladijn and Mellibeus as in Modern Dutch, but not in Lutgart (section 3). In Lutgart, the original long vowels varied in writing between a single grapheme and two graphemes, suggesting that there was a need to distinguish these from original short vowels in open syllables. In all probability, the original short vowels had the tendency of becoming long and this allophonic lengthening needed to be distinguished from the 'real' long vowels in open syllables. Saladijn and Mellibeus, in contrast, must have neutralised the length contrast in open syllables such that all vowels were written with a single grapheme in this context.

- Evidence from rhyme: Once again there appears to be a difference between Lutgart on the one hand, and Saladijn and Mellibeus on the other. The hypothesis we entertained is that had OSL taken place, original unrounded short vowels in open syllables would rhyme with original unrounded long vowels. For independent reasons, it was not possible to compare rounded vowels because when these were lengthened, the vowel quality altered (cf. Sytsema et al. 2014). However, original short unrounded vowels in open syllables rhymed with original long vowels in Saladijn and Mellibeus, but this is much less evident in Lutgart (section 4).
- Metrical parsing: Here we find clear evidence of the lack of OSL in Lutgart compared to Saladijn and Mellibeus. Saladijn and Lutgart are written in iambic verse which requires a heavy stressed foot at the end of a line. Final light syllables are not tolerated unless they are schwas. Thus, original LH words like *coninc* with only initial stress (and no stress on <ninc>) were impossible at the end of a line in an iambic verse which was true in Lutgart. In Saladijn, however, such words were permitted, indicating that the initial light syllable in *coninc* must have lengthened by OSL and the weight of the initial syllable became heavy and the syllabic sequence became HH, similar to words like *ambacht*. Such sequences were allowed since one of the syllables could be defooted (section 5). Thus, original LH syllables must have been lengthened by OSL since they follow the same metrical pattern as words with

original HH syllables in Saladijn but not in Lutgart. Furthermore, in Saladijn, after OSL, when *coninc* had a sequence of HH syllables, one could be defootted and either syllable could bear a beat even line medially. Again, this is lacking in Lutgart where only the initial syllable could carry a beat since it was a single foot.

Thus, we believe that there is evidence to suggest that OSL had been more established in Saladijn and Mellibeus than in Lutgart. Whether this is due to minor dialectal differences or to the individual authors is hard to conclude. Since the authors of the texts appear to have originated from the same area, a likely conclusion is that given the approximate 75 year gap between the manuscripts, what we find is a gradual extension of OSL through this period — well entrenched in the later texts, but just beginning in the earliest one.

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