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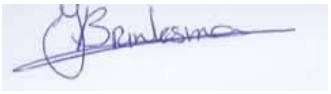
| Date and signature: 17 May 2017<br>  |

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# The Phonemicization of the Fricative Voicing Contrast:

# Evidence from Early Middle English Orthography

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## Abstract

Multiple factors have been argued to have caused, reinforced, or contributed to the phonemicization of the fricative voicing contrast in English; factors such as the influx of French loanwords, apocope and degemination. Nevertheless, these factors alone do not appear to fully explain phonemicization and our understanding of their impact is limited. The present study addresses two hypotheses regarding the prerequisite for the phonemicization of the voiced fricatives: the hypothesis that dialect contact led to familiarity with initial voiced fricatives in the area without initial fricative voicing, aiding the acceptance of initial voiced fricatives in French loanwords (Lass, 1992, p. 59), and the hypothesis that the fricatives already had distinct phonological representations in Old English, with the influx of French loanwords, apocope, and degemination merely imposing an unpredictable distribution (Honeybone & Iosad, 2013). An analysis of the spelling of the labiodental fricative in early Middle English indicates that initial fricative voicing occurred in the South and the South West Midlands in accordance with previous analyses of orthography (see Fisiak, 1984 for an overview). However, several spellings likely indicating voicing were found in texts of the East Midlands, which might indicate spread of voiced initial fricatives via dialect contact. French loanwords with the voiced labiodental fricative were found in texts localised in different parts of the country and primarily in later texts. It is argued that while the dialect contact hypothesis may not be rejected and dialect contact likely played a role in phonemicization, the theory that phonologization preceded phonemicization offers a more parsimonious explanation.


*Keywords*: Middle English, fricatives, phonemicization, French loanwords, spelling

**Table of Contents**

## Introduction

Language is always changing. New words constantly come into use while others gradually drop out. The ever-changing lexicon is not the only marker of the unstable nature of language; grammatical forms and phonological systems also change. This paper focuses on a case of phonemicization or phonemic split, i.e. the progression of allophones, distinct speech sounds generally perceived as a single sound, into separate phonemes, speech sounds that distinguish one word from another (McColl Millar, 2015, pp. 72-73).

The voiced fricatives [ð], [v] and [z] are generally considered to have been allophones of /θ/, /f/ and /s/, respectively in Old English (OE) and to have appeared in a complementary distribution with the voiceless fricatives (e.g. Lass, 1992, p. 41). In Present Day English (PDE), however, the voiced and voiceless fricatives are separate phonemes, as illustrated by minimal pairs such as *fan-van* and *lacy-lazy*. Multiple different factors have commonly been argued to have contributed to, reinforced, or even caused phonemicization; factors such as the influx of French loanwords with initial /v-, z-/, the voicing of the dental fricative in function words, apocope involving the loss of word-final /ə/ inflections, and degemination leading to the loss of the consonant length contrast (e.g. Kurath, 1956; Lass, 1992; Minkova, 2011). The extent to which all these factors contributed to phonemicization is unclear due to the limited knowledge on the dating and spread of the different factors, as will be elaborated on in the theoretical framework.

It has been suggested that the factors described above cannot explain phonemicization by themselves, because French loanwords and words affected by apocope and degemination could have been adapted to fit the complementary distribution, as happened in OE with (at least certain) Latin loanwords (e.g. Honeybone & Iosad, 2013). The current study addresses two hypotheses regarding why phonemicization nonetheless occurred. Lass (1992) suggests that dialect contact between dialects with and without word-initial fricative voicing resulted in

familiarity with voiced initial fricatives in the areas without voicing, aiding the acceptance of French loanwords with voiced initial fricatives (p. 59). Honeybone and Iosad (2013) argue that in the OE period the fricatives had (developed) distinct phonological representations, with phonological computation still imposing a largely complementary distribution. The borrowing of French words, degemination and apocope is suggested to have merely resulted in an unpredictable distribution of speech sounds that already had distinct phonological representations.

The current study will consider the phonemicization of the fricative voicing contrast by looking at early Middle English (eME) texts and analysing the occurrence and orthography of the fricatives, focusing predominantly on diatopic variation. It will consider the orthographic evidence for word-initial fricative voicing of native words and what the evidence implies for the viability of the dialect contact hypothesis. Consideration of all three of the fricative pairs, i.e. /f/-/v/, /s/-/z/ and /ð/-/θ/, is beyond the scope of the current study. Instead, the focus will be on the word-initial voicing contrast for /v/-/f/ as orthographic evidence for the labiodental fricative voicing distinction is more extensive that that available for /s/-/z/ and /ð/-/θ/. The orthography of the labiodental fricative in word-initial position will be analysed for both native words and French loanwords. While multiple studies have considered the spelling evidence for word-initial fricative voicing, no comprehensive study has yet been conducted for the *LAEME* corpus, the most comprehensive corpus of eME.

The paper starts off with a broad theoretical framework which discusses the status of the voiced fricatives in OE, the factors that reinforced or contributed to phonemicization and different perspectives on the prerequisites of phonemicization. Chapter 2 discusses spelling as evidence for linguistic change and Middle English (ME) spellings for [v], before moving on to elaborate on the corpus and method. Chapter 3 presents the results and a discussion of the findings within the larger framework of what was truly instrumental in the phonemicization of

the voiced fricatives. Finally, a concluding chapter will summarise the study's findings and its implications, as well as provide suggestions for further research.

# 1. Theoretical Framework

## 1.1 The Status of the Voiced Fricatives in OE

Lass (1991-1993) opens his paper with: "It is a truth universally acknowledged, that voicing was non-distinctive for the Old English fricatives" (p. 3). In recent years, however, the status of the voiced fricatives in OE has been a topic of renewed discussion, with new insights and interpretations complicating a simple complementary distribution. Laker (2009) argues that the voiced fricatives were already separate phonemes in OE, while others such as Minkova (2011) do not find the evidence regarding fricative voicing in OE to be at odds with the view that the voiced and voiceless fricatives were allophones. The following two sections will discuss the distribution of the voiced and voiceless fricatives in OE and its implications for the status of the voiced fricatives respectively.

### 1.1.1 The Distribution of the Voiced and Voiceless Fricatives in OE

A reconstruction of the distribution of the OE fricatives relies on various sources of evidence, such as "orthography, historical comparisons, place names, evidence from language contact and system-internal structuralist arguments" (Minkova, 2011, p. 44). OE spelling offers little information. The dental fricative was spelled either <þ> or <ð> but the distribution of the graphemes appears to be unrelated to voicing, while the coronal sibilant was consistently spelled <s> (Lass, 1991-1993, p. 5). The labiodental fricative was generally spelled <f>, although the 8th century Mercian glosses demonstrate a <b> spelling for where later OE <f> is assumed to represent [v] and similarly in late OE an unconventional <u> spelling appears where /f/ is believed to have been voiced (Lass, 1991-1993, pp. 7-9). Most evidence for the distribution of [f] and [v] in OE, however, comes from "modern reflexes of OE forms associated with or defined by particular spellings" (Lass, 1991-1993, p. 9). An account of why fricatives in certain positions or certain OE words are thought to have been either voiced or

voiceless is beyond the scope of this paper. The following paragraphs will instead consider what generalisations may be made based on what is known about fricative voicing in OE.

A simple account of the distribution of the voiced and voiceless fricatives in OE, as described by many textbooks on the history of English, states that the fricatives were voiced between voiced sounds and that they were voiceless in all other environments (e.g. Hogg, 1992, p. 92). This distribution is illustrated in the phonological rule in (1). The rule would predict the fricative to be voiced in intervocalic position as in (2a), following a voiced consonant and preceding a vowel as in (2b), and when following a vowel and preceding a voiced consonant as in (2c).

(1) [ +obstr, +cont] → [+voice] / [+voice] ___ [+voice]

(2) a. s*nīþan* 'cut'

b. *furþor* 'need'

c. *fæþm* 'embrace'

The rule in (1) allows voiced obstruents on either side of the fricative. The rule is thus able to account for fricative voicing in past tense forms like *cyþde* 'informed' and *ræsde* 'rushed' but would also predict fricative voicing in underived words with a voiced obstruent following the fricative (Minkova, 2011, p. 48). These words, however, had a voiceless fricative (Minkova, 2011, p. 48). Lass (1991-1993) states that fricatives were voiceless in all obstruent clusters (p. 4). The corresponding rule may be found in (3). The voicing in words like *ræsde* and *cyþde* may be explained by the voicing rule applying before syncope, such that for the underlying form /ræ:s + ide/ the fricative is voiced before syncope of /i/ (Moulton, 2003, p. 167).

(3) [ +obstr, +cont] → [+voice] / V(R)___ (R)V

Lass (1992) also observes that fricative voicing only happened in foot-medial position when the fricative was "preceded by a stressed vowel (followed by an optional liquid or nasal) and followed by an unstressed vowel" (p. 41). The voiceless fricatives are argued to have appeared in all other positions, i.e. in foot-initially, foot-finally and in obstruent clusters (p. 41). Minkova and Stockwell (1994) further refine Lass' distribution, stating that intersonorant fricatives were voiced at the onset of the weak syllable in the trochaic foot unless the fricative was part of an obstruent cluster (p. 533). This distribution avoids the problem of having to establish the foot boundaries in words with secondary stress, indicating that in the word *toseþan* 'prove' the dental fricative was voiced, but in the word *únþèawas* 'prove' it was voiceless (Minkova, 2011, p. 50). With regard to the distribution suggested by Lass (1992), and refined by Minkova and Stockwell (1994), geminates, which have a longer realisation than the single voiceless fricative, should be considered obstruent clusters, such that the fricative in words like *offrian* 'offer' and *missan* 'to miss' is voiceless. Furthermore, words like *bosm* 'bosom' and *swefn* 'dream', which had a voiced fricative, likely made up a foot, with the final consonant being syllabic (Laker, 2009, p. 214).

Morpheme boundaries placed further restrictions on the voicing conditions. Laker (2009) notes that fricatives were not voiced at a derivational morpheme boundary (p. 213). In many cases voiceless fricatives at derivational morpheme boundaries would also be anticipated by application of the rule that fricatives were only voiced at the onset of the weak syllable of the trochaic foot, such that both the rule by Minkova and Stockwell (1994) and the morpheme-juncture rule would anticipate /f/ to have been voiceless in words like *prym-faest* 'glorious' and *of-ascian* 'enquire'. The morpheme-juncture rule is, however, necessary to anticipate the voiceless realisation in words with stacked prefixes, such as *únforcùþ* 'noble' (Minkova, 2011, p. 50). In summary, the phonological rule in (1) overestimates the number of environments in which /θ/, /f/ and /s/ were voiced in OE and fails to recognize the prosodic

and morphological considerations affecting fricative voicing. A more complete rule is described in (4).

(4) If the fricative is at the onset of the weak syllable of the trochaic foot and not at a derivational morpheme boundary:

[ +obstr, +cont] → [+voice] / V(R)___ (R)V

In his argument for the early phonemicization of the voiced fricatives, Laker not only refers to the general non-phonological considerations playing a role in fricative voicing in OE, but also to specific words and morphemes which may form exceptions to the rule in (4). Especially the voiceless fricative in the feminine abstract noun suffix *-þu* and the ordinal suffix *-þa* has been subject of debate. The two explanations that have been put forward employ either the morphological restriction or the prosodic restriction of the rule in (4). Dietz (1997) argues that the *-þu* and *-þa* suffix fall under the morpheme juncture rule (p. 168), while others posit that the fricative was voiceless due to preceding unstressed syllables as in (5a) and (5b) which may have been lost due to i-mutation (e.g. Luick, 1914-40, p. 845).

(5) a. *seofo-þa* 'seventh'

b. *streng-þ(u)* (< ∗*strangiþu*) 'strength'

Certain OE words appear to be simply incompatible with the rule in (4). Minkova (2011), however, demonstrates why these exceptions are not necessarily problematic for the productivity of the rule. Laker (2009), for example, notes that words like *cærse* (< ∗cræsse) 'watercress'and *hyrse* (< ∗*hruss(i)j*-) 'mare' show no subsequent voicing of the fricative after *r*-metathesis (p. 214). Minkova (2011) refers to the free variation of the non-metathesized

forms and the metathesized form as explanation, stating that this is likely to have prevented rule application (p. 34). Other exceptions to the rule are *blosm (< blostm)* 'blosom', where following syncope of *t* the fricative was not voiced (Laker, 2009, p. 214) and the adjective *wyrsa* 'worse' which also had a voiceless fricative (Minkova, 2011, p. 35). Minkova (2011) notes, based on searches of *The Dictionary of Old English*, that *-stm* final spelling for 'blossom' was far more frequent than the *-sm* spelling (p. 35). Similarly, the adverb *wyrs* 'worse' with the word-final voiceless fricative appears to have been more frequent than the adjective (Minkova, 2011, p. 35). Finally, certain foreign borrowings where according to the rule in (3) voicing would be expected, had voiceless fricatives, such as *burse* 'purse' from Latin, *gærsum* 'jewel' from Old Norse and *cursian* 'curse' possibly from Irish (Minkova, 2011, p. 36). The question then is: to what extent do the exceptions to rule (3) form a problem for the validity of the rule and what do they mean for the status of the voiced fricatives in OE?

Based on the observation that all of the exceptions discussed above concern words with a liquid or nasal flanking the fricative, Minkova (2011) suggests a hierarchy for fricative voicing in OE depending on the sonority of the flanking voiced elements. She argues that two flanking vowels offered a stronger impetus for voicing than liquids and nasals (Minkova, 2011, p. 49). Indeed, the data do not suggest any exceptions to the rule in (4) for intervocalic fricatives, while certain idiosyncratic words with liquids or nasals violate the rule.

### 1.1.2 Implications for the Status of the Voiced Fricatives

The existence of minimal pairs is generally used to establish whether two speech sounds are separate phonemes in a language. Laker (2009) acknowledges that minimal pairs or near-minimal pairs did not exist in OE (p. 214). Thus, if minimal pairs were to be regarded as imperative for a speech sound's phonemic status the voiced fricatives [ð], [v] and [z] in OE would not have been phonemes. Laker (2009), however, accepts Fulk's analysis that the voiced and voiceless fricatives were no longer allophones in OE, citing the distribution of the

voiced and voiceless fricatives which cannot solely be explained in phonological terms and the exceptions to the regular distribution (pp. 214-215). Minkova (2011) points out that multiple speech sounds in PDE that are considered allophonic alternations, such as light [l] and dark [ɬ] in American English, "interact with and can be overridden by non-phonological factors" (p. 38). In other words, non-phonological considerations may obscure functioning phonological rules and in that sense the voiced fricatives in OE need not necessarily be considered phonemes.

Minkova (2011) furthermore suggests that there is no binary division between pure allophony and phonemic contrasts (pp. 43-45). Instead, contrastiveness of speech sounds may be described as a scalar property. Goldsmith (1995), for example, defines five different levels of contrastiveness, given in (6).

(6) The cline of contrastiveness (Goldsmith, 1995, p. 12):

1. Contrastive segments
2. Modest asymmetry case
3. Not-yet integrated semi-contrasts
4. Just barely contrastive
5. Allophones in complementary distribution

In light of these different stages, it is perhaps reductive to try to label the voiced fricatives in OE as either allophones of /θ/, /f/ and /s/ or phonemes. Instead, Minkova (2011) suggests that there are stages in which the phonemic status of a segment is indeterminate or quasi-phonemic (p. 45). The question then is whether the indeterminate stage was part of the phonemicization process for the voiced fricatives, or whether phonemicization would also have taken place when the distribution of the voiced and voiceless fricatives in OE would

have been completely phonological and complementary. The distribution as found in OE could perhaps be a first step in the phonemicization process, having an effect on the underlying representation of the voiced fricatives. However, as such allophonic alternations as that of light [l] and dark [ɬ] in American English would suggest, non-phonological considerations do perhaps not necessarily have an effect on underlying representations. It is impossible to recover the underlying representation of the voiced fricatives during the OE period. Nevertheless, contrasting the idea of a not purely phonological motivated distribution as an essential stage in the phonemicization process with other perspectives on the prerequisites for phonemicization may offer insight into the likelihood of the different perspectives. I turn to different perspectives on the prerequisites for the phonemicization of the voiced fricatives in section 1.3, first discussing the factors that contributed to or reinforced the phonemicization of the voiced fricatives in section 1.2.

### 1.2 Factors Contributing to Phonemicization

There is a general consensus in the literature as to the multiple factors that contributed to or reinforced the phonemicization of the voiced fricatives. These factors are assumed to have played a role in the transition from the distribution of the voiced and voiceless fricatives in OE and the distribution as found in PDE. To state it simply, the transition consists of voiced fricatives appearing word-initially and word-finally and voiceless fricatives appearing word-medially in an intersonorant position, specifically at the onset of the weak syllable of the trochaic foot. The following sections will discuss the introduction of initial /v/ and medial /f/ through French loanwords, the introduction of initial /ð/ in function words, the introduction of final /ð/, /v/ and /z/ through apocope, and the introduction of medial /f/ and /s/ through degemination respectively. With all the different factors playing a role it is interesting to consider when and where they started taking effect, aiding a more complete account of ME

phonology. The chapter will discuss the often tentative dating of the different changes and the limited comprehension of how these changes started taking effect throughout England, illustrating the use of further research.

### 1.2.1 The Introduction of Initial /v/ and Medial /f/ through French Loanwords

The influx of French loanwords into English is generally considered the most decisive factor contributing to the phonemicization of the fricative voicing contrast (Laker, 2009, p. 217), and therefore of particular interest. After the Norman invasion of 1066 many French words were borrowed into English, particularly after 1250 when French speakers started to adopt English; only about a 1000 words were borrowed before that time (Van Gelderen, 2006, p. 99). Loanwords helped establish the voiced labiodental fricative phoneme in word-initial position with words like *vile* 'vile' and *veyn* 'vein' and the voiceless phoneme in medial position with words like *coffin* and *sacrifice* (Minkova, 2011, p. 54). According to Lass (1992), French loanwords resulted not only in initial /v/ being introduced into the language but also initial /z/, resulting in minimal pairs such as *feel* - *veal* and *seal* - *zeal* (p. 58). He suggests that consequently /f/ and /v/ and /s/ and /z/ were separate phonemes by 1250 (p. 59). Minkova (2011), however, does not think that French borrowings had this impact on the sibilants, noting that there are only 31 items with initial /z/, all of which are low-frequency lexical items, compared to almost 800 entries with initial /v/ in the *Middle English Dictionary* (pp. 51-52). She also notes that the lexical assimilation of /z/-initial words in 1500 was still at a rudimentary stage, while many /v/-initial words had multiple derivations, such as *venimehede* (n.) and *venimen* (v.) in the case of *venim* (adj.) (p. 52). Indeed, Van Gelderen (2006) concludes that /z/-initial words were only really introduced in the 16$^{th}$ and 17$^{th}$ centuries due to Greek influence (p. 52). French borrowings therefore might be expected to have had a great influence on the phonemicization process for the /v/-/f/ contrast but not necessarily so for the /s/-/z/ contrast. The first French loanwords "appeared most densely

around London, the centre of fashion and administration, and spread northwards and westwards from there; by the fourteenth century, they were being used freely all over the country" (Barber, 2000, p. 140). An analysis of eME spelling evidence described further on in this paper will consider whether this implies that the word-initial contrast for /v/-/f/ was perhaps first established in the South East Midlands.

### 1.2.2 The Introduction of Initial /ð/ in Function Words

As French did not have initial /ð/, the appearance of the voiced dental fricative word-initially has a different explanation. Most words in PDE with initial /ð/ are function words, such as *the*, *this*, *that*, *there*, etc. Jespersen (1909) contributes the fricative voicing in these particular words to their frequent intervocalic position in combinations such as *to this*, or in the case of *though* due to generalisation from *although* where ⟨th⟩ was already voiced (p. 201). Many others (e.g. Kurath, 1956, p. 439; Lass, 1992, p. 59; Thurber, 2011, p. 67) refer to stress conditioning, considering that function words usually do not have syntactic stress. The lack of stress is thought to be conducive to voicing because voiced fricatives require less energy to produce than voiceless fricatives (Millward, 1996, p. 148). Lass (1992) states that function words acquired word-initial voiced fricatives around the 14th century, based on rhymes such as *sothe* - *to thee* (p. 59). Thurber (2011), however, argues that it happened earlier, around 1200, based on the distribution of ⟨ð⟩ and ⟨þ⟩ in the text *Vices and Virtues* (ca. 1200) that is most easily explained by assuming the letters represent differences in voicing based on stress. Similar previous analyses compared the distribution of ⟨th⟩ and ⟨þ⟩, but due to ⟨th⟩ being a new spelling, the distribution could be explained by orthographic conservatism particularly for function words (Thurber, 2011, pp. 68-69). Analysis of alliterations in OE texts would suggest that there was not yet a voicing contrast in OE in terms of the dental fricative of function words and the dental fricative of major class words (Minkova, 2011, pp. 39-40). Voicing of the initial dental fricative of function words thus most likely happened after the

OE period, possibly as early as 1200, though conclusive evidence first appears in the 14th century.

### 1.2.3 The Introduction of Final /ð/, /v/ and /z/ through Apocope

The voice contrast in word-final position developed similarly for all three fricatives through apocope. The loss of final /ə / inflections, i.e. the loss of a conditioning environment, resulted in voiceless fricatives being in word-final position, such that for example OE [nozu] 'nose' became [nɔ:z] (Lass, 1992, p. 59). In the case of verbs, loss of the final inflection resulted in noun-verb pairs with a voiceless-voiced fricative contrast such as *house* [haus] (noun) - *to house* [hauz] (verb) (Van Gelderen, 2006, p. 52). The loss of inflections started in the North and North Midlands in the twelfth-century and the inflections were completely lost some time during the late ME period (Lass, 1992, p. 79).

### 1.2.4 The Introduction of Medial /f/ and /s/ through Degemination

In the case of the labiodental fricative French loanwords helped establish the voiceless phoneme in medial position through loanwords such as *coffin* and *sacrifice* (Minkova, 2011, p. 54). Degemination, however, is generally considered most important in the establishment of the medial voice contrast for /s/-/z/ and /f/-/v/ (e.g. Kurath, 1956; Lass, 1992). OE had geminate consonants such that <ff> was [f:] and <f> was [f]. As the geminate [θ:] was rare in OE, degemination likely did not have a great influence on the phonemicization of the dental fricative (Minkova, 2011, p. 55). According to Lass (1992), the process of degemination, i.e. the loss of the consonant length contrast, started in the North around 1200 and probably was complete around 1400 in London (p. 59). Luick, however, suggests that there are already signs of degemination in Old Northumbrian in the 10th century, as indicated for example by spellings like *geseton* in the Old Northumbrian translation of the Lindisfarne Gospels where *gesetton* would be expected (qtd. in Cole, in press). Laker (2009) argues that degemination did not actually play a role in the phonemicization process because geminates only occurred

after short vowels, while voiced fricatives, after the lengthening of vowels in open syllables, occurred only after long vowels (p. 217).

### 1.2.5 Summary

**Table 1.** Overview of the known or assumed dating of the different factors contributing to the phonemicization of the voiced fricatives.

| **Factor contributing to phonemicization** | **1200-1400 (Lass, 1992, p. 59)** |
|---|---|
| Introduction of initial /v/ and medial /f/ through French loanwords | From 1066 onwards, separate phoneme by 1250 (Lass, 1992, p. 59).<br><br>French loanwords predominantly first appeared around London (Barber, 2000, p. 140). |
| Introduction of initial /ð/ in function words | Concrete evidence (based on rhymes such as *sothe – to thee)* from the 14th century (Lass, 1992, p. 59).<br><br>Perhaps evidence from orthographic variation in particular texts ca. 1200 (Thurber, 2011). |
| Introduction of word-final /ð/, /v/ and /z/ through apocope, i.e. loss of final /ə / inflection | Started in the 12th century in the North and North Midlands (Lass, 1992, p. 79). |
| Introduction of medial /f/ and /s/ through degemination | Started in the North around 1200 and completed in London around 1400 (Lass, 1992, p. 59). |

### 1.3 The Prerequisites for Phonemicization of the Voiced Fricatives

The different factors described in the previous chapter are generally assumed to have caused phonemicization (e.g. Van Gelderen, 2006, p. 52). Multiple scholars, however, recognize that these factors are unlikely to have caused phonemicization by themselves (e.g. Lass, 1992; Moulton, 2003; Honeybone & Iosad, 2013). This idea may be illustrated by at least certain Latin borrowings into OE, where word-initial [v] was likely replaced by [f], as is suggested by the PDE realisation of *fan* (from Latin *vannus*) with a voiceless fricative (Lass, 1991-1993, p. 7). In other words, it seems there has to be a reason as to why in ME words affected by degemination or apocope and French loanwords were not adapted to fit in with the general patterning of OE. The voicing in function words seems to have been triggered by the weak position of the function words and is in itself an explanation for the establishment of /ð/ word-initially. Considering that this voicing most likely first occurred in the 14th century and thus after the other changes discussed in section 1.2 had started taking effect and almost definitely after the first influx of French loanwords into the language, it is unlikely to have triggered the phonemicization of the voiced fricatives. Laker's (2009) suggestion that phonemicization relied on native speakers of Brythonic shifting to OE runs into trouble as phonemicization appears to have occurred later and exceptions in OE to the voicing rule usually concerned the coronal sibilant even though Celtic did not have the sibilant voicing contrast (Minkova, 2011, p. 44). Lass (1992) suggests that it is possible that French loanwords with initial /v/ and /z/ were simply accepted due to the particularly large influx of French words which increased familiarity with these forms (p. 58). However, as described in section 1.2.1 there were few loanwords with initial /z/ and these words were nonetheless borrowed with the voiced fricative. The following two sections will discuss two scenarios that may have enabled the processes described in the previous chapter. Section 1.3.1 will focus on an explanation based

on the distribution and status of the voiced and voiceless fricatives in OE, while section 1.3.2 offers an explanation based on dialect contact.

### 1.3.1 Phonologization Precedes Phonemicization

Honeybone and Iosad (2013) argue that the distribution as found in OE indicates that the voiced fricatives already had phonologically distinct representations by the ME period, stating that this is a prerequisite for phonemicization. In other words, phonologization, which involves phonologically distinct representations, is argued to precede phonemicization, with phonemicization viewed as the establishment of an unpredictable distribution. The idea was first suggested by Moulton (2003), who notes certain characteristics of allophonic variation incompatible with the distribution of the voiced and voiceless fricatives in OE. First of all, voicing assimilation would require the voiceless fricatives to be specified for voice, indicating that at a certain level the voicing contrast was always available (pp. 158-161). Furthermore, the rule for fricative voicing would have to take place before syncope and before voicing assimilation, an unlikely 'deep' position for an allophonic rule (p. 167). Moulton argues that the voiced obstruent clusters of OE, likely resulting from an interaction between the fricative voicing rule and syncope (see section 1.1.1), created the opportunity for a reanalysis of the voicing specification of the voiced fricatives as underlying (pp. 170-171). Moulton further suggests that changes in the ME period were not the direct cause of phonemicization but were enabled by the complex distribution of the voiced and voiceless fricatives in OE (p. 172).

Honeybone and Iosad (2013) reach the same conclusion as Moulton (2003) but with slightly different argumentation. They refer primarily to the prosodic and morphological restrictions of the fricative voicing rule and the interaction with gemination as an argument for the phonologized nature of the distribution. While Moulton (2003) argues that the voiced fricatives must on a certain level already have been specified for voice, Honeybone and Iosad (2013) argue that there was no phonological activity for [voice], but that instead the voiceless

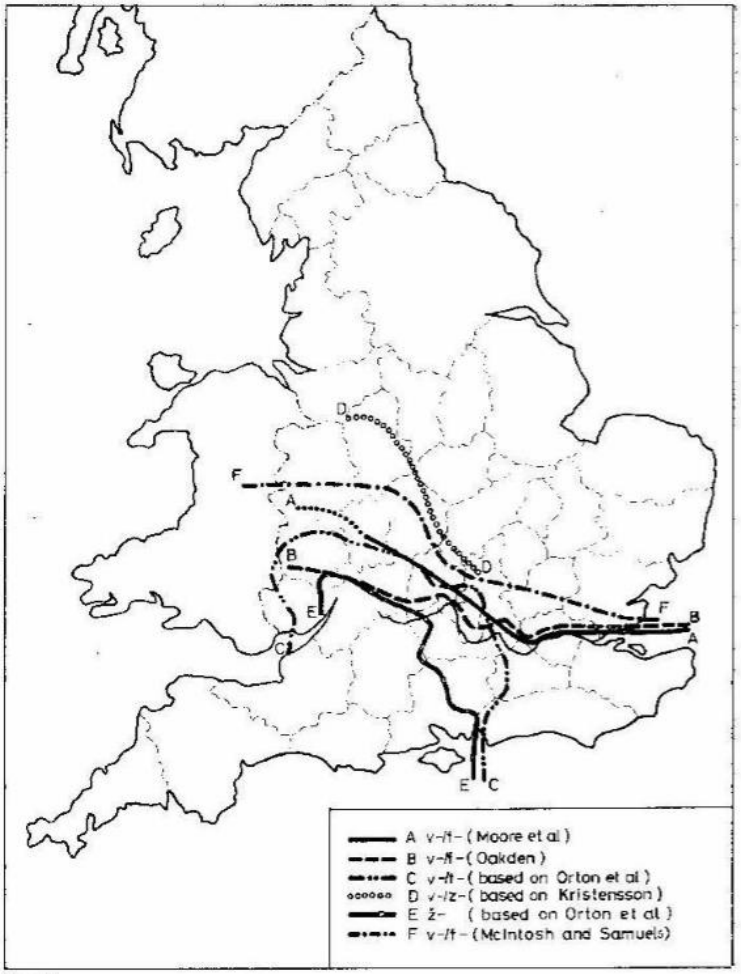
fricatives were specified for H (|spread|, |fortis|, etc). An account of the empirical evidence supporting either the argumentation by Moulton (2003) or Honeybone and Iosad (2013) is beyond the scope of the current paper (but see Spaargaren, 2009). Relevant to the current paper is the general argument first suggested by Moulton (2003) and stated more strongly by Honeybone and Iosad (2013). In summary, the sensitivity of the distribution of the voiced and voiceless fricatives to phonological structure is argued to imply that the OE voiced fricatives were distinct phonological symbols, with the phonological computation imposing a largely complementary distribution. The adoption of French loanwords and processes like apocope and degemination resulted in an unpredictable distribution but relied on the already distinct phonological representations of the voiced and voiceless fricatives in OE.

**1.3.2 Dialect Contact**

Lass (1992) argues that dialect contact played a role in the acceptance of the voiced fricatives. Most handbooks on the history of English state that at least by the ME period in the south initial fricatives were voiced before voiced sounds (e.g. Van Gelderen, 2006, p. 141). The statement appears to rely predominantly on a few studies of ME literary texts (Lass, 1991-1993, p. 15). ME literary texts, however, appear to provide only limited information, since there is no spelling evidence for [ð-] and there are only a few occurrences of <z->, while spelling for [v-] is variable (Fisiak, 1984, p. 4). The variable spelling may indicate that the voicing was only variably expressed in writing or that the voicing was variable both in written and spoken language (Lass, 1991-1993, p. 21). This is an undecidable issue and arguments are based on analytical faith (p. 21). The spelling evidence for solely the labiodental fricative may indicate that only word-initial /f/ was voiced or that /s/ and /θ/ were voiced as well but that this was not represented in written language (p. 21). Modern dialectal data (such as that of the *Survey of English Dialects*) would point to the latter (p. 24-26). The overview of multiple studies based both on the orthography of ME texts, place names and surnames and modern

dialectal variation by Fisiak (1984), also offers more information than the data based solely on literary texts and would suggest that word-initial fricative voicing extended further north than suggested by the handbooks, with voicing perhaps extending up to Staffordshire in the west. Map 1 shows the isoglosses of different studies, indicating up to where the data considered in a particular study would suggest voicing occurred. The isogloss by Moore et al. was based on a corpus of localized dated texts, mostly from the 15th century, and that of Oakden on a few literary texts from the 13th and 14th century. The isogloss established by Orton et al. relies on data from the *Survey of English Dialects*, undertaken between 1950 and 1961, while Kristensson's is based on an examination of place names and surnames in the Lay Subsidy Rolls, and that of McIntosh and Samuels on 110 manuscripts from 1350-1450 as part of the *Edinburgh Middle English Dialect Project* (Fisiak, 1984).

**Map 1.** Medieval and modern word-initial fricative voicing (Fisiak, 1984: map 4)



Based on the isoglosses in map 1, Lass (1991-1993) remarks that 'southern voicing' is the wrong term and suggests that the voicing would be better described as southern and western (p. 17). The suggestion that voicing extended up to the (North) West Midlands militates in favour of the hypothesis that dialect contact played an instrumental role in the acceptance of voiced fricatives in initial position. Dialect contact could have resulted in familiarity with initial voiced fricatives in the Midland and Northern dialects and thus perhaps led to French words with initial /v/ easily being accepted into the language (Lass, 1992, p. 59).

For the dialect contact hypothesis to function as an explanation for the phonemicization of not only /v/ but /z/ as well, it has to be assumed that the limited amount of words borrowed with an initial voiced sibilant affected the underlying representation of [z] or that the acceptance of word-initial [v] through French loanwords did not only affect the underlying representation of [v], but by association also that of [z] and perhaps [ð] as well. This is not an unlikely assumption considering phonological systems appear to prefer symmetry (McColl Millar, 2015, p. 77). Phonemicization of [ð] does not necessarily need this explanation as it might be explained by a language-internal prosodic process. McColl Millar (2015), however, suggests that voicing in function words might actually have occurred due to a drive for symmetry (p. 77). It is of course possible that dialect contact indeed contributed to phonemicization, increasing the familiarity with word-initial voiced fricatives, but that phonemicization ultimately relied on the complicated distribution of the voiced and voiceless fricatives in OE.

# 2. Data, Corpus & Method

## 2.1 Research Question

The theoretical framework has demonstrated the limited information available on the dating and the spread, i.e. diatopic variation, of the factors contributing to or reinforcing phonemicization. It has also raised the question of what the exact prerequisites of phonemicization were. The current study attempts to add to what is currently known by carrying out a study of the voicing of the labiodental fricative in initial position based on eME orthography. The three fricative pairs, i.e. /f/-/v/, /s/-/z/ and /ð/-/θ/, would require different methods of orthographic analysis. While there is an apparent correlation between <v> and <f> and the voicing distinction of the labiodental fricative, spelling variation for the coronal sibilant is minimal, and spelling variation for the dental fricative is generally unrelated to voicing (e.g. Minkova, 2011). Consequently, consideration of all three fricative pairs is beyond the scope of the present study. Instead the focus will be on the word-initial voicing distinction for the labiodental fricative as spelling in this environment appears to be clearly related to phonetic realisation (although this relation is never simple as will be discussed in the following chapter) and spelling variation is relatively common. Orthographic analysis has in this the case the clearest potential of providing information on diatopic variation. Furthermore, southern voicing is, at least to a certain extent, expressed in orthography for the labiodental fricative (e.g. Fisiak, 1984). A comparison of the areas in which spellings indicating the initial fricative voicing of native words are found and the areas where French loanwords are found (borrowed with the voiced fricative) may help establish whether dialect contact could have been instrumental in the phonemicization of the voiced fricatives, or whether phonemicization instead probably relied on already distinct phonological representations of the voiced and voiceless fricatives in OE. The *LAEME* corpus will provide

the study with a broader corpus of eME than the other corpus studies into southern voicing described. The research question is as follows:

To what extent can the study of eME orthography help establish a closer description of the phonemicization process of the fricative voicing contrast for /v/ and /f/ and provide insight into the prerequisites for phonemicization?

### 2.2 Spelling Evidence as Evidence for Language Change

Considering there are no recordings of eME, spelling variations may be considered potential manifestations of language change. Uniform spelling was introduced in English with the rise of Standard English and the invention of the printing press in the fifteenth century (Stenbrenden, 2016, p. 7). Before that time, there was more spelling variation and spelling traditions were more likely to reflect spoken language. In ME especially spelling variation was common. The relatively stable orthographic traditions of OE were uprooted by the establishment of French as the language of the ruling class, resulting in a vast decline of work (especially of official documents) produced in English and an increase in regional spelling differences (Scragg, 1974, p. 15). ME spelling is thus especially likely to provide information regarding sound changes and dialectal variation.

The possibility of spelling reflecting speech, however, does not imply a direct correlation between the spoken and written language and analyses based on Luick's famous statement that "man schrieb wie man sprach" (1914-1940, p. 38) would undoubtedly lead to insufficiently substantiated conclusions. McIntosh (1956) notes that spelling was "never intended […] to reveal facts about its spoken equivalent to the uninitiated" (p. 39). In other words, the primary aim of scribes was to communicate a certain message to readers familiar with the language, not provide facts about the realisations of sounds. Stenbrenden (2016) concludes that writing is most likely logographic, i.e. based on word-recognition, rather than

phonetic (p. 33). This, however, does not mean that spelling cannot provide information about the spoken language. eME scribes had fewer conventions to rely on than OE scribes and were therefore also more likely to rely on spoken language to a certain degree while writing. Furthermore, conventions may be disrupted by certain factors, such as analogy because "if a certain sound is spelt a certain way in one context, it can be spelt the same way in another" (Stenbrenden, 2016, p. 33). Spelling can thus certainly provide information about sound changes and dialectal variation, but always has to be treated carefully as a source of evidence. McIntosh (1956) states that "only by understanding the limitations of the correlation [between spelling and spoken word] can we […] make proper use of the available written material" (p. 28). Stenbrenden (2016) illustrates this by referring to the medieval concept of littera that is similar to the present concept of letter (p. 27). In summary, every littera at a certain point in time, in a certain region, has a limited range of potestas (sound qualities) possibly attached to that littera (p. 27). Furthermore, spelling should be combined with other sources of evidence, provided by for example the previous and later history of a certain sound, the dialect area to which a certain spelling belongs and the conventional orthography from that area, and the spelling system of the text in question, for a truly convincing argument (Stenbrenden, 2016, p 30).

Spelling may reflect sound change and may be used as evidence, especially when corroborated by other sources of evidence. The question then is how and when a sound change may be apparent through spelling. There is usually a time lag between changes in the spoken language and accompanying adjustments to the written language (if the written language is adapted at all) (Samuels, 1972, p. 5). This is especially relevant in the case of southern voicing. Stenbrenden (2016) notes the possible usefulness of occasional spellings, a "minority-type of orthography which occurs together with the majority-type in identical or contemporaneous texts" (Penzl, 1957, as quoted in Stenbrenden, 2016, p. 31). Such

occasional spellings may "represent subconscious interference from speech habits" and thus provide insight into changes that are not (yet) generally expressed in the written language (p. 33). However, while scribes usually adapted the orthography when copying texts to fit their dialect and customs (Scragg, 1974, p. 25), an occasional spelling could of course always be a result of exact copying. In this case copying could still suggest something about the acceptability of and familiarity with the copied form. In summary, a good analysis of orthography bears in mind that orthography in a certain region may not (yet) have caught up with the change in spoken language and that derivations from the conventional orthography in a certain region may be especially likely to provide information on the spoken language.

**2.3 Spelling of [v] in ME**

In order to search for indications of word-initial [v] (both in native words and French loanwords) it is imperative to first recognize the known different spellings for [v] in ME. In the tradition of OE, <f> remained a common spelling for [v] (Lass, 1991-1193, p. 20). Furthermore, <v> was adopted for [v] following French practice (Lass, 1992, p. 36). As <v> was already used interchangeably with <u> for [u] and [u:], <u> was also employed for [v] (p. 36). In ME there was a tendency for the figura <v> to be used word-initially and the figura <u> word medially regardless of the intended potestas (Lass, 1992, p. 36). Finally, <w> and, where used, <p> were also occasionally employed for [v], illustrating the "complex overlapping usages in some early Middle English writing systems" (*LAEME*, 'Introduction', ch. 3). In summary, [v] in ME was presented in spelling as either <f>, <v>, <u>, <w>, or <p>. Based on several searches of the *LAEME* corpus for frequent items this list would appear to be exhaustive.

As the study will consider French loanwords which in French had a [v-] realisation and native words which had an [f-] realisation at least in the Northern and East Midland

dialects, [f] and [v] will be the main phonetic realisations considered. Realisations of these words in PDE do not give reason to assume that <u>, <w> and <p> spellings are indicative of a realisation other than a labiodental fricative. Henceforth, <v>, <u>, <w> and <p> will be referred to as <v>-type spellings.

### 2.4 Corpus

The *LAEME* corpus of tagged texts functions as the corpus for the current study. The database contains 167 samples of eME texts from ca.1150-1325 equalling about 650000 words total. All texts are indexed with an approximate date and region of origin. The words, and each derivational and inflectional morpheme in the text are lexico-grammatically tagged. The material is not organised on a phonological basis, such that it is for example not possible to search for French loanwords with word-initial <v>. The surviving eME material is not evenly divided over the country and consequently the corpus consists of relatively many manuscripts from the South West Midlands and South East Midlands, less so from the Central Midlands and the South and very few texts from the North and North Midlands. Texts cover genres such as documentary and other official records, prose, poetry and lyrics. Official records, however, are scarce because most official documents were written in Latin.

### 2.5 Method

#### 2.5.1 Questionnaire

A questionnaire of items was compiled both for words of native origin (see appendix A) and for French loanwords (see appendix B). The form of the items reflects how the items are tagged as lexels in *LAEME*. The native words included in the questionnaire were taken from Lass's (1991-1993) study of the Cotton MS of *The Owl and the Nightingale* (O&N), written in the second half of the 13$^{th}$ century in Worcester, a county in the South West Midlands. All

native words with an initial labiodental fricative that occurred at least twice in the text were included in the questionnaire, following Lass's division of words into those involving only <f> spellings, those involving only <v> or <u> spellings, or both <f> and <v>, <u> spellings (pp. 19-20). This division enables comparison of the findings of the present more comprehensive study and the study of O&N to see if the items that show a certain spelling categorically in O&N also demonstrate a categorical spelling over a larger corpus. The questionnaire of French loanwords was compiled by considering the lexel list included in *LAEME*. Twenty items that occur in at least two different texts were included in the questionnaire. The words that make up a (near-)minimal pair with a word with initial <f> in the *LAEME* corpus are indicated such that a possible effect of this on spelling could be investigated.

**2.5.2 Data Collection**

For the French loanwords, the items in the questionnaire were used to find all texts containing any form of a particular lexel. For the native words, on the other hand, searches were based on form, such that all texts with an initial <v>-type spelling for a particular item were found. Frequencies of spellings for all items found in a particular text were recorded. Furthermore, localisation (based on county) and approximate dating was documented for all texts found based on the questionnaires. For all texts containing at least one <v>-type spelling for a particular item on the questionnaire with native words it was recorded whether or not the text also contained an <f> spelling for the same item. Besides systematic data collection, tag dictionaries of texts considered of particular interest due to geographic location were examined.

**2.5.3 Analysis**

The present analysis focuses on whether a certain spelling in a particular region could be considered indicative of a certain phonetic realisation. For the native words reference is made

to the studies into southern voicing discussed in section 1.3.2. Unexpected spellings in particular regions and the implications for phonetic realisation are discussed in detail. The spellings of native words found by the current study are compared with the spellings found by the small study of O&N by Lass (1991-1993). The implications of the data for possible phonetic token-variation is discussed. For the French words, a possible effect of whether or not an item is part of a (near-)minimal pair is considered. A comparison of the spread of southern voicing and the density of French borrowings in certain areas is conducted to investigate the plausibility of the two theories on the prerequisites for phonemicization discussed in section 1.3.

# 3. Results & Discussion

## 3.1 Words of Native Origin

Based on the questionnaire there were 30 texts in the *LAEME* corpus with at least one native word with an initial <v>-type spelling. Table 2 gives the counties where these texts were likely written, the number of texts with at least one <v>-type spelling for a particular county, the total number of texts localised in that county, the number of words found with a <v>-type spelling, and the total number of tagged words for that county. The total number of tagged words is given as a means of comparison considering texts may vary greatly in length and shorter texts cannot be expected to demonstrate <v>-type spellings to the same extent as longer texts. The two texts from Berkshire where no <v>-type spellings were found, for example, consist of only 55 and 310 tagged words. A labelled map of the counties in the year 1086 that largely coincides with the county division employed in *LAEME* may be found in appendix C. Table 2 shows that all <v>-type spellings were found in counties from the South and South West Midlands. The high number of <v>-type spellings for Kent, where only three texts are localised, stands out. Based on the questionnaire it would appear that <v>-type spellings did not occur in the North and East Midlands.

**Table 2.** Distribution of <v>-type spellings for native lexical items in *LAEME* based on the questionnaire (appendix A).

| County | Total texts with <v>-type spellings | Total texts | Total lexical items with <v>-type spellings | Total words |
|---|---|---|---|---|
| Berkshire | 1 | 3 | 56 | 30207 |
| Devon | 1 | 2 | 1 | 567 |
| Gloucestershire | 5 | 8 | 67 | 27987 |
| Herefordshire | 3 | 8 | 147 | 49458 |
| Kent | 3 | 3 | 646 | 37579 |
| Shropshire | 4 | 6 | 4 | 55291 |
| Somerset | 1 | 3 | 3 | 703 |
| Sussex | 1 | 1 | 1 | 268 |
| Wiltshire | 3 | 4 | 6 | 14421 |
| Worcester | 8 | 17 | 359 | 121252 |

Providing the number of <f> spellings for each item in the questionnaire for the different counties would undoubtedly offer the best method of comparison as in that manner the percentage of <v>-type spellings could be calculated. This approach is beyond the scope of the present study, and is therefore only done for one item in the questionnaire. Table 3 gives the number of <f> spellings and the number and percentage of <v>, <u> or <w> spellings for *fall* for the counties where at least one text with one <v>, <u>, <w> spelling for *fall* is localised. There were no < p> spellings found for *fall*.

**Table 3.** The number of <f> spellings and the number and percentage of <v>-type spellings for *fall* for the counties where at least one text with one <v>-type spelling for *fall* is localised.

| County | N <f> | N <v>, <u>, <w> | % <v>, <u>, <w> |
|---|---|---|---|
| Berkshire | 18 | 8 | 30.8 |
| Gloucestershire | 35 | 5 | 12.5 |
| Herefordshire | 47 | 5 | 9.6 |
| Kent | 2 | 21 | 91.3 |
| Wiltshire | 14 | 1 | 7.1 |
| Worcester | 60 | 23 | 27.7 |

Unlike the texts localised in the other counties, the texts localised in Kent contain more <v>-type spellings than <f> spellings for *fall*. This is in line with the high number of <v>-type spellings for the county presented in table 2. Examination of the tag dictionaries of the texts localised in Kent would suggest that two of the texts have more <v> and <u> spellings for native words than <f> spellings. These texts are, furthermore, the only ones found by the current study that have only <v> and <u> spellings for a majority of the items. The text that is most consistent in the use of <v> and <u> was written relatively late compared to other texts included in the *LAEME* corpus. The text consists of folios written by Dan Michel around 1340 (London, British Library, Arundel 57). It is perhaps not surprising that fricative voicing is more regularly expressed in writing in a later text given the time-lag between sound change and a change being (fully) expressed in written language, if it is expressed at all (Samuels, 1972, p. 5). Table 3 indicates that in eME in general, then, <v>-type spellings are occasional spellings for native words which have a word-initial [f] realisation in the Northern and East Midland dialects. It is safe to assume that, at least generally, <v> and <u> spellings were used to represent the phonetic realisation, i.e. voiced, in analogy with French spelling. As discussed in section 1.3.2, there is evidence from sources

other than ME texts, such as modern dialectal variation, that suggests that initial fricatives were voiced in the south (and west) of England.

If <v>-type spellings are considered indicative of voicing, based on table 2, it would seem that fricative voicing did indeed predominate in the Southern and South West Midland dialects. The key map as provided by *LAEME* is employed to roughly indicate the isogloss based on the current study (see appendix D). The isogloss is similar to that by Moore et al. as depicted in map 1 and (unlike some studies) incorporates the south of Shropshire in the area where the labiodental fricative was voiced. Considering that the four texts localised in Shropshire found in the questionnaire only had one <v>-type spelling, the tag dictionaries of the texts localised in Shropshire were considered in greater detail to see if there were <v>-type spellings for items not included in the questionnaire. All four texts for which a <v> or <u> spelling was already found also contain a few other items with a <v> or <u> spelling. The texts for which no <v>-type spellings were found in the questionnaire do actually contain these spellings for other words, such that in one text *vetles* is found for *fētles* (lexel = fae:tels) and in the other text *uet* occurs for *feet* and *ueat* is found for *vat.* The latter is especially interesting considering that this is one of the only words for which the southern realisation is part of the PDE lexicon. Two <u> spellings are the only non-initial <f> spellings for *vat* in the *LAEME* corpus. Both of these spellings are found in texts localised in Shropshire. Future research may consider how and why *vat* became part of the present Standard. Nevertheless, the main point here is that based on the *LAEME* corpus Southern Shropshire may indeed be included in the area of southern voicing.

The isogloss proposed by the current study runs through Oxfordshire and Surrey despite finding no <v>-type spellings in these counties for the items included in the questionnaire. Again, the tag dictionaries of the texts in question were considered. For Oxfordshire, only one <v>-type spelling was found, *ueteles* for *fētles*, despite the relatively

high frequency of items available for one of the texts. For Surrey, where only one relatively short text is localised, no <v>-type spellings were found. However, <f> still appears to have been the conventional orthography for [v] in eME and consequently the absence of any <v>-type spellings can hardly be interpreted as an absence of initial voicing when other studies would indicate initial fricative voicing did occur in the area. The scribe of a particular text may have been more prone to orthographic conservatism. The v-/f- isoglosses in map 1 are a little further north in the east than the isogloss based on the current study. The text localised in London and the text localised in the south of Essex, however, do not contain any <v>-type spellings for native words. Admittedly, both texts are also relatively short and therefore also have a limited amount of words with initial <f>. In the light of isogloss D, based on Kristensson et al., in map 1, any text localised in Staffordshire is also of particular interest. Only one text in the *LAEME* corpus is localised in Staffordshire, more precisely in the southern part of the county. This text has *iuiht* for *fight* (n). Following the prenominal prefix *i-* a voiceless fricative could be expected as suggested by Lass (1991-1993, pp. 19-20). The <u> spelling, however, likely indicates voicing and would agree with Kristensson et al.'s finding that initial fricative voicing extended up to Herefordshire.

No <v>-type spellings were found in the questionnaire outside of the South and South West Midlands. As <v>-type spellings outside of this area could be indicative of a dialect contact effect, the tag dictionaries of texts localised outside of the established area for southern voicing were considered. I found three texts with at least one <v> or <u> spelling. No <w> or < p> spellings were found outside of the South and South West Midlands. All spellings are given in their context in (7), (8) and (9) with the lexel given between brackets. The areas in which the texts were written lie relatively close together and two of the texts are part of the same manuscript, written in the second half of the 12$^{th}$ century in the areas of East Essex and East Suffolk. The other text, localised in the Isle of Ely, was written about a

century later. The localisation of the texts is indicated with red dots on the map in appendix D.

(7) a. *on þe forme men, alle* ***ueide*** *ér* (fēgan)

b. *er he be spo* ***iueid*** *he falle defle to honed* (fēgan)

c. ***uulsteð*** *þe þridde, is þe flesliche* (fylstan)

d. *þe* ***uulieð*** ⁊ *proteð* ⁊ *sneuieð aure fule* (foul)

e. *for-□ man sholde* ***fuluullen*** *englene sete* (fulfil)

(Cambridge, Trinity College B.14.52 (335), entry 2) – NW Essex, ca. 1175-1200

(8) a. *is þe* ***uulle*** *of endelese blisse* (fill)

b. *At ure fulcni(n)ge biforen þe* ***uantstone*** (fontstone)

c. *hereð nu ó hu* ***uele*** *pise* (fela)

d. *goð eche dai to chirche alse shep to* ***uolde*** (fold)

(Cambridge, Trinity College B.14.52 (335), entry 3) – W Suffolk, ca. 1175-1200

(9) ***vor-soþe*** *i sauȝ a selly syt, a body on a bere lay* (forsooth)

(Oxford, Bodleian Library, Laud Misc 108, entry 2) – Isle of Ely, ca. 1300

In line with the <v>-type spellings found for the questionnaire items, the <v>-type spellings found in the East Midlands would seem to indicate voicing. The findings of previous literature described in section 1.3.2, however, indicate that word-initial fricative voicing did not occur in the East Midlands. Berndt's (1960) study of ModE place names, on the other hand, would suggest that Essex was also part of the area in which initial fricatives were voiced (as cited in Fisiak, 1984, p. 8). This position is also supported by certain early Modern

English orthoepist sources (p. 8). It is thus possible that word-initial fricative voicing extended up to Essex and perhaps even further. The <v> and <u> spellings as found in three texts from the South East Midlands in the present study may be indicative of a general voiced phonetic realisation in that area. Nevertheless, this raises the question of why the voicing was rarely expressed through orthography, while the orthography from other areas indicate voicing relatively consistently. However, as previously mentioned, orthographic conservatism may well have played a role. After all, not all texts from counties for which voicing is reasonably established have <v>-type spellings for native words (although text length also plays a role in this). Considering the spellings as a result of dialect contact is plausible. The sporadic <v>-type spellings suggest that perhaps word-initial voiced fricatives were spreading via dialect contact.

All <v>-type spellings in (7), (8) and (9), except *uulsteð* in (7d), occur in intervocalic position (*vor-soþe* in (9) follows the word *day*). Whether the intervocalic position was conducive for voicing is difficult to say. In all texts <f> spellings also occur in intervocalic position and most of the lexels for which a <v> or <u> spelling was found also occur with an <f> spelling in intervocalic position.

<v>-type spellings occur for all items in the questionnaire for words of native origin. Thus, items that only have <f> spellings in O&N (Lass 1991-1993) also have <v>-type spellings over a larger corpus. Based on the study of O&N, Lass (1991-1993) suggests possible interpretations of the data, finding a variationist interpretation more likely than a neogrammarian interpretation (pp. 21-22). In other words, Lass suggests that the categorical or variable spellings as found in O&N might indicate phonetic token-variation, such that certain words were categorically voiced, others variably, and others were unaffected, instead of all words having been voiced. Considering sound change has a time-dimension and is thus never instantly categorical (Chen, 1972), phonetic token-variation in the case of southern

voicing is not an unreasonable assumption. Nevertheless, the present study would suggest fewer items were categorically voiceless than might be suggested by Lass's study of O&N. Regional differences might have provided an explanation if perhaps different items were voiced in different areas. However, <v> and <u> spellings were also found in Worcester for all items with only an <f> spelling in O&N, also in relatively early texts. It is important to note that while variable voicing might well have been the case, an <f> spelling does not necessarily indicate a voiceless realisation. As mentioned already, it takes time for written language to catch up with spoken language. In OE, in environments where /f/ was voiced, [v] was generally spelled <f>, and <f> undoubtedly continued to represent [v] to a certain extent in the spelling of native words in eME texts written in the area where southern voicing occurred. Lass (1991-1993) acknowledges that the suggestion of phonetic token-variation does not necessarily derive from the orthography of eME texts and suggests that the change was perhaps even at quite a late stage (see section 3.3). The occurrence of <v>-type spellings for all items on the questionnaire established by the present study militates in favour of this idea.

### 3.2 French Loanwords

Based on the questionnaire for French loanwords, 29 texts were identified that contained at least one of the items (no matter the spelling). The localisations of the texts are indicated in map 4 (appendix E), with the coloured dots offering a rough indication of the dating of the text. The counties where the texts were written, the number of texts containing at least one of the items per county, and the number of items per county are given in table 4. The number of different items is also given, such that, for example, for Worcester only 2 different items were found: *verse* and *virtue*. Of course, the number of French loanwords is again, to a certain extent, dependable on the number of texts and length of texts in a certain county. As French

loanwords, however, do not occur very frequently in texts the number of texts and total tagged words for a county are not given for comparison considering the effect would not be as apparent as in the case of southern voicing.

**Table 4.** Distribution of French loanwords with a labiodental fricative in *LAEME* based on the questionnaire (appendix B).

| County | Total texts with French loanwords | Total French loanwords | Total different French loanwords |
|---|---|---|---|
| Berkshire | 1 | 19 | 8 |
| Chesire | 1 | 3 | 1 |
| Essex | 2 | 4 | 2 |
| Herefordshire | 4 | 9 | 3 |
| Kent | 2 | 71 | 9 |
| Lincolnshire | 3 | 12 | 4 |
| Norfolk | 3 | 5 | 3 |
| Oxfordshire | 1 | 40 | 11 |
| Shropshire | 4 | 16 | 7 |
| Worcestershire | 4 | 21 | 2 |
| City of York | 1 | 14 | 7 |
| Yorks, East Riding | 1 | 14 | 8 |
| Yorks, North Riding | 1 | 10 | 6 |
| Yorks, West Riding | 1 | 5 | 3 |

Table 4 and map 4 would indicate that in eME already, French loanwords with an initial labiodental fricative were used in all the main different dialect areas; <v>-type spellings, predominantly <v> and <u>, make up the vast majority of the spellings. The data

does not clearly indicate a vaster concentration of loanwords with initial <v> or <u> in areas closer to London as was expected based on the account of the spread of loanwords by Barber (2000, p. 40). An indication, however, might be the high number of French loanwords in the texts from Kent. A likely explanation for the distribution found derives from the differences in dating, with certain texts written more than a century later than others. The majority of texts localised in Essex are written relatively early, with the texts containing French loanwords written at the end of the 12th century and the beginning of the 13th century. The texts from Yorkshire, on the other hand, were all written at the beginning of the 14th century. This might explain why many more loanwords were found for Yorkshire than for Essex. The text from Oxfordshire and the texts from Kent are also written after 1250. When only considering the texts written before 1250, the items in the questionnaire appear in texts up to Shropshire and Norfolk, with the exception of *verse* occurring once in a text localised in Lincolnshire, as will be discussed below. Most of the texts located in the north of England were written in the second half of the 13th century or even later. Nevertheless, the few texts written at an earlier date would suggest that French loanwords with an initial voiced labiodental fricative were not as integrated into the language in the northern part of the country as in the South West Midlands and Essex.

Exactly five of the forms found have an <f> spelling, as given in (10) with the approximate date and county of origin.

(10) a. *fer*$^{r}$*s* 'verse' (Lincolnshire, ca. 1175-1200)

b. *færses*; *fers* 'verse' (Worcester, ca. 1200-1250)

c. *fers* 'verse' (Herefordshire, ca. 1225-1250)

d. *fil* 'vile' (Berkshire, ca. 1300-1325)

In section 2.2 the potential of occasional spellings as indications of phonetic realisations was discussed. Nevertheless, this need not always be the case. The forms found in the texts from Worcester, Herefordshire and Berkshire in (10) all co-occur with <v> or <u> spellings for the same word. As southern voicing occurred in the counties in question, the <f> spelling may have been employed by the scribes in analogy with native words, which, as discussed, were generally spelled with an initial <f> but could nonetheless have had a voiced realisation. The <f> spelling of the words in (10b-d) does not necessarily indicate a voiceless realisation. Particularly interesting, then, is the <f> spelling in (10a) which comes from the *Ormulum*; *verse* is the only item on the questionnaire found in the text. It is actually not established whether *verse* is a French loanword. Forms like *fers* are already found in OE texts, originating from Latin *versus* (Lass, 1991-1993, p. 7). The common assumption is that the word was re-introduced at a later point with an initial voiced fricative, probably via French (p. 7). It is, however, possible that in late OE the word already had a voiced realisation as may be suggested by the form *vers* from *Byrhtferth's Handboc* written around 1050 in Cambridgeshire (verse: *OED*). It is, then, also possible that *fer*$^{r}$*s* had a voiced realisation despite the <f> spelling. There, however, does not seem to be any conclusive evidence indicating either a voiced or voiceless realisation.

No effect was found for whether the loanword was part of a minimal pair with a native word with an initial voiceless labiodental fricative. Almost all words appear in texts with predominantly initial <v> or <u> spellings and these spellings are thus not more common for words part of a minimal pair. This might have been expected if <f> was a more common spelling as well, considering there would perhaps be greater need to distinguish the words part of a minimal-pair. As it is, the one <f> spelling for an item other than *verse* is found for *vile*, which actually is part of a (near-)minimal pair.

### 3.3 Prerequisites for Phonemicization

The data do not offer any clear indications on behalf of either of the theories. Discussion of the data will demonstrate that the dialect hypothesis cannot be eliminated as a prerequisite for phonemicization. Nevertheless, the theory that phonologization precedes phonemicization is preferable based on the principle of Occam's Razor, as it requires fewer assumptions to be applicable than the dialect hypothesis. Thomason (2009) highlights the importance of recognizing both internal and external causes and the probability of a change having multiple causation (p. 361). In a way multiple causation is already established for the phonemicization of the fricative voicing contrast with the identification of the different factors reinforcing or contributing to phonemicization. While it seems that these factors cannot explain phonemicization by themselves, they cannot be omitted either or phonemicization would not have taken place when it did. It is likely that also both dialect contact and the nature of the voiced and voiceless fricatives in (late) OE played a role in phonemicization although it may be suggested that in that case the retention of the voiced fricative in French loanwords, following apocope and retention of the voiceless fricative following degemination relied more heavily on an already phonologized nature of the fricative voicing contrast.

Instances of initial <v> and <u> in a small area of the East Midlands are argued to perhaps indicate familiarity with word-initial voiced fricatives to the extent that it influenced writing. However, while dialect contact is suggested by the current study, the influence of this on the borrowing of French loanwords is unclear. Curiously, for the area where <v> and <u> spellings are found for native words (outside of the area where southern voicing is established) relatively few French loanwords are found based on the questionnaire. This may, to a certain extent, be explained by the early dating of a majority of the texts. Some of the earliest texts containing the loanwords are localised in Essex, which may offer some support

for the dialect hypothesis as Essex likely bordered the area of southern voicing. However, it is possible that Essex was also part of the area of southern voicing.

Relatively many different loanwords were found in Yorkshire which may form a problem for the dialect contact hypothesis given the complete lack of <v>-type spellings for native words in the North. The migration field of London circa 1300 extended far into northeastern England, with economic contacts likely mediated through urban centers such as York, Beverly and Newcastle (Keene, 2000, pp. 106-107). On one hand, the lack of spellings indicating initial fricative voicing of native words in the North suggests that there is no correlation between the expected dialect contact and the acceptance of French loanwords. Nevertheless, Lass's (1992) hypothesis specifies familiarity with the voiced fricatives in the areas without southern voicing, not necessarily spread of initial fricative voicing (p. 59). London was either part of the area of southern voicing or at least bordered the area, as illustrated by map 1. Migration from the North to London and then back could thus possibly have resulted in sufficient familiarity with initial voiced fricatives to aid acceptance of /v/ in French loanwords. All texts from Yorkshire were written quite a while after the Norman invasion, which means that also another form of dialect contact could perhaps also explain the French borrowings in the texts. If French loanwords with [v] were first borrowed in the English of London and surrounding areas, where extensive contact with speakers from the area of southern voicing was likely, the words could have spread north. The other possibility is, of course, that the fricatives already had phonologically distinct representations. In this case loanwords could be expected to be simply borrowed with the voiced fricative no matter the part of the country.

As already mentioned, Lass (1992) suggests degemination started in the North around 1200 but there are also already signs of degemination in Old Northumbrian texts from the 10$^{th}$ century (Cole, in press). It thus seems degemination occurred earlier in the North than the

influx of French loanwords. Consequently, for the dialect contact hypothesis to function, it should be assumed that [v] and [z] remained allophones of /f/ and /z/ respectively and therefore the fricative remained voiceless following degemination. As mentioned in section 1.2.4 this could be possible considering, due to vowel lengthening in open syllables, voiceless fricatives in medial position occurred after short vowels, while voiced fricatives occurred only after long vowels (Laker, 2009, p. 217). A simpler explanation for the fricative remaining voiceless following degemination, however, is the assumption that the voiced and voiceless fricatives already had distinct phonological representations. In this case it does not matter whether the distribution of the voiced and voiceless fricatives constitutes a predictable or unpredictable distribution. The possibility that phonemicization – in the sense of the establishment of an unpredictable distribution – preceded the influx of French loanwords is no problem for the theory considering that with distinct phonological representations in place the onset of phonemicization could lie in the OE period.

In the previous section the possibility that word-initial /v/ was already accepted into the language outside the area of southern voicing in late OE was highlighted based on the case of *verse*. As discussed in the previous paragraph, this does not pose a problem for the theory that phonologization precedes phonemicization. The question is, then, whether the dialect hypothesis could possibly account for a [v] realisation in loanwords outside of the area of southern voicing in the OE period. This relies mainly on the onset of southern voicing and whether dialect contact could already have led to sufficient familiarity with voiced initial fricatives. <v>-type spellings do not seem to occur word-initially for native words before the ME period. This, however, does not necessarily mean initial fricatives were voiceless before that time. Lass (1991-1993) notes that initial fricative voicing occurs both in certain early English dialects and other Continental West Germanic languages (Dutch, High German) despite the change not being ‘natural’ or expectable “by the usual criteria of cross-linguistic

generality or frequency and phonetic explicability" (p. 35). Furthermore, there are also significant similarities in the voicing, such that the most strongly affected segment is /θ/ (as is suggested for English by the *Survey of English Dialects*) and voicing fails in certain onset clusters (p. 36). This points to monogenesis or diffusion rather than convergence, i.e. separate, independent developments (p. 36). If initial voicing started around 1200, as suggested by the spelling evidence, the English change would have to be rather independent of the Continental change considering the feeble contact around that time (pp. 36-37). Instead Lass suggests that initial voicing was brought over, either in the "first migrations in the 5$^{th}$ century or during the following period of migration and contact" and that at some point initial fricative voicing was a feature of certain OE dialects, presumably the Southern and for a large part the West Midland dialects (p. 38). As the voiced and voiceless fricatives were still allophones at the time there would hardly have been reason to express the distinction in writing. The dialect contact hypothesis is thus compatible with a possible voiced realisation of certain Latin loanwords in late OE.

The dialect contact hypothesis could explain the phonemicization of the voiced fricatives, with familiarity with voiced initial fricatives resulting in acceptance of initial /v/, and to a certain extent of initial /z/ in loanwords. Although it is unclear whether or not /z/ was introduced as a separate phoneme through French, the clear contrast that developed for the labiodental fricative could have led to [z] being retained in analogy with [v] following apocope. The voicing of dental fricative in function words has a language-internal explanation and could have had a separate development. The factors discussed in this section may be compatible with the dialect hypothesis although especially the early onset of degemination and the following retention of the voiceless medial fricative remains an issue. All in all, the theory that phonologization precedes phonemicization requires fewer assumptions than the dialect contact hypothesis and is a more parsimonious explanation for the retention of the

voiced fricative in French loanwords, following apocope, and retention of the voiceless fricative following degemination. Even if phonologization is accepted as a prerequisite, dialect contact still likely played a role as well.

## Conclusion

The study considered the spelling of the labiodental fricative in both native words and French loanwords in word-initial position. The questionnaire found spellings indicating voiced realisations in the South and South West Midlands, in accordance with previous orthographic analyses. As also proposed by Moore et al., but not by Oakden (Fisiak, 1984), the area of southern Shropshire is suggested to have been part of the area of southern voicing. A more northern border, as suggested by McIntosh and Samuels based on the *Middle English Dialect Project* and Kristensson based on the Lay Subsidy Rolls (Fisiak, 1984), could not be established due to the limited number of eME texts from the area although one spelling indicating voicing was found in the sole text localised in Staffordshire. The questionnaire did not find <v>-type spellings outside of the expected area. However, consideration of tag dictionaries enabled identification of <v>-type spellings in three texts outside of the expected area. The finding of <v>-type spellings for Essex provides support for a study by Berndt (Fisiak, 1984) based on personal names and place names suggesting that southern voicing extended up to Essex. The current study also found <v>-type spellings for two texts localised even further north, Suffolk and Isle of Ely. The spellings are interpreted as possible indications of a limited spread of initial voiced fricatives.

The questionnaire for French loanwords found loanwords in texts from the North (Yorkshire) as well as the Midlands and the South. The texts containing a large number of different loanwords were written relatively late, around 1300. A vast majority of the spellings indicate voiced realisations, although five <f> spellings were found, of which four for *verse*. For four of the five texts the word also had a <v>-type spelling, indicating that the realisation was probably voiced. It is also possible that for *verse*, voiceless realisation of the earlier Latin loanword was used as well as the voiced realisation. However, also for the text in which only

an <f> spelling was found, a [v] realisation was suggested to be possible, based on the idea that the Latin word was borrowed with the voiced fricative but generally spelled <f>.

Although the spellings were only found in three texts, the <v>-type spellings found outside of the expected area provide support for the dialect contact hypothesis. Further discussion of migration patterns highlights the possibility of the dialect contact hypothesis. The likelihood that southern voicing is related to the initial fricative voicing on the continent and was thus likely already part of OE (Lass, 1991-1993, pp. 36-28) would mean that even if initial fricatives were voiced in certain Latin loanwords the dialect contact hypothesis would still be viable. The early onset of degemination is presented as the biggest problem for the dialect hypothesis, considering initial fricative voicing of native words cannot explain retention of voiceless fricatives in medial position. Nevertheless, it is possible that degemination did not affect the allophony of the voiced and voiceless fricatives, still resulting in a complementary distribution (Laker, 2009, p. 217). All things considered it appears that while the dialect contact hypothesis may surely not be rejected, the theory that phonemicization relied on already distinct phonological representations of the voiced and voiceless fricatives is a more parsimonious explanation, requiring fewer assumptions. It may be suggested that while dialect contact likely played a role in phonemicization, it was as a contributing factor rather than as the prerequisite.

The current study relied on a questionnaire and did not consider all native words or French loanwords with a labiodental fricative and the study could thus be elaborated on and could perhaps also include words with a coronal sibilant. Future research may also compare the phonemicization process of the fricative voicing contrast with other phonemicization processes. The theory that phonologization precedes phonemicization has the advantage that it could apply to all instances of phonemic split. In this case, however, it would also be expected that at a certain stage before phonemicization the phonologized nature of the rule imposing

the complementary distribution could be identified. Honeybone and Iosak (2013) suggest that this is at least the case for the phonemicization process of the fricative voicing contrast in Brythonic. Furthermore, research may consider to what extent pure allophony exists and to what extent presumed indications of phonologization actually indicate future phonemicization.

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# Appendix A

## Questionnaire Words of Native Origin

| Only <f> spellings O&N | Only <v, u> spellings O&N | Both <v, u> and <f> spellings O&N |
|---|---|---|
| fall | fen | fast |
| fly | foe | feed |
| flesh | folde | fel |
| forto | fo:n | far |
| fowl | | fight |
| full | | for |
| follow | | for- |
| friend | | fox |
| | | from |
| | | foul |

## Appendix B

## Questionnaire French Loanwords

veil (near-minimal pair with *fail*)

vile (minimal pair with *file*)

vine (minimal pair with *fine*)

vow (near-minimal pair with *fowl*)

voice

vain

vice

vessel

virgin

vanity

venom

verse

villainy

virtue

voyage

visage

vestment

vision

vilte

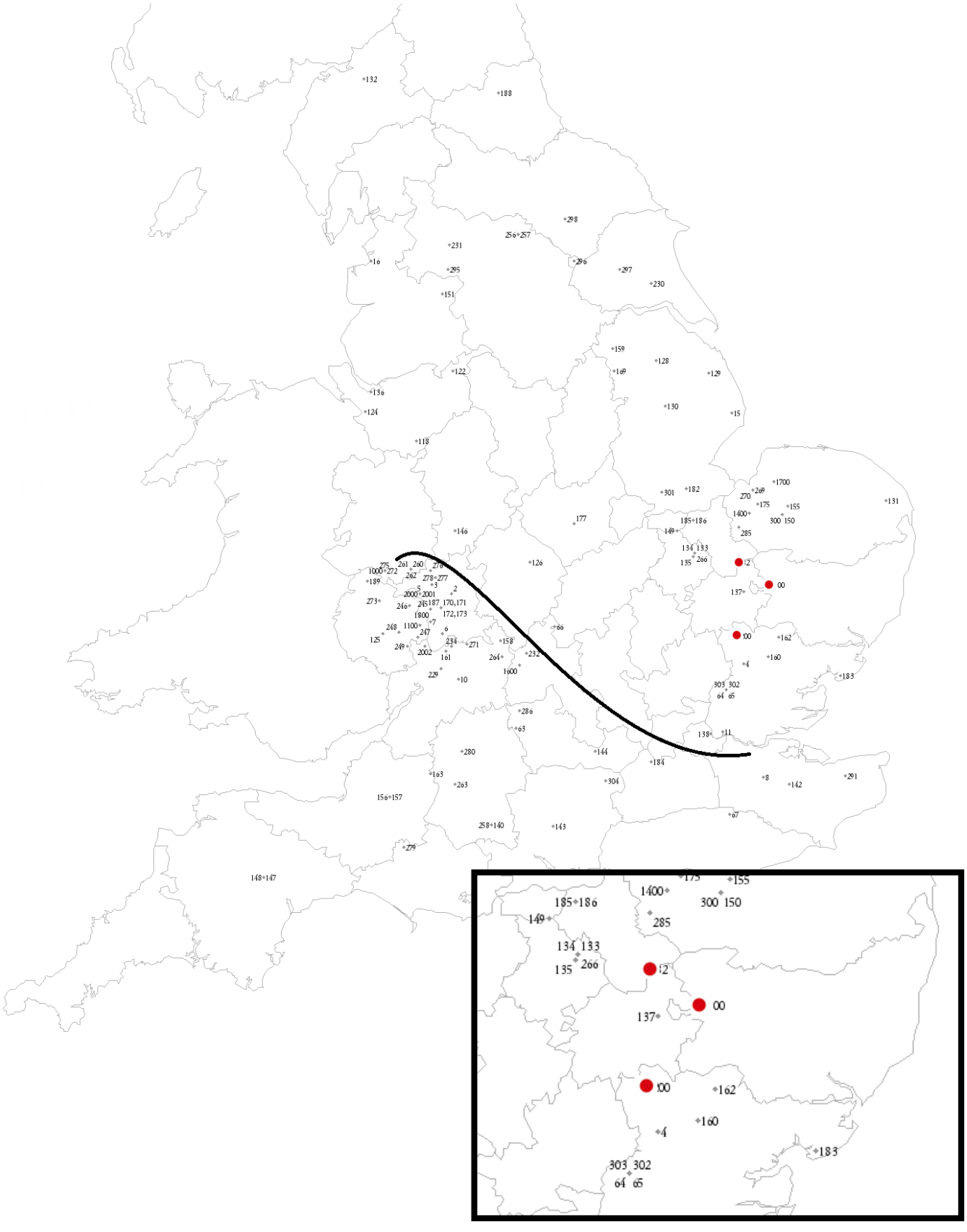
verai

## Appendix C

**Map 2.** Counties of England in the year 1086, as documented in the Doomsday Book. Adapted from Gun (2009).

## Appendix D

**Map 3.** Isogloss for v-/f- based on the questionnaire with words of native origin and localisations of texts with <v>-type spellings for native words outside of the expected area based on consideration of tag dictionaries. Adapted from *LAEME*.



## Appendix E

**Map 4.** Localisations of the texts containg French loanwords based on the questionnaire. Adapted from *LAEME*.