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OLD NORTHUMBRIAN VERBAL MORPHOLOGY IN THE GLOSSES TO THE LINDISFARNE GOSPELS

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To my parents

Acknowledgements

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1. Introduction and preliminaries

1.1 Introduction

In considering a text such as the *Lindisfarne Gospels,* one is very much aware of the vast philological attention the manuscript has received since the first contribution made to its study by George Hickes in 1705. Since then, scholars of the stature of Bouterwek (1857), Skeat (1871-87), Lindelöf (1901), Holmqvist (1922), Berndt (1956) and Ross, Stanley & Brown (1960) have advanced the subject (see Ross 1937:17-25 for a detailed summary of early studies on *Lindisfarne*). This Latin Gospelbook written in the North of England in the early eight century constitutes a major landmark of human cultural, intellectual, spiritual and artistic achievement. While the Latin text of the *Lindisfarne Gospels* is a valuable early witness to St Jerome's 'Vulgate', it is the carefully inserted interlinear gloss to the Latin, written in Old Northumbrian and added around the 950s-960s, and the linguistic importance this gloss holds as one of the most substantial earliest surviving renderings of early northern dialect that will concern us in this study, and more concretely the distribution of verbal morphology found therein.

Old and Middle English verbal morphology in the northern dialects diverged most remarkably from that of the southern dialects in two main areas. Crucially, the tenth-century Northumbrian texts bear witness to the replacement of the inherited present-indicative *-ð* suffixes with *-s* forms, and by the Middle English period, present-indicative plural verbal morphology in northern dialects was governed by a grammatical constraint commonly referred to as the Northern Subject Rule (NSR) that conditioned verbal morphology according to the type and position of the subject. The plural marker was *-s* unless the verb had an immediately adjacent personal pronoun subject in which case the marker was the reduced *-e* or the zero morpheme, giving a system whereby *They play* occurred in juxtaposition to *The children plays*, *They who plays, They eat and plays*.

It has tacitly been assumed in the literature that the reduced forms at the crux of the NSR, and the constraint that triggers them, must have emerged in the northern dialects during the early Middle English period, as there is little indication of the pattern existing in extant Northumbrian texts from the tenth century, and by the time northern textual evidence is once again available from c.1300, the NSR is clearly prevalent (Pietsch 2005; de Haas 2008; de Haas & van Kemenade 2009). Nevertheless,

the assumption that the NSR was entirely lacking in Old Northumbrian stands on shaky grounds without further detailed analysis of the tenth-century northern writings, as has been pointed out in the literature (Benskin 2011:170). As might well be imagined, such an endeavour is hindered by the fact that extant textual evidence from the period is far from abundant, and that which remains is limited in nature: the only substantial Northumbrian texts passed down to us are the interlinear glosses to the Latin manuscripts of the *Lindisfarne Gospels* and the *Durham Ritual* supposedly written by the same scribe, Aldred, in the second half of the tenth-century, as well as the Northumbrian part of the *Rushworth Gospels* gloss (*Rushworth*^{2}), written by a scribe called Owun in the late tenth-century and heavily reliant on the *Lindisfarne* gloss. Yet despite their limitations, the glosses constitute a substantial record of late ONrth verbal morphology that provides important insights into the mechanisms of linguistic change.

Although the study of the Northern Subject Rule in the early northern writings has barely been touched upon in the literature (as far as I am aware the matter has only been cursorily considered by de Haas 2008), morphological variation between *-s* as opposed to *-ð* in the late Northumbrian texts has been the object of numerous quantitative analyses (most famously Holmqvist 1922; Ross 1934; Blakeley 1949/50 and Berndt 1956). It is striking, however, that the vast majority of these studies were written well over fifty years ago and the matter has not been thoroughly considered since. A reconsideration of present-tense marking patterns in Old Northumbrian that draws from the insights of recent research into variation and benefits from the application of modern statistical methodology is clearly long overdue. Furthermore, certain potentially relevant factors remain unexplored. For instance, while grammatical person and number have been identified as important factors in conditioning variation between the interdental and alveolar variants, the effect of subject type and adjacency on morphological variation in Old Northumbrian has hitherto been disregarded. This is despite the fact that research indicates that subject effects are a crucial factor in determining the selection of verbal morphology, not just in non-standard varieties of present-day English (cf. Chambers 2004; Tagliamonte 2009) and in varieties of EModE, as discussed above, but also most notably in Middle English northern dialect itself (McIntosh 1989; Montgomery 1994; de Haas & van Kemenade 2009; de Haas 2011).

Using data drawn from the standard edition of the *Lindisfarne* gloss (Skeat

1871-87) collated with the facsimile copy of the manuscript (Kendrick, T. D. et al., 1960), this dissertation carries out a detailed study of the replacement of the interdental fricative by the alveolar fricative which differs both methodologically and in perspective from previous studies in several crucial ways. It constitutes the first study to simultaneously examine the effects of all relevant phonetic, lexical and syntactic variables on the process of change using statistical quantitative methodology. The study approaches the issue from an innovative hitherto disregarded perspective and considers factors such as lexical conditioning and morphosyntactic priming and pays particular reference to the subject and adjacency effects of the so-called Northern Subject Rule. By analysing the full breadth of possible language-internal explanatory variables on the development of the alveolar fricative ending in late Old Northumbrian and by applying statistical methodology, the study aims to elaborate and refine the overall view presented in early studies and set the Northumbrian developments within a broader framework of diachronic variation that will aid the verification of cross-linguistic generalisations and further our understanding of regularisation processes. It will be shown that the distribution of ONrth verbal morphology constitutes the first attested manifestation of a tendency in English for subject type to compete with person and number features for the function of grammatical material.

In addition to a variationist study of *-ð* and *-s* forms, this dissertation also carries out a contextual and quantitative analysis of reduced morphology in the Old Northumbrian interlinear gloss to the Lindisfarne Gospels. It looks in detail at reduced forms in the Lindisfarne gloss and considers to what extent the nature and distribution of these forms are indicative of the incipient development of the ME *-s* versus *-e*/*Ø* NSR pattern in late Old Northumbrian. I also assess to what extent inflectional morphology already present in the northern dialects constitutes the historical source for the occurrence of *-e*/*Ø*/*n* in the present indicative. To this end, I posit that, not only present-subjunctive morphology, but also preterite-present and preterite-indicative verbal morphology played an important role in perpetuating the levelling of reduced forms and -n into the present indicative. I show that the subject and adjacency effects at the heart of the NSR appear not only to govern the occurrence of reduced morphology in the present indicative as a low frequency variant but also conditions the distribution of reduced verbal morphology in the preterite.

A further question that will be examined in this dissertation involves the

contentious issue of the authorship of the glosses to *Lindisfarne* and whether or not the interlinear gloss of the *Lindisfarne Gospels* was the work of a single hand, Aldred (Ross, Stanley & Brown 1960; Brunner 1947/48; van Bergen 2008). To this end, I will consider the utility of language variation as a diagnostic for determining the authorship and more specifically, what light is shed upon this unresolved problem of Old English philology by the distribution of variants verbal forms in Li.

Another aspect under consideration relates to methodology and the unreliability of the text editions of medieval sources for linguistic research. In general, editions are unsuitable as sources unless they are collated with the raw data of the original manuscript because, as van der Hoek (2010) points out, they tend to involve "a reconstruction of a non-extant version of the text in question by selecting and altering from among the different surviving versions, in the attempt to arrive at a text that is purer from either a literary or philological point of view." The edition in question, in the case of the *Lindisfarne Gospels,* is that of Skeat (1871-87) which relies on the sole version of Li. but whose language and grammar have nevertheless been subjected to editorial interpretation and alteration.

1.2 Thesis and outline of the investigation

The main thesis of this dissertation is that while phonotactic considerations were instrumental in motivating and conditioning the replacement of the *-s* ending by *-ð* in late Old Northumbrian, the replacement process essentially exhibits the typical configuration of a morphological regularization process, namely a NP/PRO constraint and a tendency for the levelled form to spread from low frequency to high frequency lexical items.

The results of this dissertation also challenge the established view that the subject and adjacency effects at the crux of the NSR constraint emerged during the early Middle English period and that the constraint necessarily involved a syntactically-conditioned opposition between an inflected *-s* form and an uninflected form. Contrary to widespread belief, the results of this study indicate that the syntactic configuration of the NSR was already a feature of Old Northumbrian and (non-categorically) conditioned not only the distribution of verb forms with *-s* and *-ð* endings, but also that of reduced endings in both the present indicative and preterite.

When set within a broader framework of diachronic variation, the subject and

adjacency effects that condition processes of levelling in Northumbrian are also found to govern non-standard agreement patterns and levelling processes in varieties of Early Modern and Present-Day English. This suggests that throughout the history of English there has been a tendency for subject type to compete with person~number agreement for the function of morphological material in linguistic scenarios where morphological variation occurs. Building on an hypothesis first put forward by Pietsch (2005), who suggests that the emergence of subject effects is likely in a situation where levelling and erosion has led to a breakdown of the inherited agreement system based on person and number, it is also my contention that the categorical manifestation of the effects of subject type, typical of northern Middle English and Middle Scots, and the variable effects reported for late Old Northumbrian in the present study, in addition to similar effects in EModE and in a wide range of non-northern and overseas varieties of PdE, should be viewed as manifestations of the same agreement phenomenon. Namely, a concord system based on a pronominal versus non-pronominal distinction rather than on person-number features typically characterizes the patterns of variation that appear when covariant forms compete in the same environments. The fact that similar constraints are found to condition comparable processes of levelling in other Germanic languages such as Swedish suggests that such processes and the constraints that govern them reflect family universal tendencies. From this perspective, while contact scenarios of population and language contact are undoubtedly conducive to triggering processes of regularisation and morphological simplification, the syntactic constraints that govern the resulting variation are internally motivated and require no external input. The pattern and strength of this tendency need not manifest itself identically in varieties however and will vary according to the influences of the local setting.

With regards to its organisation, this dissertation is structured as follows. In chapter 2, I consider the sociolinguistic and cultural milieu of the Lindisfarne Gloss and issues relating to its authorship before moving on to consider the innovative nature of the language employed and previous hypotheses posited to explain the origin and proliferation of the innovative alveolar variant. Chapter 3 outlines the workings of the Northern Subject Rule and its history in northern England and Scotland since the Middle English period. I go on to discuss the presence of Northern Subject Rule concord in EModE and in a wide range of overseas varieties of English and non-northern varieties of British English. The chapter aims to serve as an overview of the

constraint from Middle English through to Present Day English, and as a point of comparison with manifestations of the rule in late Old Northumbrian. Chapter 4 discusses a detailed statistical analysis of variation between -s and -ð in which the full cohort of possible explanatory variables are considered. In chapter 5, I look in detail at the distribution of reduced forms in the Lindisfarne gloss with the aim of assessing whether there are signs of the incipient development of the Middle English NSR pattern in late Old Northumbrian and to what extent inflectional morphology already present in the northern dialects constitutes the historical source for the occurrence of -*e*/*Ø*/*n* in the present indicative.

I conclude the dissertation with a summary of the main conclusions and a brief discussion of future lines of research.

2 The manuscript of the Lindisfarne Gospels

2.1 The biography of the text

There is no conclusive evidence of where the manuscript known as the *Lindisfarne Gospels* was made or by whom. The most widespread view in the literature favours production at the monastery of Lindisfarne, Holy Island, off the coast of Northumbria in the north-east of England in the early eighth century (Ross, Stanley & Brown 1960; Brown 2003). In recent years, the supposition that Lindisfarne was the origin of production for the *Lindisfarne Gospels* has been challenged and alternative production centres such as Ireland, or an Insular continental foundation, or the twin monasteries of Wearmouth/Jarrow proposed (see O'Sullivan 1994; Dumville 1999), though more recently Brown (2003) has reasserted Lindisfarne as the origin for the volume and dated production to c. 710-25 (2003:84). It is thought that the Gospelbook was associated with the cult of St Cuthbert, an Anglo-Saxon nobleman and member of the community who was its bishop at the time of his death in 687. The volume was probably elaborated as part of the preparation for the translation of Cuthbert's relics to a shrine next to the high altar (Ross, Stanley & Brown 1960). In 793 Holy Island was to fall prey to the first of many violent Viking raids which were eventually to drive the community off the island at the end of the ninth century. It is known that the volume accompanied the displaced community during this period and that they stayed at Chester-le-Street for a while before finally settling at nearby Durham. Little is known of the Gospelbook's whereabouts after the Dissolution of the Monasteries in the sixteenth century, but by the seventeenth century the volume was in London, passing from Robert Bowyer to Sir Robert Cotton and, with the rest of his collection, to the British Library in 1973, where it is known as Cotton MS Nero D.iv (Brown 2003: **).

It was while the volume was at Chester-le-Street some time around 950 that the manuscript was glossed in Old Northumbrian, making *Lindisfarne* the earliest surviving translation of the Gospels in the English language and one of the few surviving witnesses of early northern dialect. We know that work on disseminating scripture in the vernacular had started considerably earlier. Bede was working on a translation of the Gospel of John at the time of his death in 735 and the *Vespasian Psalter*, a Kentish work from about 720-30 was glossed in English during the mid-ninth century distinguishing the volume as the earliest extant biblical translation into English. The

tenth century itself was to witness the elaboration of further glosses in addition to *Lindisfarne*, those added to the *Rushworth* (or *Macregol*) *Gospels*, by two hands, in the Mercian dialect (*Rushworth*[1]) and the Northumbrian dialect (*Rushworth*[2]) and reliant on the *Lindisfarne* glosses as a source. A further translation of the Gospels in the West Saxon dialect, known as the *West Saxon Gospels*, is also preserved in a twelfth-century copy. As Brown (2003:96) succinctly puts it, "The spirit of evangelization that engendered such an openness to spread the Word by any means was very different to the official tolerance encountered by Wycliffe and Tyndale in the late Middle Ages."

2.2 The authorship of the Lindisfarne glosses

The glossator of the *Lindisfarne* gloss has traditionally been identified as a priest named Aldred, a member of the St Cuthbert community. Aldred is also attributed with having glossed the tenth-century Latin collector the *Durham Ritual* at a later date (Ross, Stanley & Brown 1960:24), although as Skeats points out, a comparison of the manuscripts might suggest otherwise (1871-87, Preface to St John: ix). In the colophon he added to f. 259r of the *Lindisfarne Gospels*, Aldred takes credit for having written the glosses and associates his work with members of the community who were believed to have originally made the *Lindisfarne Gospels*: Eadfrith, Bishop of Lindisfarne (698-721) is accredited with writing and illuminating the volumes, his successor Bishop Aethilwald is said to have bound it and the metalwork is attributed to an anchorite named Billfrith. This colophon, in addition to palaeographical, archaeological, historical and contextual evidence is traditionally cited in the support of Lindisfarne as the site of production (Ross, Stanley & Brown 1960).

In recent years, however, the reliability of a colophon added 250 years after manufacture has been questioned (see O'Sullivan 1994; Dumville 1999 and Nees 2003). The most detailed rebuttal is that of Nees (discussed in Brown 2003:93-95) who convincingly argues that Aldred was adapting an earlier source or sources for his statements concerning the 'makers' of the Lindisfarne Gospels. Nees suggests that Aldred sought to associate the work of the four makers of the book with the work of the four evangelists and hence emphasizing the continuing evangelistic transmission of the four gospels in which he was partaking. In choosing the other three 'evangelists' he was guided by references to the Bishops Eadfrith and Aethilwald made in the works of Bede and by the inclusion of Billfrith in a list of anchorites in the Durham *Liber Vitae*. Variant spelling forms such as the use of 'Eðilvald' and 'Oeðilvald' alongside

'*Æ*ðilwald' for the name 'Aethilwald', also bolsters the view that Aldred may have copied them from different sources, while simultaneously using forms he was familiar with (Brown 2003:95). Nees notes how the practice of including colophons and dedication passages rose in popularity during the tenth century and that the dedications found in books presented to the community of St Cuthbert in the early tenth century would have provided Aldred with an ample source of potentially influential material. On balance, it seems that although there is no way of proving that Aldred's colophon was based on earlier material, the evidence conspires to suggest that elements of an earlier source or sources were incorporated into his colophon; a conclusion that has important implications for the authorship of the gloss itself.

Considerable palaeographical and linguistic debate has arisen as to whether the interlinear gloss written in Old Northumbrian was the work of a single hand, as Aldred's colophon would lead us to believe. Brunner (1947/48) outlines the two broad perspectives that exist in the literature with respect to this contentious issue. The first, favoured by Bouterwek (1857); Stevenson & Waring (1854-1865) and Skeat (1871-87) is that the gloss was the work of two or more scribes speaking different dialects. Only this in their opinion would account for the wealth of variant forms in the gloss and the restriction of particular variant forms to certain parts of the text. The involvement of more than one hand would also explain certain palaeographical and orthographical inconsistencies such as apparent changes in handwriting, so too, the change from red ink to brown from John 5:10 onwards and the use of *v* for *u* and *w* in this latter section (Bouterwek 1857, discussed in Brunner 1947/48:32). The opposing viewpoint is the palaeographical one held by Maunde Thompson & Warner (1881-1884), Millar (1923), Ker (1943) and Ross, Stanley & Brown (1960) who are unanimous in regarding the whole gloss as the work of the same man, who they take to be Aldred, based on the assumption that the colophon proper was indeed an autobiographical statement by Aldred.

The palaeographers' translation of Aldred's colophon is also crucial to informing their stance. Consider their translation of part of the last section of the colophon (Ross, Stanley & Brown 1960:10):

> *Alfred p'sb'r indignus et misserrim' mið godes fultu'mæ 7 sc'i cuðberhtes hit of'gloesade on englisc. 7 hine gihamadi mið ðæm ðríim dælu'. Matheus dǣl gode 7 sc'e cuðberhti. Marc' dæl ðæm bisc'. 7 lucas dæl ðæm hiorode 7 æht^{w} ora seo/^{u}lfres*

mið to inlade. 7 sc'i ioh' dæl f'hine seolfne 7 feouer ora seo/ᵘlfres mið gode 7 sc'i cuðberti. þte he hæbbe ondfong ðerh godes milsæ on heofnu'

And Aldred, unworthy and most miserable priest, glossed it in English between the lines with the help of God and St Cuthbert. And by means of the three sections, he made a home for himself – the section of Matthew was for God and St Cuthbert, the section of Mark for the bishop, the section of Luke for the members of the community [...] and the section of John was for himself [...] so that, through the grace of God, he may gain acceptance into heaven.

The difficulty lies in translating the difficult phrase *hine gihamadi mið ðæm ðríim dælu* which Ross, Stanley & Brown render "by means of the three sections, he made a home for himself." In contrast, Skeat (1871-87, Preface to St John: ix) translates it as "made himself at home with the three parts" which he interprets as meaning that Aldred familiarized himself with the three parts, i.e. revised the three first gospels which had been written by others and glossed the last one, that of John, himself. The verb *gihamadi* is not recorded elsewhere in Old English, which complicates its interpretation (Ross, Stanley & Brown 1960:8). Skeat (1881-87: *op. cit*. I, vii) was later to concede that Maunde Thompson's translation, "Aldred...glossed it in English, and got for himself a home [in the monastery] by his work on the three parts...But St John he glossed for himself...to the end that he may gain admittance into heaven," was closer to the mark. Abstracting away from the linguistic aspect, Nees (2003:347) suggests that Aldred's marked insistence on separating the gospels into three and one, into what is today known as the synoptic Gospels and John, is a reformulation of the Trinus et unus Deus "three and one" motif with which Alfred begins his additions to the main body of the text. Whatever the intended meaning or significance may have been, translations that are highly subjective and prone to various interpretations are clearly shaky foundations upon which to rest an argument and the issue is better served by palaeographical and/or linguistic analysis.

2.2.1 Palaeographical evidence as a diagnostic for determining authorship

The most detailed analysis of the gloss's palaeography is that of Ross, Stanley & Brown (1960), who based on orthographical differences and discrepancies in the general appearance of the gloss, divide the text into two main parts with a break at ff. 203r /

203v, i.e. at the end of Luke, which effectively distinguishes John from the other three gospels, and, as it happens, parallels the distinction drawn by Aldred himself in the colophon between the glossing of the first three gospels and the glossing of the fourth (Ross, Stanley & Brown 1960:23):

> [there is] some evidence that the Gloss falls into two main parts, dividing at ff.203r/203v, that is, at the end of St. Luke's Gospel. Here <v> supplants <u>, and at this point also the hand becomes neat and compact […] in contrast to the rather untidy, thin look of the pages immediately before [...]. The Colophon, too, suggest that the glossing of St. John's Gospel was in fact a distinct operation from the glossing of the other three.

The palaeographers observe the "considerable" contrast between the first and last pages of the first main section up to ff. 203r / 203v and also suggest that there are "slight indications" of a break around the beginning of Mark at ff. 93r/95r and at f. 160v, i.e. L.8:30 (Ross, Stanley & Brown 1960:24). The outset of the first sub-section of the first main part (f.3r - f.93r) is characterised by a bold, vigorous hand that becomes notably smaller and less vigorous around ff. 93r/95r through to f. 160v. Between f.160v - f.203v the handwriting is much the same as before but weaker and poorer in quality, possibly owing to the effects of physical weakness or sickness (Ross, Stanley & Brown 1960:24). The second main section from f. 203v to the end of the text essentially comprises the Gospel of John. Slight differences are nevertheless to be found in this last section as well. From f. 203v to f.234v, the handwriting has a "solid, square look" that is fairly consistent in size but also interspersed with sporadically very small or very large writing. The handwriting loses its solid square look from f. 235v onwards becoming smaller and weaker and "remarkably consistent". At f. 220va 2, red ink makes an appearance and is used throughout the rest of John and the Colophon.

In spite of marked differences in general appearance between parts of the gloss, such as differences in the size and neatness of the handwriting, or changes in ink colour, the formation of the individual letters is nonetheless consistent enough throughout the gloss for Ross, Stanley & Brown (1960:20) to conclude that not even the writing of two scribes formed in the same school would be so similar as to "reproduce with precision all the minor details of execution." They nevertheless suggest the possibility that while the gloss was written entirely by Aldred, he was not necessarily entirely responsible for

its composition and may have copied parts of the gloss from other sources (1960:11, 22).

Brown (2003: ***) further explores the possibility that although Aldred's gloss is essentially his own composition and is based on the *Lindisfarne* text (certain errors derived from the layout of the original Latin text in Lindisfarne show this must have been the case, cf. Ker 1957:216), he also "consulted one or more pre-existing translations and preserved their linguistic and orthographic forms alongside those of his own" (2003:100). She discusses the possibility, originally posited by Elliot & Ross (1972:65), that Aldred's gloss to John may have been informed by Bede's translation of the Gospel of St John and that his use of red ink in John might reflect a conscious effort to honour such a prestigious source. More significantly, Boyd (1975:52 quoted in Brown 2003:97) draws attention to a marginal note inserted by Aldred at f.255 *rb* 22 which reads 'post /.i. est in die examines iudicii. Districti iudicis ~ *ðus beda ðe bróema bóecere cuéð* 'thus said Bede the famous scribe.' The marginalia not only confirms Bede as one of Aldred's sources of scholarship, but may also, as Brown suggests, constitute proof that Aldred was consulting pre-existing vernacular translations of the Gospels, such as Bede's translation of John. In other words this marginal note may acknowledge a Bedan gloss.

The use of red ink is also taken up by Skeat, who points out that its use is not confined to the Gospel of St. John, but also occurs in isolated glosses elsewhere in the gloss, namely between ff. 3v-5v and at f. 141va 3. In these cases the entries made in red ink involve alterations and corrections and appear to be the result of a general revision carried out once the gloss to John has been completed (Ross, Stanley & Brown 1960:24). Skeat attributes this superintending hand to Aldred (Skeat 1871-87: Preface to Luke: vii):

> Another peculiarity is the occasional use of red ink, […], where a word has been supplied by the glossator Aldred, who seems merely to have superintended the glossing of the first three gospels, but to have glossed the fourth gospel himself for the most part, as it is chiefly written in red ink, and has certain orthographical peculiarities.

That this may have been the case is borne out by Ross, Stanley & Brown's (1960:24) observation that the abbreviation <· ł ·> as opposed to < ł > occurs for 'vel' in these red corrections. This variant makes its appearance for the first time in the gloss itself at

about f. 224r, and agrees quite well with the occurrence of other orthographical and palaeographical peculiarities such as the change in ink colour, the use of *v* instead of *u* and prefixal *gi-* instead of *ge-*. If Aldred was also responsible for glossing the *Durham Ritual*, as is generally assumed (Brown 1969:23-25), then the use of *v* instead of *u* and prefixal *gi-* instead of *ge-,* may actually be a weightier argument than first appears in favour of the hypothesis that Aldred restricted his glossing activities to John, given that these forms are equally characteristic of the *Durham Ritual* (Skeat 1871-87: Preface to John: x).

2.2.2 Linguistic variation as a diagnostic for determining authorship

An overriding problem with the palaeographical perspective is that it does not satisfactorily explain the remarkable linguistic variation manifest in *Lindisfarne.* While the highly codified and monolithic nature of standardized Modern English should not detract from the fact that earlier stages of the language may have tolerated a high degree of morphological variation, (in fact, in a situation of rapid change where there is no standard variety against which the emerging new variety might be judged, we would expect such variety and change to be the rule rather than the exception) the manner in which certain variant forms are confined to particular sections of the text in *Lindisfarne* needs to be accounted for. The findings of studies on the distribution of variant forms conspire to suggest that either more than one hand was responsible for glossing *Lindisfarne*, or the glossator responsible for writing the gloss relied on different sources. The findings of Brunner's (1947/48) study on the distribution of several variant forms in the glosses indicate that certain variants are either confined to, or are dominant, in specific parts of the text with a clear demarcation at Mark 5:40, leading her to conclude that either "two or more scribes made the gloss or that one scribe made the gloss from an earlier version made by two or more scribes" (1947/48:52). The latter view, i.e. that Aldred's translation was informed by several sources or relied on an exemplar in which various scribes had been involved rather than a change of scribe in *Lindisfarne* itself, has gained much currency in recent years (see Brown 2003; van Bergen 2008). The distribution of uncontracted negative forms in the gloss (van Bergen 2008) also points to there having been at least two changes of scribe in the exemplar – one around Mark 5:40 and another around the beginning of John, and the final scribe could not have been the same as the first. I will consider each study in turn.

Brunner considers the variant forms *he(o)no* versus *he(o)nu* and *ðy/ðyu* versus

ðio/ðiu which are found to be confined to certain sections of the text, and the stem variants *cueð-* versus *cuoeð-* of the verb *cweþan* 'say' and *woer-* versus *wer-* of the verb *wosan* 'to be' which predominate in certain parts of the gloss as opposed to others. With regards to the use of *he(o)no* as against *he(o)nu,* Brunner finds that whereas *he(o)no* occurs throughout the gloss, *he(o)nu* ceases to appear after Mk. 3:34. Similarly, the nom. acc. sg. feminine forms of the definite article *ðy, ðyu* are used throughout Matthew and the first five chapters of Mark, at which point they are entirely replaced by *ðio, ðiu.* The present-tense stem variants *cueð-* and *cuoeð-* occur in roughly equal measure up to Mk. 5:40, but from then on the use of *cueð-* becomes infrequent and the variant *cuoeð-* predominates. With regards to the variant stem forms of the verb *wosan*, forms in *oe-* (as in the pl. pret. ind. *woeron*) are rare throughout Matthew and the first five chapters of Mark, but gain in currency in the remainder of the text.

Van Bergen's (2008) survey of negative contraction in Old English dialects indicates that there are parts of the gloss where contracted negative forms such as *nis* (< *ne is*), *nolde* (< *ne wolde*) *nallas* (< *ne wallas*) occur more frequently than in others. The section from Mk.5:40 through to the end of Luke shows an increased use of uncontracted forms, although as van Bergen points out, the data are too scarce for the first five chapters of Mark to determine whether there is actually a neat "before and after" division at Mark 5:40 (van Bergen 2008:291). Nevertheless, the higher rates of uncontracted negative forms in Luke give way to a notable increased incidence of contracted forms in John, a change in linguistic properties that coincides with the main division stipulated by Ross, Stanley & Brown (1960:23) on palaeographical grounds and once again distinguishes John from the first three gospels.

The difficulty, as van Bergen points out, lies in interpreting what the differences between different parts of the *Lindisfarne* gloss mean. Is the linguistic variation prevalent in Lindisfarne indicative of a change of scribe or simply of a change in the glossator's practice? The palaeographical evidence would suggest that if a change of hands occurred, then it must have taken place in the exemplar, rather than in *Lindisfarne* itself. Not all of the changes identified manifest themselves in the same way. Abrupt changes would suggest a change of scribes, while a gradual transition from one variant to another would be more in line with a change in the same scribe's practice, but as van Bergen points out "the issue is not clear-cut on the issue of sharp change or more gradual change between the different parts" (2008:291). A case in point discussed by van Bergen is that of the use of *v* instead of *u* in the Gospel of St. John

which Ross & Elliot (1972:65, cited in van Bergen 2008:291-92) consider a gradual change that is therefore likely to have been an innovation adopted by Aldred himself. Nevertheless, they advocate the view that a change in scribe occurred at this point in the exemplar and that Aldred's gloss to John is a copy of a translation made by Bede. We will leave this matter here for the time being, but will return to it in section 4.2.4 where I will consider what contribution is made to the authorship debate by the findings of the present study.

2.3 The language of the Lindisfarne glosses

From the linguistic point of view, *Lindisfarne* is a remarkable text that reflects a language on the cusp of dramatic change and already far closer in many respects to the Middle English stage than any of its tenth-century West Saxon counterparts. The wealth of variant forms found in *Lindisfarne* has been remarked upon repeatedly in the literature. Ross (1960:39) observes that a verb like *lufað* could have up to twenty variant forms in the plural. A more concrete example is provided by Brunner (1947/48:32) who cites *cuoeðas, cuoeðes, cuoeðæs, cuoeðeð, cuoeðað, cueðas, cueðes, cueðæs, coeðes,* and *cuæðes* as attested third-singular present-indicative variant forms of the West Saxon verb *cweþan*. Another of the main characteristics of the Northumbrian texts is the advanced state of morphological simplification across the verbal system caused by various processes of reduction and levelling including the proliferation of the present-indicative marker *-s*, the phonetic levelling of vowels in unstressed syllables and the early loss of final *-n,* most notably in the infinitive and present-plural subjunctive, and to a lesser degree in the preterite-present plural verbs and preterite indicative and subjunctive. Other innovations found in *Lindisfarne* include the break down of the gender system, the incipient emergence of a discrete definite article and the merger of the nominative-accusative and the dative in the strong *a*-stem declension (cf. Jones 1988; Millar 2000). There is also a lack of defined usage between the indicative and subjunctive mood in the gloss, with preterite-indicative *-on* endings invading the preterite-subjunctive environment and present-indicative *-s*/*-ð* morphology encroaching into present-subjunctive contexts, suggesting the early recessive nature of the subjunctive as a formal category in late Northumbrian. This lack of defined morphological usage across the verbal system also extends to preterite-present verbs where it is not uncommon to find instances inflected with weak/strong verb present-indicative morphology such as *wutas, wutað* or *cunnas* (see section 5.3).

Older accounts have often adopted a somewhat critical view of the language of the Northumbrian glosses, and have labelled much of the rule-governed linguistic change found therein as "confusion" or as "problematic" or "troublesome" northern grammar (Lindelöf 1927: lvi-lvii; Campbell 1959:301-2, 338, fn.2; Keefer 2007:95-96). The *Durham Ritual,* in particular has been the object of much criticism. The prevalence in this text of uninflected forms made up of the root part of the verb with little apparent effort to indicate the grammatical features of the Latin word it translates leads Keefer (2007:95-96) to view Aldred's glossing activity in the *Durham Ritual* as a system of abbreviated shorthand, a "sense-gloss" in which the root forms act as aids for the translation of the Latin original. The basic uninflected vernacular gloss enables the readers' understanding of the Latin to be filtered through the English to which it runs parallel. Keefer speculates that unlike other glosses, the *Durham Ritual* gloss was never intended as teaching material. By providing only the semantic values of the Latin as opposed to grammatical detail, the gloss was intended to aid "an appreciation of the original, rather than an appropriation of it by the vernacular of the glossator" (2007:95). Other scholars have seen less of a deliberate aim to the glossing technique employed and have gone so far as to question Aldred's command of Latin. So Lindelöf (1927: lvi-lvii, quoted in Keefer 2007:94):

> The glossator of the Durham Ritual was not a very skilled Latinist […]. The state of nominal and pronominal inflection in the documents of late Old Northumbrian, especially of the Northern variety, makes it … very difficult, or even impossible to fix the case, number, or gender, which the glossator had intended to express.

Nevertheless, Lindelöf's words "the glossator had intended to express" alludes to the crux of the question. Did the glossator actually intend to express case or gender in the manner expected or is the language of the gloss indicative of morphological simplification and linguistic change? Several studies would suggest that the latter explanation is highly likely. Millar's (2000) survey of the evolution of the demonstrative pronoun in late OE and early ME periods, in addition to Jones' (1988) study of the loss of grammatical gender in the history of English provide evidence of the radical restructuring of the morphological system in late Old Northumbrian.

In the case of *Lindisfarne*, there is no denying that abbreviation does indeed occur. The scribal habit of abbreviating words is especially commonplace with nominal

forms and adverbs (*middan*' for *middangeord*; *faed' fad'* for *faeder; uut'* for *uutudlice*), and also occurs frequently with prefixes, as in *f'estydton, f'driofon* and *of'foerdon* for *forestydton*, *fordriofon*, *oferfoerdon*. Abbreviated forms are usually unambiguously indicated by the insertion of a serpentine squiggle, although abbreviated, so called truncated forms, also occur without any such indication that they are abbreviated, e.g. *faed, fad* (Ross 1960:37) With regards to abbreviated verbal forms in *Lindisfarne,* the presence of such forms is in fact relatively marginal and occasionally motivated by space restrictions. They are usually unambiguously indicated by the insertion of a serpentine squiggle or by a total lack of inflection (compare the vocalic 'reduced' form *gie drinca* at f. 116va 20 with the bare root *ue cym* at f.245 ra 11). Indeed abbreviated forms can consist of little more than the first few syllables of a word as in (1b). I summarise here the instances found in *Lindisfarne* of abbreviated preterite forms and present-indicative forms (excluding the first and second singular and forms of *bēon* and *wesan*). Reconstructed forms according to Skeat are provided:

(1)
a. teldon ł bismer [*edon*] ~ *inludebant* f.199 ra 23 (Lindis.L.Skeat 1871, 23:36)
b. bebodadon ł gefeast [*adon*] ~ *commendauerunt* f.173 vb 5 (Lindis.L.Skeat 1871, 12:48)
c. hia gehengon ł mæhtſ[*on*] ~ *crucifigerent* f.127 va 16 (Lindis.Mk.Skeat 1871, 15:20)
d. hwæstredon ł missp̄[*recon*] ~ *murmurabant* f. 225 va 21 (Lindis.Jn.Skeat 1871, 6:61)
e. geseas ł behald[*as*] ~ *videte* f. 121 vb 11 (Lindis.Mk.Skeat 1871, 13:9)
f. ne ondattſ[*að*] ~ *confitebantur* f.241 rb 20 (Lindis.Jn.Skeat 1871, 12:42)
g. ue cym̄[*as*] ~ *ueniemus* f.245 ra 11 (Lindis.Jn.Skeat 1871, 14:23)
h. geberhtade ł geberht[*es*] ~ *clarificabit* f.248 ra 5 (Lindis.Jn.Skeat 1871, 16:14)
i. to cuom̄[*on*] ł to weron ~ *aderant* f.199 vb 6 (Lindis.L.Skeat 1871, L.23:48)

Note how abbreviated forms often comprise the second element of a double gloss in which the first alternative is inflected rendering the inflection of the second element unnecessary in effect. So too the second-person singular abbreviated verb form: <*doas* ł *uir̃* > (L. *facis*) f. 215rb 8 (Jn.3:2), which Skeat expands to <*doas* ł *uircas*> (Fernández-Cuesta 2009).

On other occasions, however, letters appear to have been missed out by the scribe. Instances recorded by Fernández-Cuesta (2009) in a detailed assessment of

Skeat's editing protocol include those in examples (2). The altered forms that appear in Skeat are provided in addition to the original forms found in the manuscript.

(2) a. L. unigeniti <ancenn[e]des> (Lindis.Jn.Skeat 1871, 1:14) ~ <acenn^{d}es> f. 211vb 24

b. L. mansit <g[e]wunede> (Lindis.Jn.Skeat 1871, 1:32) ~ <gwunede> f. 212vb 15

c. L. facere <g[e]wyrce> (Lindis.Jn.Skeat 1871, 2:16) ~ <gwyrce> f. 214vb 1

d. L. calciamenta <g[e]sceoe> (Lindis.Mt.Skeat 1871, 3:11) ~ <gsceoe> f. 32ra 2

e. L. omnis <eh[g]uelc> (Lindis.Jn.Skeat 1871, 3:16) ~ <eh[g]uelc> f. 216 ra 1

Skeat interprets these omissions as errors and reinserts the 'missing' letters in parenthesis as illustrated above. It is worth noting, however, that the exact same type of omission occurs repeatedly and systematically involves either the deletion of unstressed vowels as in (2a-d) or consonant cluster reduction (2e). In other words, these renderings may in fact be orthographic representations of features of spoken speech rather than abbreviations. Fernández-Cuesta (2009) plausibly conjectures, for instance, that forms such as <gwunede> and <gwyrce> are indicative of the early weakening in late Old Northumbrian of prefixal *ge-* (later ME *i-*).

Chapter 5 will discuss the distribution of verbal forms with 'reduced' vocalic as opposed to consonantal inflection. It will be seen that far from occurring randomly, the distribution of reduced verbal morphology in *Lindisfarne* is indicative of syntactically governed morphological simplification.

2.4 The sociolinguistic situation

The sociolinguistic history of population and language contact in the North is certainly crucial to understanding the development of northern dialect. Many of the features that distinguish northern ME dialect from southern ME dialects derive mainly (if certainly not exclusively) from its extensive contact with Old Norse as a result of widespread Scandinavian settlement in the North and East of England during the late Old English period. Once the initial period of hostility had died down, many of the newcomers settled as farmers and there must have been considerable intermarriage and language mixture. Place name evidence allows us to infer the significant density of the Scandinavian population from the ninth century onwards, especially in Yorkshire and the "Five Boroughs" (Lincolnshire, Nottinghamshire, Derbyshire, Leicestershire and

Northamptonshire). The scale of Scandinavian settlement was lower in the far northern region of Northumbria, as can be appreciated in the map in Figure 1. Despite embracing so many Scandinavian speakers the settled areas remained English speaking, but not without Old Norse first leaving its mark on the English language.

The extensive influence of Old Norse on the northern dialect has long been held to vouch for the intimacy of contact between the native English and the Scandinavian settlers and the nature of the influence of Old Norse on northern English indicates that substantial language shift occurred. In addition to the borrowing of Old Norse lexical items, more significantly for the purposes of this present study, several closed-class Old Norse function words such as prepositions and pronouns were also borrowed into English - grammatical forms such as *till* 'to' and *fra* 'from' or the use of the complementizer *at* used to introduce the infinitive instead of native 'to' were commonplace in northern ME. Grammatical transfer is also apparent in the borrowing of the personal pronouns *they, their, them* > ON *þeir*, *þeira*, *þeim* which later spread to other dialects and served to disambiguate the inherited OE third-person plural pronominal system. Scandinavian influence is also regularly invoked as an explanation for diverging phonological developments in northern and southern varieties (Campbell 1959:§438; Hogg 1992:274-275).

In these circumstances language shift involves the imposition, not only of content words, but also of grammatical features, as well as simplification and shifts from marked to unmarked forms. The type of 'interference'or 'transfer' (Thomason & Kaufman 1988:33-45) that occurs when adult immigrants acquire the local language, but as adult learners well past the 'critical age' of language acquisition do so imperfectly, leads to substrate influence in the resulting new variety. From a sociolinguistic perspective such interference at the individual level is irrelevant; contact-induced change can only be said to have occurred if the new linguistic material spreads through the local speech community as a whole. The issue of second-language-error-derived language change raises interesting questions. What social dynamics would enable second-language learner errors to catch on in the local speech community at large? What would drive native English speakers to want to emulate foreigners' mistakes? With reference to Morse-Gagné (2003) and Thomason & Kaufman (1988), Ringe & Eska (forthcoming) construct a possible sociolinguistic scenario conducive to diffusion. The settlers' farming villages involved a degree of mixed economy, which included a significant amount of trade and seasonal movement by the population, thus,

providing settlers with the opportunity to visit other settlements and pick up English. According to Thomason & Kaufman (1988:285) the resulting "Norsified English" spread most successfully, not to the English speaking villages, but to Norse-speaking settlements, so that the only English they learnt was the non-native Norsified variety which was passed onto successive generations as a native language. As Ringe & Eska conclude, "By that process the resulting dialect would have ceased to seem foreign after a generation or two; they would simply be further dialects of English, mutually intelligible with some others and so able to pass on their Norse peculiarities by ordinary dialect borrowing."[1]

Several scholars (Thomason & Kaufman 1988:280, 303; Samuels 1989:276; Millar 2000:47, fn.17) have observed that the *Lindisfarne* glosses might not be the most apt reflection of contact-induced change bearing in mind the text originated in the northern part of Northumbria that lay outside of the most heavily Scandinavianized area known as the 'Scandinavian Belt' (Samuels 1989:111). The implication is that the changes taking place in the language, such as the loss of inflectional morphology, are a purely internal matter. This perspective, however, is not unproblematic, principally because it assumes the glossator was from Bernicia and in doing so ignores the fact that nothing is known about Aldred's birthplace. His command of the Northumbrian dialect suggests a northern birthplace, but his exact birthplace remains unknown. He may very well have come from the southern part of Northumbrian; we simply do not know. The possibility that Aldred may have relied upon other sources or the possible involvement of other hands of unknown provenance in writing the glosses further complicates the picture.

Thomason & Kaufman's assessment of Old Northumbrian (1988:§9.8.6.10) also highlights the lack of direct transfer of Norse linguistic material in the glosses, which is limited to Norse-derived loanwords (Pons-Sanz 2000), but not structural transfer.[2] A crucial question in this respect is raised by Millar when he asks, "Need all linguistic change due to contact represent direct transfer of systemic material from one language to another?" (2000:51). While there is no denying the lack of direct quantifiable

[1] For further evidence of non-native interference patterns in the mainstream speech of local communities see Ringe & Kroch's discussion of Anatolian Greek (forthcoming), and King (2000) for a discussion of structural borrowing from English into the Acadian French of Prince Edward Island, Canada.

[2] Compare Kroch & Taylor (1997) who use instances taken from the *Lindisfarne* glosses (where the Latin cannot be held responsible for the word order) as evidence of an early dating for the emergence of the northern V2 syntax they attribute to contact with Old Norse.

morphological or syntactic transfer from Norse in the glosses, certainly the type of levelling processes manifest in *Lindisfarne,* which involve the generalisation of a default marker rather than the direct transfer of linguistic material, have been subject to extensive scrutiny in contact scenarios in the literature where they are a common manifestation of contact-induced language change (Trudgill 1986; Siegel 1997). Recent research in the field of contact linguistics would suggest that the changes patent in the Aldredian glosses and the speed at which they spread owes much to contact dynamics and the processes and principles of change that shape new dialect formation in language contact scenarios (Trudgill 1986; Seigel 1997; Schreier 2002; Britain 2002).

Another source of external influence in the North that has traditionally been overlooked is that of Celtic. Recent historical, archaeological, and place name evidence, in addition to genetic studies, suggests that far from being exterminated as a race, as the traditional view on the nature and impact of the Anglo-Saxon settlement handed down to us by nineteenth-century historians holds, the majority of the Celtic population of Britain remained in place and continued to live as part of the Celtic-Anglo-Saxon community (see Filppula et al. 2008 and references therein for detailed discussion). Conditions favourable to bilingualism therefore existed for a considerable length of time after the arrival of the Anglo-Saxons, especially in the northern and western regions of the country that must have been conducive to language shift. A growing number of Celticist studies have posited significant British influence on English, especially in the domain of grammatical structure. The Northern Subject Rule, is one such feature that is argued to be a substratum feature carried over into English during a sustained period of Brittonic/Anglo-Saxon contact in the North of England between the mid-seventh and late-eighth centuries (Hamp 1975-1976:73; Klemola 2000:340; Vennemann 2001; de Haas 2008; Benskin 2011). In a recent study, Laker (2010) convincingly argues that British influence, in addition to that of Scandinavian, may also explain phonological differences between the dialects of Old and Middle English.

We shall return to the issue of language contact phenomena in section 5.5 where in light of the results of the data analyses outlined in chapters 4 and 5, we shall discuss to what extent the contact dynamics of the period or language internal developments shaped the observed outcome in late Old Northumbrian.

2.5 The loss of present-tense suffixal *-ð* in English

2.5.1 Present tense markings in Old English

My starting point for discussing present-tense verbal morphology in Old Northumbrian are the endings in the present-indicative and imperative of early Old English. The paucity and brevity of northern texts from this early period means that we have little choice but to rely on the far more extensive West Saxon texts for a reliable picture of the agreement system at this time, which was as follows:

Table 1. Old English present tense markings (*Sources*: Lass 1992:134; Campbell 1959:§730, §748, §754)

		Strong / Weak I	Weak II
sg.ind.	1	-e	-ie
	2	-(e)st	-ast
	3	-(e)þ	-aþ
pl.ind./pl.imp.		-aþ	-iaþ

Despite the poorly attested nature of early Northumbrian from the eighth and ninth centuries, enough material remains to show that present verbal morphology in these early northern writings did not differ greatly from that of the southern dialects. Early Northumbrian material comprises the short poems Cædmon's Hymn, Bede's Death Song and the Leiden Riddle, and fragmentary inscriptions, the most substantial of which include those found on the Ruthwell Cross and the Franks Casket. Present verb forms with -ð, such as *Her fegtaþ Titus and giuþeasu* 'Here Titus and a Jew fight' found on Franks Casket, and the third person plural *fraetuaþ* and singular forms *scelfaþ*, *hlimmit* of the Leiden Riddle suggest present tense markings did not diverge significantly in the southern and northern dialects at this early stage.

2.5.2 The proliferation of suffixal -s in English

In the tenth century, the interlinear glosses to the Latin manuscripts of the *Lindisfarne Gospels* and the *Durham Ritual*, as well as the Northumbrian part of the *Rushworth Gospels* gloss (*Rushworth*^{2}), afford us with a better insight into the northern linguistic system. In these texts Northumbrian verbal morphology is well-recorded for the first time, as is an important change in progress whereby inherited -*ð* in the present-indicative plural and third person singular environments is being supplanted by -*s* endings. Using *Lindisfarne* as his source, Ross (1960:39) outlines the following late

northern English present-indicative paradigm in which the remarkable wealth of variant forms is immediately apparent.

Table 2. Late Old Northumbrian present-tense markings (*Source*: based on Ross 1960:39)

		Strong / Weak I	Weak II
sg.ind.	1	-o, -a	-iga, -igo
	2	-as, -es	-as, -igas, -es, -iges
	3	-eð, -es, -að, -as	-að, -as, -eð, -es, -igas, -iges, -igeð, -igað
pl./pl.imp.		-eð, -es, -að, -as	-að, -as, -eð, -es, -igas, -iges, -igeð, -igað

If we set aside the first- and second-person singular (the first singular has a vocalic ending and the second singular already ended in *-s* in the Anglian dialects as opposed to southern *-st*), note how in addition to the occurrence of both -s and *-ð* in the same plural and third-person singular contexts, the inflectional vowel distinction that distinguishes the third-person singular from the plural in Old English is being lost owing to vowel reduction in unstressed syllables. As will become apparent in the discussion of the Northern Subject Rule pattern in chapter 5, there is also reason to believe that reduced forms with vocalic rather than consonantal endings of the type *binde* or *etto* already operated as a low variant form in plural pronominal environments.

The first attested occurrence of an *-s* ending actually occurs in the ninth-century Urswick runic inscription in the plural imperative *gebidæs* (Holmqvist 1922:2; Ross 1934:68, fn.1) as illustrated in (3).

(3) ‘+ t u n w i n i s e t æ | æ f t e r t o r o i| t r e d æ b e k u | n æ f t e r h i s b | æ u r n æ g e b i d æ s þ e | r s || a u | l æ’

Tunwini setæ æfter Toroitredæ bekun æfetr his bæurnæ gebidæs þer saulæ

“Tunwini set up a monument after Torhtred his son. Pray for his soul.”

This suggests an early date for the incipient development of the innovative form in the plural and third person singular environments, although other ninth century rune-

inscribed crosses in the North always have the old *-ð* ending, as in *gibidæþ* (Lancaster Cross) and *gebiddaþ* (Thornhill III and Overchurch Stone) or the variant *-t*/*-d* spelling found in *gebidæd* on the Falstone memorial stone (*SCONE* Fernández-Cuesta at al.). Whatever the frequency of *-s* endings at this early date, by the mid-tenth century, suffixal *-s* and *-ð* coexisted in northern dialect as the excerpt in (4), taken from the interlinear gloss to the *Lindisfarne Gospels,* illustrates.[3]

(4) Li. 7 mi*ðð*y *ða syndrigo ł agnum scip* ***sendeð*** *ł* ***forletes*** *before hia* ***gaeð*** *7 ða scip hine* ***soecas*** *ł* ***fylgað*** *him...*

L. *et eum proprias oues emiserit ante eas uadit et oues illum secuntur...*

f. 234ra 23 (Lindis.Jn.Skeat1871, 10:4)

"And when he sends forth his own sheep, he goes before them and the sheep follow him..."

Descriptions of northern Middle English in the older literature suggest that by the early Middle English period the alveolar variant had ousted *-ð* entirely in the North in contexts not constrained by the Northern Subject Rule (Holmqvist 1922:**). In recent years, the compilation of linguistic atlases for the Middle English period such as the *Linguistic Atlas of Late Middle English* (*LALME* McIntosh et al. 1986) and the *Linguistic Atlas of Early Middle English* (*LAEME* Laing & Lass 2007) has provided the tools for a far more accurate and refined view of ME verbal morphology. The picture that emerges involves far more variation than previously assumed. While *-s* is generally cited as the universal ending in northern ME, plural suffixal *-n* was also commonplace (Fernández-Cuesta & Rodríguez-Ledesma 2007:126-127; de Haas 2011). Under the influence of the southern-derived standard, the fifteenth- and sixteenth- centuries were also to herald a (short-lived) rise in *-th* usage in northern texts. A further innovation of northern Middle English was the transfer of *-s* to the first-person singular context (Mustanoja 1960:481-482; Lass 1992:136-137) where its occurrence appears to have variably conformed to the adjacency constraint of the Northern Subject Rule (Fernández-Cuesta, in press).[4]

[3] Throughout this paper, *-ð* will be used to refer to the present-indicative voiceless interdental fricative ending [Θ] found in OE, while *-th* will be used for instances taken from ME and EModE. In excerpts taken from particular manuscripts, however, the exact spelling variant that occurs (*ð*, *þ* or *th*) will be reported.

[4] Rodeffer (1903:44), quoted in Holmqvist (1922:49), cites the earliest instance of first-person singular *-s* on record as occurring in Richard Rolle's *Prose Treatises*, 1349.

The alveolar variant was gradually to gain currency in the southern dialects during the fifteenth and sixteenth centuries where it competed with both *-th* and *-Ø* in plural and third-person singular contexts. The plethora of research that examines this replacement process in EModE, particularly with regard to the third-person singular environment, indicates that a combination of various extralinguistic and linguistic factors influenced the process of change (Holmqvist 1922; Stein 1987; Kytö 1993; Ogura & Wang 1996; Nevalainen & Raumolin-Brunberg 2000b, 2003; Wright 2001, and more recently Gries & Hilpert 2010).

Of the extra-linguistic factors, gender and social stratification are shown to be important during the sixteenth and early seventeenth century before losing effect around the mid-seventeenth century (Kytö 1993; Nevalainen & Raumolin-Brunberg 2003). There is evidence to suggest that women headed the process of change (Kytö 1993) and that *-s* entered the standard grammar via the speech of the lower orders (Holmqvist 1922; Nevalainen & Raumolin-Brunberg 2003). Text type also played a role in promoting the use of the *-s* ending; higher rates of the alveolar fricative in informal texts such as private letters, especially among women, suggest that *-s* was channelled through the informal texts (Kytö 1993). An effect between speaker gender and recipient gender is also found whereby writers use the alveolar variant more frequently when writing to recipients of the opposite sex (Gries & Hilpert 2010).

Of the language-internal explanatory variables, the most important appear to involve an interplay between lexical conditioning and phonological factors. Several studies coincide in demonstrating the effect of lexical frequency on the spread of the new variant; the high frequency lexical items *do* and *have* are found to resist the adoption of the progressive variant with the forms *doth* and *hath* persisting well into the eighteenth century (Stein 1987; Kytö 1993; Ogura & Wang 1996; Gries & Hilpert 2010).

With regard to phonological environment, verbs with stem-final consonants, /t/ and /d/ in particular, appear to favour the *-s* ending, whereas *-th* is retained for longer in verbs with sibilant stem endings such as /s/, /z/, /ʃ/, /ʒ/ and the sibilant affricates /ʧ/ and /ʤ/ (Holmqvist 1922; Stein 1987; Kytö 1993). In fact, the 'sibilant constraint' is found to operate well into the seventeenth and even eighteenth century (Percy 1991; Nevalainen & Raumolin-Brunberg 2000b). In line with such phonotactic considerations, Gries & Hilpert (2010) identify a parallel effect whereby the interdental variant is preferred if the onset of the following word starts with an alveolar fricative.

Negation has also been noted to promote the new variant (Stein 1987), although there is no clear consensus on how far-reaching this effect was (cf. Kytö 1993).

Variation between suffixal *-s/-th* versus *-Ø* in varieties of EModE is also syntactically governed by the pronominal or nominal nature of the subject and by the syntactic position of the pronominal subject. The literature shows low frequency subject and adjacency effects condition present tense marking in Early Modern London English in both the third-person plural (Schendl 1996, 2000; Wright 2002) and third-person singular environments (Bailey et al. 1989; Schneider & Montgomery 2001). In her Early Modern British and American English data, Kytö (1993:120) also finds evidence that "the plural *-s* and *-th* endings are closely linked with the full NP subjects" whereas pronominal subjects show a near categorical preference for *-Ø*. Similar observations are made by Bailey & Ross (1988:199-200) for sixteenth- and seventeenth-century "Ship English" spoken by British sailors. We will return to consider this matter in further detail in section 3.2

The plethora of studies that has emerged in recent years detailing the replacement of *-th* by *-s* in EModE, particularly in the third-person singular environment, stands in abundant contrast to the stark number of studies that have addressed the topic recently for Old Northumbrian. Nevertheless, a number of well-known older studies have discussed the origin of *-s* and the factors that led to the ultimate success of the alveolar variant. Section 2.6 will consider these accounts.

2.6 Previous accounts of the origin of the *-s* ending

Explaining the exact source and mechanism for the replacement of inherited *-ð* by *-s* and why this development was unique to the North has been the subject of scholarly research that has spanned more than a century (Sweet 1888; Holmqvist 1922; Ross 1934; Blakeley 1949/50; Berndt 1956; Stein 1986; Samuels 1989; Kroch et al 2000), yet the origin of the *-s* endings remains obscure and none of the competing accounts found in the literature have satisfactorily explained its genesis. In this section, I outline the contending views in the literature. These essentially involve phonetic factors such as sound change, phonetic reduction or phonotactic preference of *-s* over *-ð* and/or analogical extension of the second-person singular suffixal form in *-s*.

2.6.1 Sound change

The phonetic factors invoked to explain the change from *-ð* to *-s* include sound change,

phonetic reduction and phonotactic/articulatory preference for [s] over [θ] The earliest attempts to account for the *s*-forms posited straightforward sound change from [θ] > [s]. This is the explanation adopted by Murray (1873:212), Lindelöf (1890:75) and Sweet (1888:§526) who observes, "The change of final *þ* into *s* in verb-inflections in late Northumbrian seems to be organic, as there do not seem to be any analogical influences at work." Holmqvist (1922) was the first to refute this explanation as untenable on the grounds that "such a sound change is without parallels in the recorded history of English." If sound change is indeed 'blind' as the Neogrammarian hypothesis would dictate, that is, if it operates across the board regardless of grammatical categories, nouns and prepositions ending in weak *-eð*, *-að* such as *mōneð*, *fostrað, muð, wið* and *innoð* would also have been subject to the same sound change, but *s*-forms are never recorded with non-verbal categories. Ross (1934:69) dismisses this as proof on the basis that *-ð* in these nominal cases may have been "reintroduced analogically from the oblique cases; thus the words *heofon*, *Hæðen* are not found without *n* in Northumbrian although final *n* has been lost phonologically in this dialect." The lack of *-s* forms in prepositions of the type *wið* and *mið,* where analogical reintroduction of *ð* could not be invoked as an explanation, is explained as a special development pertinent to monosyllabic words that finds support in Old High German (Ross 1934:70). Ross further corroborates his argument by demonstrating the propensity of the postulated sound change [θ] > [s] (also [ð] > [z]) in other languages in the historical record.[5]

The suggestion that *-ð* was reintroduced analogically implies an interim period in which word-final *-s* would have alternated with -ð in lexical items which is not attested in the extant data. The extent to which Ross assumes *n* had been lost in late Northumbrian is also an exaggeration of the real state of affairs in tenth-century northern dialect. While *n* no longer occurred in the infinitive and had been (near) categorically lost in the present subjunctive, in the preterite indicative (and to a lesser extent the preterite subjunctive) it was the normal form except in certain syntactic environments (see chapter 5). The differential categorical resistance to loss of *-n* was first noted by Berndt (1956:225-303) and taken up a generation later by Stein

[5] Ross (1934:70-71, with references) quotes many examples of *th*-alveolarization including Lacanian Greek in which θ became σ, hence in the Tsaconian dialect of Modern Greek σ occurs for θ: e.g. *σερι* = *θερος* 'summer'; in Provence Romance *d* appears as *z* after having passed through a ð stage, hence Provence *preza* = L. *praeda*; Breton *z* corresponds to Welsh [θ], [ð], e.g. Breton *pez* 'thing' = Welsh *peth*. In the Semitic languages only Arabic has retained the four Proto-Semitic interdental spirants; in the other languages the sounds have become alveolarized. The postulated sound change of *th*-alveolarization [ð, θ] > [z, s] is also common in African varieties of modern-day English especially in final position (Wells 1996).

(1986:642) who saw it as "differential categorial progressiveness in a morphological process" of the type exhibited by present-indicative -*s*. The replacement of -*ð* by -*s* (and of -*n* by -*e*) is not a matter of a general 'sound law', but of a morphophonemic change limited to inflectional contexts. Final -*n* in lexical items such as *heofon*, and *hæðen* was never lost, just as word-final -*ð* remained stable in lexical items because the final -*n* and -*ð* in these environments did not constitute inflectional morphology.

It is precisely the irregular nature of the conjectured sound change that lead Kroch et al. (2000) to associate it with substrate influence that results from second-language-learner error in language-contact situations. They claim that the irregular sound change which accounts for -*s* superseding -*ð* is the result of non-native interference patterns; imperfect learning by Norse speakers which permeated the mainstream speech of local communities. With references to Noreen (1923:162) the transfer is explained as the inability of Norse speakers to readily pronounce [θ] in final position due to word-final [θ] having been voiced to [ð] in the sixth or seventh century in certain Norse dialects, leading to the replacement of the marked /θ/ by the unmarked, but phonetically similar /s/. The replacement of a phoneme by another in the course of second language acquisition is a common phenomenon when the morpheme structure constraints of the learner's native language do not allow the occurrence of a particular phoneme in a phonological context where it occurs in the target language. One of several examples provided by the scholars is that of Chinese learners of English who replace word-final /l/ with /r/ because although /l/ occurs in initial syllable position in Chinese, it does not occur in final position whereas /r/ does.

Further evidence, they claim, comes from the *Lindisfarne* scribe's occasional tendency to write second person singular forms with -*th* endings, which suggests that in this position -*ð* and -*s* had become allographs of /s/, although as Blakeley points out (1949/50:20, fn.4) the few instances of second-person singular in -*ð* found in the glosses (he cites just 8 tokens taken from the Gospels as a whole, e.g. *gelefeð* instead of *gelefes* at Jn. 1:50) may be the result of "false analogy", motivated by the fact that as -*s* spread across the paradigm the scribes would have felt that -*ð* and -*s* alternated freely in all contexts. The issue of diachronic pronunciation has nonetheless been brought up with regards to -*th*/-*s* forms in EModE where it has been suggested that by the mid-seventeenth century no difference in pronunciation existed between the forms; -*th* was merely a conservative spelling convention used in writing, but speakers actually said -*s*. In his survey of EModE present-tense markings, Lass (1999:164) cites the opinion of a

contemporary witness Richard Hodges who observed the following in his *Special help to orthography* (1643:26-27), "whensoever *eth*, cometh in the end of any word, wee may pronounce it sometimes as *s* & sometimes like *z*, as in these words, namely in *bolteth* it and *boldeth* it, which are commonly pronounc't, as if they were written thus, *bolts* it, *bolds* it . . ."

Other phonetic factors, including phonetic reduction and morphophonemic preference have also been invoked as an explanation for the Northumbrian innovation. So Pietsch (2005:174) who views the innovative suffix as the outcome of "the weakening and subsequent neutralisation of a set of previously distinct but phonologically similar affixes (*-eð/-að/-iað/-is* > *-s*)." The most extensive discussion of the phonetic reduction hypothesis is offered by Lutz (1992:161-64), who addresses the role played by consonantal strength in phonotactically determining change. From this perspective the replacement of -ð by -*s* in Northumbrian (and -*ð* by -*n* in the Midlands) is viewed within the broader frame of other consonantal changes in the history of English that were all brought about by the phonotactically determined destabilization of a 'weaker' acoustically less perceivable consonant, occurring in weak phonotactic position (e.g. medially, or in unstressed syllable codas). Such consonants tend to be lost or are replaced by phonotactically more stable consonants agreeing with the original in manner or place of articulation, e.g. ME *fnēsen* > 14/15c. *sneeze*; ME *fnorten* > 14/15c. *snort*. Lutz suggests that the phonotactically-motivated substitution of -ð by -*s* occurred first in the North owing to phonotactic differences between dialects in the North and those in the South and Midlands. Crucial to informing her stance is the observation that third-person singular present-indicative verbal forms are rarely syncopated in Anglian texts, e.g. Anglian *helpeþ* as opposed to WS *helpþ*. Consequently, in the North the dental suffix always occurs in unaccented syllable coda position in both the plural and the third singular, whereas in the dialects of the Midlands and South, the dental of the majority of third singular forms occurs in accented forms owing to syncope of the unaccented vowel. According to Lutz these phonotactic differences lie at "at the root of the dialectal and chronological differences in the development of the dental suffix in Middle English and Early Modern English" (1992:162).

Empirical evidence from EModE does not support this claim. In fact, a reversal of Lutz's hypothesis is found to be the case. Nevalainen & Raumolin-Brunberg (2000b) find that consonant clusters brought about by syncope of the vowel appear to be facilitated by the availability of the -*s* ending, in other words, the rise of the sibilant

ending and syncope of the inflectional vowel went hand in hand. The authors show that the sharp rise in the use of the -*s* ending patent in London towards the end of the sixteenth century coincides with the loss of the vowel in the third-person singular present-tense suffix, resulting in syncopated -*s* suffixes of the type *he desyers*, whereas the variant suffix with an inflectional vowel (-*eth*) continued to be associated with sibilant-final stems, as in *promiseth*. Interestingly, these findings are more in line with an explanation put forward by Jespersen as early as 1909, who explained the proliferation of -*s* in morphophonemic terms on account of -*s* being "more easily articulated in all kinds of combinations" (Jespersen 1909-1949:17-18).

Using data drawn from Chadwick's *Index Verborum to the Lindisfarne Gospels* (1934) and the collated text, Blakeley (1949/50) provides quantitative evidence that phonotactic considerations are a central factor in determining the occurrence of -*s* in late Old Northumbrian. Higher frequencies of -*s* occur in verbs with stem-final dental segments /t, d, ð/, while vocalic stem-final segments or those ending in the alveolar sibilant /*s*/ (and /m/) are argued to inhibit the occurrence of -*s*. Blakeley's hypothesis essentially upholds Holmqvist's argumentation discussed in section 2.6.2 that -*s* spreads via analogical extension from the second-person singular, but introduces a phonetic factor, namely that, under the influence of the second-person singular the *s*-forms originated in the second-person plural of verbs with stems ending in *d*, *t* or *ð*, but spread "less readily to verbs with stems ending in *s* or *m*, and to the verb *doa*" (1949/50:19) From the second-person plural the *s*-forms spread through the plural and finally to the third-person singular with the stem-ending of the verb conditioning -*s* usage. In effect, Blakeley's study is the first to suggest that more than one factor was involved in determining the process of syncretism. Blakeley's findings are further bolstered by the influence exerted by stem ending on the proliferation of -*s* in EModE, and discussed above, whereby verbs with stem-final consonants, /t/ and /d/ in particular, appear to favour the -*s* ending, whereas -*th* is retained for longer in verbs with sibilant stem endings such as /s/, /z/, /ʃ/, /ʒ/ and the sibilant affricates /ʧ/ and /ʤ/.

2.6.2 Analogical influences

The other main theory put forward to explain the occurrence of -*s* forms, and briefly alluded to above, is analogical influence (Holmqvist 1922; Blakeley 1949/50). The central position of Holmqvist, this school's main exponent, is that the -*s* ending spread analogically from the second-person singular environment to the second-person plural,

and then into all persons of the plural and finally to the third-person singular. His argument is based on quantitative data taken from the tenth-century Northumbrian documents, which according to Holmqvist, indicate *s*-forms occurred more frequently in the plural environment than in the third-person singular with a peak in the second-person plural. Holmqvist's data is gathered from all four gospels in *Lindisfarne* and Luke in *Rushworth*[2]. He does not make his source explicit, although he probably relied on Cook's *A Glossary of the Old Northumbrian Gospels* (1894) and Skeat's edition (Blakeley 1949/50:17). Blakeley shows Holmqvist's data to be "singularly inaccurate", although concedes that "his statistics, erroneous as they are, yet enable him to place the frequency of the *s*-forms in the correct order: 2nd pl., 3rd pl., 3rd sg." (1949/50:23). Holmqvist's study does not, however, include instances of first person plural in the count as he considers their numbers too low to be of any significance; a similarly dismissive attitude in respect to first person plural tokens is adopted by Blakeley (1949:20, fn.3).

If by analogical levelling we understand the loss of linguistically marked or minority forms, then the spread of the less common second-person suffix might initially strike us as surprising. Evidence extracted from the historical record, however, shows that not every instance of syncretism involves the loss of marked or minority variants. In all cases of nominative-accusative syncretism that arose in the history of Attic Greek, it is the nominative marker, the unmarked case that was generalized, just as it was in a large majority of the West Germanic languages (Ringe 1995:55-62). However, in the case of Heraklean Greek it was the accusative marker that was generalized (Ringe forthcoming). The unpredictable, random direction that levelling might select is also observed by Trudgill (2008:350-51) when he states, "it would be an error to attempt to locate explanations in terms of more natural, marked, or frequent categories winning out. Attempts to account for outcomes of analogical levelling in terms of markedness and/or frequency...are not particularly likely to succeed." Similarly, the reduction of distinct verb forms in the present tense in Old English and Old Swedish produced very different outcomes with Old English collapsing the three persons of the plural and Old Swedish collapsing the three persons of the singular. With regards to this divergence Ferguson (1995:175) observes, "It is a sober reminder of the inadequacy of current notions of markedness or naturalness that of the two languages, beginning from roughly the same structure and both 'simplifying', one collapsed the three persons of the plural and the other the three persons of the singular."

A further theory, also based on analogical processes and contact phenomena, is that *-s* spread from the second-person singular to the third-person singular before invading the plural environment due to Norse influence (exponents of this hypothesis include Rodeffer 1903, Keller 1925, Samuels 1989). In Old Norse at the time of the Scandinavian settlement the verbal suffix *-r* (< *-ir* < *-iz* < *þ*) was common to both the second- and third-person singular and would still have been pronounced [z] (Keller 1925:85, quoted in Samuels 1989:115, fn.21). In Scandinavian languages the *-r* ending is believed to have originated in the second-person singular from where it spread first to the third-person singular environment, then to the first-person singular and finally into the plural, although the final stage of this levelling process was not complete until a much later date (ref.Haugen). According to the older literature (Holmqvist 1922:3-4; Ross 1934:72; Brunner 1962:177), the lower frequencies of *s*-forms in the third-person singular found in late Northumbrian compared to the plural renders this hypothesis improbable. Samuels (1989) posits, however, that low rates of third-person *-s* need not be an impediment in upholding this language transfer theory. Samuels notes that the *Lindisfarne* glossator worked at Chester-le-Street outside the focal area of dense Scandinavian settlement, the so-called "Great Scandinavian Belt" which Samuels describes as "a belt stretching from Cumberland to Westmorland in the west to the north, and East Ridings of Yorkshire in the north, often including part of Lincolnshire but excluding the old kingdom of Bernica in Durham and Northumberland" (1989:111). Although *s*-forms occurred more frequently in the plural than in the singular in the idiolect of the glossator, Samuels suggests that it does not necessarily follow that this would have been the case in the areas of primary Scandinavian influence where he argues the third-person singular would have been the first ending to have been affected by the analogy (1989:111). This may well have been the case, but in the absence of textual evidence the hypothesis inevitably remains speculative. Furthermore, as previously mentioned, we have no basis for asserting that the language recorded in the gloss is necessarily of north Northumbrian extraction, it could just as plausibly reflect the speech of southern Northumbria or a mixture of dialects. Even if Aldred had been solely responsible for composing the gloss, which seems unlikely, nothing is known about Aldred's birthplace and it would be unwise to assume that he originated from the northern regions of Northumbria where he later settled.

The most detailed survey to date of Old Northumbrian verbal morphology is Berndt (1956, 1989) who adopts a 'functionalist' perspective in explaining the

proliferation of the *-s* ending. His central position is that the replacement of *-ð* by *-s* was motivated, and facilitated, by a drive towards analytical structure characteristic to varying degrees of all Old English dialects. The tendency in OE to use subject pronouns besides verb inflections for the function of marking person and number facilitated the sound change that levelled *-s* throughout the present-indicative paradigm. The availability of an analytic form to take over the function of person and number marking was therefore crucial in implementing the levelling process (Berndt 1956:51) and he shows that the rank order of the frequency of *-s* in the 1pl, 2pl, 3pl and 3sg exactly matches the rank order of the frequency of occurrence of subject pronouns. Certainly, person and number in the Anglian dialects in the plural and third singular could increasingly only be identified by the use of the personal pronoun. In addition to the levelling of *-að* across the the three persons of the plural common to all OE dialects, the early weakening and levelling of vowels in final unstressed syllables to *-e* in northern dialects means that in the glosses we often meet with *-að*, *-as* third-singular endings in addition to the regular *-eð*, *-es* endings, and *-eð*, *-es* alongside *-að*, *-as* in the plural, further neutralizing the singular/plural distinction in the present indicative. The high degree of syncretism already manifest in the Old English present-indicative paradigm undoubtedly stimulated the growth of analytical devices such as personal pronoun subjects, while simultaneously contributing to furthering the decay of the inflectional system and in the case of the northern dialects triggering the spread of *-s* endings into all environments including eventually the first-person singular.

Stein (1986:645) observes that, "If the presence of pronouns had been the decisive factor for the operation of phonetic factors we would expect *-s* to appear also in the West-Saxon texts, where pronouns were normal and available." The implication of such criticism is that Berndt leaves the question as to why the *s*-forms are unique to the north unsatisfied, but an obvious and extremely plausible explanation for such a discrepancy is the sociolinguistic scenario of language contact that arose in the North during the late Old English period which would undoubtedly have been conducive to such processes of levelling and simplification (Trudgill 1986; Siegel 1997). Despite being the subject of rather forceful critiques (cf. Ross **; Stein 1986), the importance Berndt attributes to pronoun subjects and his observation that verb forms with no overt subject generally occurred with the inherited *-ð* endings has approximated the workings of the late Old Northumbrian agreement system more so than any other study to date, as will be seen.

2.7 Summary

The survey of previous theses discussed above highlights how the vast majority of studies limit themselves to a monofactorial explanation for the replacement of *-ð by -s*. As a result, a reoccurring problem for all hypotheses invoking phonetic principle is that such argumentation alone cannot explain the differential distribution of *-s* endings over the different person categories. It is striking above all that the vast majority of studies on Old Northumbrian verbal morphology were written well over fifty years ago and the matter has not been thoroughly considered since. A reconsideration of present-tense marking patterns in Old Northumbrian, which draws from the insights of recent research into variation and benefits from the application of modern statistical methodology, is clearly long overdue. Furthermore, certain potentially relevant factors remain unexplored. For instance, while grammatical person and number have been identified as important factors in conditioning variation between the interdental and alveolar variants, the effect of subject type and adjacency on morphological variation in Old Northumbrian has hitherto been disregarded. This is despite the fact that research indicates that subject effects are a crucial factor in determining the selection of verbal morphology, not just in non-standard varieties of Present-Day English (cf. Chambers 2004; Tagliamonte 2009) and in varieties of EModE, as discussed above, but also most notably in Middle English northern dialect itself (McIntosh 1989; Montgomery 1994; de Haas & van Kemenade 2009; de Haas 2011).

3. The Northern Subject Rule

In this chapter, I outline the workings of the Northern Subject Rule (NSR)[6] and its history in Scotland and northern England since the Middle English period. I then discuss the presence of NSR concord in EModE and in a wide range of overseas varieties of English and non-northern varieties of British English. The chapter aims to serve as an overview of the constraint from Middle English through to PdE, and as a reference point for when manifestations of the rule in late Old Northumbrian are investigated in chapter 4 and 5.

3.1 The Northern Subject Rule in the North of England and Scotland

3.1.1 Northern Middle English and Middle Scots

As is well known, one of the most salient features of northern Middle English dialects, including Middle Scots, is its verbal morphology and more concretely, a grammatical phenomenon generally referred to as the Northern Subject Rule. The NSR was a syntactic constraint that governed present-indicative plural verbal morphology in these dialects according to the type and position of the subject.[7] In other words, the northern concord system did not rely exclusively on features of person and number, but was also conditioned by the pronominal or nominal nature of the subject, and by the syntactic position of the pronoun subject. These constraints are commonly referred to in the literature using the terminology coined by Montgomery (1994), as the Type-of-Subject Constraint and the Position-of Subject Constraint.

A broad description of the NSR in the historically related northern dialects would state that the present-indicative plural marker was *-s*, unless the verb had an

[6] The term "Northern Subject Rule" was coined by Ihalainen (1994:221), but the constraint is also referred to in the literature as the "Northern Present-Tense Rule" (Montgomery 1994:83), the "northern paradigm" (McIntosh 1989:117), the "northern concord rule" (García-Bermejo Giner & Montgomery 2003:xxxiii) and more neutrally as the "*they*-constraint" (Wright 2002:243). The term "Northern Subject Rule" will be employed in the present study, although the effects at the crux of the constraint are not delimited to the northern varieties as will be seen.

[7] Murray (1873:211-12), Wright (1905:§435), Mustanoja (1960:481-82), Montgomery (1994:83), and King (1997:175, 176-7) all include the first-person singular environment as coming under the scope of the effects of the NSR in northern Middle English and Middle Scots. Instances taken from sixteenth-century Scots include *I belief* as against *I renounce ouer my takkis and steydingis and resingis them* (*The Complaynt of Scotland* [Rodríguez-Ledesma 1994:142]) and *I haif spokyn with my lord Maxwell and hes deleverit* (*The Correspondence of Mary of Lorraine* [Montgomery 1994:83]). Evidence that the NSR syntactic system was operative in the first-person singular environment in fifteenth- and sixteenth- century legal documents from Yorkshire is also provided by Fernández-Cuesta & Rodríguez-Ledesma (2004) and Fernández-Cuesta (in press). See also García-Bermejo Giner & Montgomery (2003) for evidence of the NSR with first-person pronoun subjects in late eighteenth-century Yorkshire English.

immediately adjacent pronoun subject in which case the marker was the reduced or zero ending (-*e*/∅). Some examples, taken from de Haas & van Kemenade (2009), unless otherwise indicated, are illustrated in (5):

(5) a. ***þai ask*** *now oþer king þan me* (*Cursor Mundi*, 422**)**
"They are now asking for another king than me"

b. ***þai caste*** *þair mantil and* ***rennis*** *a-mise* (*Rule St. Benedict*, 13.457-460)
"They throw away their mantles and run amiss"

c. *And* ***hali storis tels*** *and* ***sais*** *þat helias, in ald dais, Was taken up als vunto heaven* (*Cursor Mundi,* 545)
"and holy stories tell and say that Eliah, in the old days, was taken up as if unto heaven"

d. *...til ye seuen Minstre Prestes* ***yat serues*** *god yar saint Iohn restes* (*Athelstan* [Fernández-Cuesta & Rodríguez-Ledesma 2007:126])
"To the seven Minster priests who serve God and St John"

Note how, in pronominal environments adjacency triggers verb forms in non-consonantal endings, *ask* and *caste* in (5a) and (5b), while the non-adjacent element of the coordinated verb-phrases occurs with an -*s* ending, *rennis* in (5b). Similarly, full noun-phrase subjects and relative-pronoun subjects, as in (5c) and (5d) trigger verb forms in -*s*.

As this syntactically-keyed agreement system with an -*s* versus -*e*/∅ opposition does not exist in the tenth-century northern texts, and as there is no textual evidence of this pattern until the fourteenth century, it has generally been assumed in the literature that the NSR constraint must have emerged during the early Middle English period (Isaac 2003:56-57; Pietsch 2005:50; de Haas 2008; de Haas & van Kemenade 2009).

The issue of the NSR in the early northern writings, however, has barely been touched upon in the literature. As far as the present author is aware, the only study to have looked at the Old Northumbrian for any foreshadowing of the NSR is de Haas (2008). Her quantitative study of the frequency and distribution of reduced forms with plural pronoun subjects in the *Lindisfarne* gloss shows that though reduced forms do occasionally occur, both adjacent and non-adjacent pronominal subjects in the present

indicative generally trigger verbal forms with consonantal endings, either -*s* or -*ð*. A summary of the numbers found by de Haas for present-indicative verbal endings with adjacent pronoun subjects are given in Table 3.

Table 3. Present-indicative verbal endings in the *Lindisfarne* gloss with adjacent plural pronominal subjects (adapted from de Haas 2008:123)

-*s* tokens / %	-*ð* tokens / %	-*n* tokens / %	-*e*/*o*/*a* tokens / %	Total
275 / 48.8%	164 / 29%	82 / 14.5%	43 / 7.6%	564

Initially, the data provided by de Haas looks persuasive; the data analysis shows that adjacent pronoun subjects do not generally trigger reduced endings. However, there is a potential problem in that the study only focuses on personal pronouns and does not consider other subject types. Nor does it consider the possibility that different morphological material, namely the consonantal endings -*s* and -*ð* themselves, as opposed to -*s* versus -*e*/∅, may display the same subject and adjacency effects found at the heart of the NSR.

A natural objection to the above suggestion will be that the NSR pertains solely to syntactically-conditioned variation between -*s* versus -*e*/∅. The prevailing view in the literature to date has been to regard the NSR strictly as a syntactically-conditioned opposition between inflected versus uninflected forms, which of course, it is, but not exclusively so. Poplack & Tagliamonte (1989:58) note:

> From the Middle English period on, there has been a tendency throughout England for verbs to retain inflection when accompanied by a full NP subject, whereas verbs with pronominal subjects, especially when postposed, have tended to remain inflected.

In a similar vein, Pietsch (2005:174) views the "weakening and subsequent neutralization" of the previously distinct OE present-indicative forms in -*s* and the development of affixless -∅ forms in the pronominal environments as a prerequisite for the emergence of the NSR. Likewise, King (1997:175), who describes the manifestation of the rule in the older Scots in the following terms:

> […] when the *subject is an immediately adjacent personal pronoun* (either preceding or following the verb) which is *first person singular, or first, second or third person plural*, then the verb has no ending.

Exceptional, is Benskin (2011:158) who views the NSR system as "independent of the suffix in *-s*" (though dependent on the availability of an uninflected suffix).

A basic premise of the present study will be that the NSR does not presuppose an inflected versus uninflected alternation, but involves instead syntactically-conditioned variation between competing forms. Accounts of variation between the suppletive past *be* forms bolsters this perspective. The literature identifies subject type as an influential factor in determining variation between *was* and *were*, not only in northern Middle English (Forsström 1948:193-207) and Middle and Early Modern Scots (Montgomery 1994:91-92; King 1997:178-79), but also in non-standard varieties of present-day English (Chambers 2004; Tagliamonte 2009). Further compelling evidence in support of this view is found in Middle English itself. Recent investigations by de Haas (2008, 2011) and de Haas & van Kemenade (2009) show that in Middle English, the surface realisations of the constraint displayed a considerable degree of morphological variation (see de Haas 2011 for detailed discussion of the NSR in eME).

While there is no denying that in the North proper, *-s* versus *-e*/∅ tends to be the core syntactically-conditioned pattern in northern Middle English, there are also texts in which *-n* occurs as a variant of *-e*/∅ , and *-th* as a variant of *-s*, resulting in a syntactically-keyed alternation between *-n* and *-s* and *-n* and *-th* (McIntosh 1989; de Haas 2011; de Haas & van Kemenade 2009). The traditional association of the NSR with the North has detracted from the fact that the geographical distribution of the constraint in Middle English also included parts of the northwest and northeast Midlands and extended into parts of the east Midlands. In these dialects, outside the traditional northern boundaries, the selection of plural present-indicative morphology adhered to the same principles of selection, but with different morphological variants. Sentences (6), taken from de Haas & van Kemenade (2009), illustrate how in the northwest Midlands plural pronoun subjects commonly triggered verb forms ending in *-e*/∅ or *-n,* while full noun-phrase subjects triggered *-s*. The examples in this case are taken from the fifteenth-century copy of the fourteenth-century Lancashire text *Anturs of Arther at the Tarnewathelan* which was probably composed in the North and

transcribed into the North-West Midland dialect during the mid-fifteenth century (Forsström 1948:137). The same pattern is found to hold by the authors in the northern text *Edinburgh MS of the Cursor Mundi,* hand C.

(6) a. *undur boes* ***thay byde*** *than byrnes so bold* (*Anturs IV*)
"Under boughs they wait then, nobles so bold"

b. *The dere in the dellun,* ***Thay droupun*** *and* ***daren*** (*Anturs IV*)
"The animals in the dells, they droop and tremble"

c. *Thenne* ***byernes bannes*** *the tyme (Anturs XLVI*)
"Then men curse the time"

In his discussion of mid-twentieth-century instances of the NSR taken from the *Survey of English Dialects* (Orton et al. 1962-1971), Pietsch (2005:139-140) also finds non-standard relic forms in *-n* and *-s* compete with each other in conformity with the NSR constraint in the northwest Midlands, an area covering southern Lancashire, Cheshire, Derbyshire, Shropshire, and Staffordshire. Forms in *-n* occur with plural pronominal pronoun subjects, as in *We callen it* [*SED*: Db1] and *You mowen* [*SED*: Db6], while full NP subjects trigger *-s* (*-n* occurs only once with a full NP subject out of a total of 335 tokens). Shorrocks (1999:114, quoted in Pietsch 2005:140) finds the same syntactically-conditioned alternation between *-n* and *-s* in more modern northern dialect in Bolton, Lancashire. The retention of such relic forms suggests that this *-s* versus *-n* alternation may have been a robust feature of speech in the northwest Midlands since Middle English times.

Middle English texts from the East Midlands exhibit the same NSR pattern but with *-th* occurring as a variant of *-s* with full noun phrases and non-adjacent subject pronouns, and adjacent subject pronouns requiring *-n* or its later derivative, the reduced or zero ending *-e*/*ø* (McIntosh 1989:119; de Haas & van Kemenade 2009). Sentences (7), taken from de Haas & van Kemenade (2009) and McIntosh (1989:119), illustrate the occurrence of *-n* or *-e*/∅ with adjacent pronoun subjects, as in (7a) and (7b), and the occurrence of *-th* with non-adjacent pronoun subjects and full noun phrases, as in (7b-d):

(7) a. *so longe so* ***he þen*** *to þen hode* (*Bury Documents* f49v, East Midlands, 1275-1300)
"so long as they grow up to [take] holy orders"

b. ***þey pretende*** *þam or* ***feyneþ*** (*Rosarium Theologie* 59/20, East Midlands [McIntosh 1989:119])
"they pretend them or feign"

c. *and þat* ***we*** *vnnen* ***habbeth*** *into þat holi minister* (*Bury Documents* f22r, East Midlands, 1275-1300)
"and what we have granted to the holy minister"

d. ***men gildith*** *here-geld* (*Bury Documents* f20v, East Midlands, 1275-1300)
"men pay Danegeld"

Linguistic contact is generally invoked as an explanation for the workings of the NSR pattern beyond the "Chester to the Wash" demarcation established by McIntosh (1989:116) for the southernmost limit of the NSR. The 'mixed' late Middle English Midland paradigm identified by McIntosh (1989) as operating in an area of the East Midlands to the south of that line, in what is today parts of Leicestershire, Northamptonshire, Cambridgeshire, and Norfolk, involves the use of *-eth* with noun phrase and non-adjacent personal pronoun subjects and *-en* (or *-e*, *-∅*) with adjacent pronoun subjects. McIntosh (1989:119) exemplifies this pattern using excerpts from the *Rosarium Theologie* (in MS Gonville and Caius College Cambridge 354/581): *þei teche, 63/13; þai aske or getteþ al,* 102/36; *þe discipules louseþ hym,* 56/18, and argues that the plural present-indicative *-eth* ending in this case does not derive from OE *-(i)aþ,* but is actually an innovation. Suffixal *-eth* in plural position is an analogical extension from the third-person singular environment according to McIntosh (1989:118) that develops under northern influence and becomes syntactically restricted accordingly: "a new creation which reflects the pattern of the northern paradigm N, where the plural has … the same form as the third singular (*-es* : *-es*)." That *-eth* was an innovation in the plural environment is borne out by Early Middle English texts from the same East Midlands area such as the twelfth-century text *Ormulum* that has third singular *-(i)aþ* and *-en* as the universal plural ending regardless of subject type. Nonetheless, it would be a mistake to assume that a shared third-person singular and

plural form in non-pronominal environments is an inherent feature of the NSR system. Evidence from ME shows that in dialects where *-s* is the universal third-person singular ending, *-s* and *-n* plural endings both occur as alternatives in non-pronominal contexts. Thus, in the early thirteenth-century text *Pater Noster* (West Riding of Yorkshire) we get *we forgyue þaim þat misdon* and […] *and for alle þat on herþe vs fedin and fostre*[8] whereas in the slightly later fourteenth-century text *Athelstan* (Beverley, East Riding of Yorkshire) plural verb forms in *-n* such as *Yat witen Alle yat euer been yat þis Chartre heren And seen* occur alongside forms in *-s If men reises newe laghes* and *...til ye seuen Minstre Prestes yat serues god yar saint Iohn restes* (Sources: Fernández-Cuesta & Rodríguez-Ledesma 1997:126-127; *SCONE* Fernández-Cuesta et al.).

Before concluding this section, mention must be made of the fact that even in the historical record the effect of subject type is generally found to be stronger than that of adjacency. Note how *-s* in (6b) is not categorical in non-adjacent pronoun position as expected whereas a broad NP/PRO constraint holds. Similarly, McIntosh (1989:119) finds that while non-adjacent verbs in coordinated VP subjects adhere to the rule "scrupulously", *-eth* occurs variably in constructions of the type 'they that sit', thus *þei þat edifieþ memorez of martirez, 69/4,* but so too *þei þat challenge þe place of a boschoprice, 56/37*. In a 'pure' categorical northern system, the crucial environment for determining morphological differentiation involves pronominal adjacency: the present-tense plural marker is *-s* (or *-th*) unless the verb is in immediate proximity with the pronoun subject. The Position-of-Subject Constraint is not, however, a consistent feature of later varieties of northern and Scottish dialect and does not exhibit the same remarkable diachronic stability as the Type-of-Subject Constraint. Pietsch (2005:131) suggests the Position-of-Subject Constraint was only "a unified, tightly integrated feature of a consistent grammatical system" in earlier northern varieties unaffected by the influences of standardisation, dialect contact and levelling. In modern northern varieties, distinguishing the effect of adjacency from unrelated effects with identical morphological outcomes also poses a difficulty. An apt example are the dialects of Yorkshire and Lancashire English. In these varieties verbal-*s* also functions as a marker of habitual aspect which suggests that the *-s* form in utterances involving the frequency adverbs *often*, *always*, *never* may be indicative of the temporal semantics of the adverb rather than of an adjacency effect (Shorrocks 1999:112, 116-117, cited in Pietsch (2005:131).

[8] Note the non-categorical nature of the effect.

Nonetheless, while the categorical tone of the dialect descriptions tend to suggest otherwise, quantitative studies show that the adjacency constraint, even in northern Middle English, does not appear to be as categorical as previously assumed, though there is evidence to suggest that the Position-of-Subject Constraint may have reached a high degree of regularity in Older Scots. Montgomery (1994) reports a consistently near categorical adjacency effect with *I*, *we* and *they* in the fourteenth- to seventeenth-century texts he surveys that only starts to wane notably from around the mid-seventeenth century, presumably under the pressure of Anglicization. Some sixteenth- and seventeenth-century Scots examples of the proximity constraint, taken from Montgomery (1994:88-89) are given in (8):

(8) a. *Alswa,* ***we grant*** *and ley* ***hechtis*** (Old Scots Legal Document, *Memorials of the Montgomeries*, vol.2, 17)

b. ***Thai see****, or* ***heris*** *tell* (*Complaynt of Scotland*, 11)

c. ***Ye haif*** *begylit thaim and causit thaim to skayll their fokkis* ***and*** *now* ***hes*** *gadderit oder souerance* (*Correspondence of Mary of Lorraine*, 15).

In early northern Middle English, however, de Haas & van Kemenade (2009) show that the subject effect is stronger than the adjacency constraint. These findings are in line with those of Fernández-Cuesta (in press), whose survey of the distribution of present-indicative *-s* and *-e* across the different plural persons in early northern Middle English indicates that non-adjacent pronoun subjects trigger zero just as much as *-s*.

All this seems to suggest that the lack of an adjacency constraint in modern dialects in which the Type-of-Subject Constraint still variably exists can be traced back to the very incipience of the rule. Wolfram and Christian (1976) and Montgomery (1997b) find the Type-of-Subject Constraint to be operative for both *be* and lexical verbs in modern day Appalachian English, but find no evidence of a proximity constraint. Non-adjacent pronominal contexts are in any case infrequent in both historical and present day data (Montgomery 1994:88, 1997:236-37). McCafferty (2004:53) refers to the late twentieth-century Northern Irish English data analysed by Pietsch (2003:108) in which there are only 147 instances of non-adjacent *they* out of a total of 2394 tokens and only five (3.4%) of these tokens trigger verbal-*s*. In McCafferty's own (2004) study of nineteenth-century Southern Irish English, he finds that, despite the presence of a strong Type-of-Subject constraint which categorically

inhibits -*s* in the adjacent subject pronoun context, non-adjacency in relation to pronominal subjects does not promote -*s* (McCafferty 2004:70).

3.1.1.1 Summary

On the basis of this survey of Middle English, there is no firm basis for considering that the NSR solely involves syntactically conditioned alternation between an uninflected and inflected form, namely -*s*. The evidence adduced so far indicates that while the surface morphology of the NSR may have varied in Middle English depending on the geographic area, the syntactic configuration of the constraint remained stable, and the morphological variants were simply different surface realisations of the same system. Based on this evidence, the hypothesis/possibility that variation between -*s* and -*ð* in the late Old Northumbrian might also have been subject to the same constraints gains strength.

3.1.2 Northern varieties during the Early Modern English and Modern English periods

During the EModE period, the influence of standardisation becomes increasing visible in the gradual erosion of the distinctive northern concord system (at least in the written language) in favour of the emerging Early Modern standard system based on person and number.

Using a corpus of fifteenth and sixteenth-century wills and testaments from the Yorkshire area, Fernández-Cuesta (in press) traces the gradual convergence of the northern system on the emerging standard pattern. Over a time-span of 150 years (1450-1600), the incidence of verbal-*s* in non-adjacent first-person singular contexts drops from 56% to just 14% and is paralleled by a steady increase in the use of the (standard) uninflected form from 36% to 81% over the same time span. The rate of -*th* remains at a relatively low constant (8%), apart from a short-lived peak (16%) during the first half of the sixteenth century when it occurs as frequently as -*s* in non-adjacent contexts. Though the prevalence of northern features gradually diminishes as the EModE period advances, distinctly northern phonological and morphosyntactic features are nevertheless to be found, including indications of the NSR (Fernández-Cuesta & Rodríguez-Ledesma 2004; Fernández-Cuesta 2011, in press). Fernández-Cuesta's (2011, in press) survey of fifteenth- and sixteenth-century legal texts, namely rural and urban wills from the Yorkshire area, finds instances of the NSR in first-person singular and third-person plural environments. In the third-person plural in the *York Clergy Wills*

and the *Swaledale Wills,* there is a near categorical trend for adjacent pronoun subjects to favour uninflected verb forms (*N* = ??), while full NP and relative pronoun subjects show a clear preference for consonantal endings (*N* = 18/23:78%).[9] Some examples, taken from Fernández-Cuesta (2011, in press), are given below in (9).[10]

(9) a. *I **wyt** and **gyfs*** (TE 1476)

b. *I **putt** ful trust in my wife and **requyres** hir on Goddis be halve...* (TE 60 1472)

c. *bsydes their owne parteis wiche **perteneth**...* (21SW 1548)

d. *hes freyndes **thynkes** most necessarie* (SW 24 1549)

e. *The said executors **demandith*** (8YCW 28)

f. *to t'hole sixe persons that **beryth** me...* (22YCW)

In addition to illustrating how the influence of the southern-derived standard was also to herald a rise in *-th* usage in northern texts during the fifteenth and sixteenth centuries, the excerpts in (9) demonstrate how *-th* usage in northern EModE conforms to the NSR pattern, with *-th* occurring as a variant of *-s* with full NP subjects and in relative clauses with plural antecedents. In fact, thirteen out of the total eighteen consonantal endings reported by Fernández-Cuesta (2011) with full NPs triggered verb forms in *-th,* as opposed to the local *-s* form, further corroborating evidence that the constraint operates independently to and regardless of surface morphology.

Quantifying the resistance of the NSR in later periods becomes stymied by the scarcity of data that approximate the spoken language, such as private letters and diaries, although the situation appears somewhat better for Scots. Using letters and diaries spanning the late fifteenth century through to the mid-seventeenth century, Montgomery's (1994) quantitative survey of the NSR in Early Modern Scots documents the near categorical nature of the constraint up to the early seventeenth century. It is around this point that the process of Anglicization starts gradually to wield its effect on Scots following the Scottish Reformation of 1560 and the Union of Crowns

[9] Only one instance of 'they' followed by an inflected form is reported (*N* = ?): (*they haithe* [26YCW]).

[10] The results of Fernández-Cuesta's (in press) study on the NSR in first-person singular environments show that the effect of the NSR is only statistically significant in the highly formulaic 'initial formulae' construction *I xx of xx whole in mind and of good Remembrance / **maykes** my Testament and Last Will.* Nevertheless, although the constraint is not statistically significant in non-adjacent structures of the type *I well **knowith***, and *I give and **bequeaths,*** the occurrence of *-s*/*th* is categorically restricted to non-adjacent environments.

in 1603 (Murray 1873; Montgomery 1994:84; McCafferty 2003:113) In Montgomery's data, the robustness of both the subject and proximity constraints notably wanes during the second half of the seventeenth century. These findings are substantiated elsewhere in the literature. Diachronic statistics for verbal -*s* based on data from the Helsinki Corpus of Older Scots (Meurman-Solin 1993) confirm the solid presence of the NSR in Scots before the Scottish Reformation of 1560. The rate of -*s* with plural NPs and relative pronoun subjects is found to be virtually categorical up until 1570 (98%-99%). From the Reformation onwards however the rate of verbal-*s* gradually decreases until by the seventeenth century a variable system that partially converges on the standard pattern is the widespread norm. It was this 'mixed' variable concord pattern that was transported to Ulster in the early seventeenth century (McCafferty 2003:113) and that has been handed down to Modern Scots (Macafee 1980:25-26, cited by Montgomery 1994:84).

Despite the gradual demise of northern features in standardised text-types, there is evidence that the NSR concord pattern continued to characterise vernacular northern English and Scots. The eighteenth-century North Yorkshire dialect recorded in the Knaresborough Workhouse Daybook exhibits a robust NSR constraint across the plural and first-person singular environments (eds. García Bermejo & Montgomery 2003). Similarly, English emigrant letters written by northerners in the nineteenth-century reveal the continued presence of the NSR in the North (García-Bermejo Giner & Montgomery 1997).

Moving into the twentieth century, Joseph Wright's *English Dialect Grammar* (1905) reports the prevalence of the NSR constraint in all the northern counties of England, including most of the north-midlands, as well as Scotland, the Scottish Isles, and Ireland. Two generations later, mid-twentieth century accounts of the constraint, as reflected in the *Survey of English Dialects* (*SED,* Orton et al., ed. 1962-1971), describe a system in which the inherited Middle English pattern of the NSR is solidly in place in the spoken vernacular across the North and is applied to all verbs including *be*.

The most comprehensive corpus investigation of twentieth-century subject-verb agreement in the north of the British Isles is that of Pietsch (2003, 2005). His study relies on data drawn from unpublished material gathered by fieldworkers for the *Survey of English Dialects* (*SED,* Orton et al., ed. 1962-1971), the *Northern Ireland Transcribed Corpus of Speech* (*NITCS*, Kirk 1991) and a subcorpus consisting of Scottish and Northern British English taken from the *Freiburg Corpus of English*

Dialects (*FRED*, Kortmann et al. 2000-2005). Though the data discussed are not strictly commensurable (a problem of which the author is fully aware), they provide an extremely informative picture of the resilience of the NSR concord system during the second half of the twentieth century. Of particular interest, is Pietsch's consideration of additional *SED* material, recovered from the original fieldworker notebooks, that was not included in the published *SED*. These utterances offer a wealth of additional data on phenomena related to the Northern Subject Rule, in particular on the morphological behaviour of verbs co-occurring with demonstrative and indefinite pronoun subjects and relative pronoun subjects with plural antecedents. Based on a detailed analysis of this additional material, Pietsch is able to conclude that "the area affected by the Northern Subject Rule in the traditional dialects reaches a good deal further south into the East Midlands than shown in the maps based exclusively on the published *SED* material" Pietsch (2005:162). The additional material also permits an evaluation of the scope of favouring environment types beyond the elicited subject types included in the published *SED* (only full NP and personal pronouns were systematically documented subject types in the published *SED* material). Pietsch finds that in the transition zone bordering the NSR isogloss, 80% of all verbal-*s* tokens occur with demonstrative and indefinite pronoun subjects and in relative clauses. Pietsch notes that though the predominance of these subject types is weaker in the north proper where verbal-*s* also occurs widely with full NPs, these favouring environments still account for 50% of all recorded tokens across the North. Environments triggering subject-verb inversion, such as questions and tag clauses, are also found to be favouring environments. Some illustrative examples of these favouring environments, taken from Pietsch (2005:164-65), are given in (10):

(10) a. *Hedges that hasn't been done* [*SED*: Lei9]
b. *It kills the thorns as grows around it* [*SED*: Nth2]
c. *Some on 'em's red* [*SED*: L13]
d. *These is the front of these* [*SED*: Lei2]

Non-standard inflection (in this case -*s*) with demonstrative and indefinite pronoun subjects and coordinated NP subjects, and in relative clauses with plural antecedents, particularly with the verb 'be', appear to be typical of a 'weak' NSR effect, i.e. in transitional varieties like those identified by Pietsch along the outer limits of the NSR

isogloss, or in northern varieties where a once robust NSR has lost its effect. This observation is in line with that made by Wright as early as 1892 with regards to the dialect of Windhill in the West Riding of Yorkshire where the dialectologist noted that plural *-s* had become mainly restricted to relatives, the subject type *them* and forms of *have* and *be* (cited in Pietsch 2005:167). Certainly, Wright's findings have proven predicative of the direction the NSR has taken in modern varieties of northern English. Attempts to quantify the resilience of the rule in contemporary northern dialects coincide in demonstrating a general, universal pattern in the development of the inherited NSR constraint, whereby under the effects of dialect contact, the constraint has lost its productivity and become fossilized to a restricted set of environments, namely the verb *be* with subjects consisting of relative clauses with plural antecedents (in particular non-standard relatives), existential *there* + plural NP subject, coordinated NPs, demonstratives, indefinite pronouns and the dialect form *them* (including the sequence 'quantifier + *of them*'). The occurrence of verbal *-s* outside these favouring environments is marginal (Shorrocks 1999; Beal & Corrigan 2000; Pietsch 2003, 2005; Cole 2009). Even the apparently robust figures of Smith et al.'s (2007) analysis of the NSR in the speech of children and their caretakers in the isolated Scottish community of Buckie (*they* 1% *-s* versus NP 65% *-s*) on closer scrutiny appear to be confined to instances of *is* and in their main to the aforementioned favouring subject types (Smith et al. 2007:80-81). Some representative examples of the reflexes of the NSR in late twentieth-century northern dialect, taken from Cole's (2009) survey of the NSR in the *Newcastle Electronic Corpus of Tyneside English* (*NECTE* Corrigan et al. 2001-2005) corpus, are provided in (11):

(11) a. *Half of them was fathers at 14.*
b. *These is just sitting watching it.*
c. *Them's only two lessons I divn't like.*
d. *when your mam and dad dies.*
e. *My mam and dad's going away…*
f. *There's a lot lives on our estate.*
g. *You'd be surprised the cars that comes round here.*

3.1.2.1 Summary

Under the standardizing influence of southern varieties, the NSR has gradually lost its

productivity in the northern varieties. It is striking, however, that the 'weak' NSR effect found in modern varieties of northern English and traditionally in the transitional zones identified by Pietsch (2003, 2005) such that existential *there*, relative clauses and coordinated NPs favour different morphological over personal pronoun subjects, broadly parallels non-standard concord in English as a whole in both the historical record and in present-day varieties. While the appearance of NSR-like agreement in non-northern varieties is generally attributed to contact phenomena, a detailed survey of the effects of subject type and adjacency on the selection of verbal morphology outside of the North suggests that while northern input may explain the occurrence of the rule in some varieties, there is also reason to believe that English (as well as other Germanic languages) exhibit a tendency for subject type to compete with person and number for the function of grammatical material. In the sections that follow I detail the operation of the NSR in varieties of British English outside the North and in varieties of English.

3.2 The Northern Subject Rule outside the North

In this section I will consider to what extent circumscribing the Northern Subject Rule to the Northern and Midland dialects alone is justified. There is strong evidence to suggest that the effects of subject type and adjacency may well have been a more prevalent feature of early English dialect, operative well beyond the delimitations of the northern counties, than generally assumed. The constraint is demonstrably present as a minority variant in the speech of a wide cross-section of society in Early Modern times. Studies clearly indicate that low-frequency subject and adjacency effects condition plural present-tense marking in Early Modern London English in the third-person plural (Schendl 1996, 2000; Bailey et al. 1989; Wright 2002) with a tendency for full NP and non-adjacent pronoun subjects to occur with *-s*/*-th,* while adjacent pronoun subjects prefer -∅ .

3.2.1 Early Modern London English

Most research on the synchronic and diachronic variation of EModE present-tense inflection has focused on the rivalry between *-s/-th/-*∅ in the third-person singular (Ogura & Wang 1996; Nevalainen & Raumolin-Brunberg 2000b, 2003; Wright 2001; Gries & Hilpert 2010). The diffusion of third singular *-s* is described by Nevalainen & Raumolin-Brunberg (2003:122-23) in terms of two waves, the first of which takes place in the latter half of the fifteenth century followed by another a century later. From

around 1620, *-s* occurs as frequently as *-th/-∅* regardless of gender or class, eventually becoming the universal third-person singular form. Variation between these forms in the plural has received far less attention. By the turn of the seventeenth century, *-∅* was undoubtedly the major variant in the plural, but *-s* and *-th* also occurred and were by no means uncommon.[11] An accurate analysis of the distribution and function of these forms has been hampered, firstly, by the tendency of older studies to interpret inflected plural forms (*-s/-th*) either as errors or as third-person singular forms (see Schendl 2000:266-68, with references). The forces of standardisation undoubtedly also played a role in forging the assumption that EModE relied exclusively on a concord system based on person~number features. Only Shakespeare's *First Folio* retains the inflected plural forms of the playwright's language. In the *Quartos* and *Second* and *Third Folios,* plural *-s* and *-th* forms were replaced by standard *-Ø* forms, a tendency that was subsequently replicated in later editions (Visser 1970:§83; Schendl 2000:266).

Crucially for the concerns of the present study, the distribution of the inflected forms is far from random. In a detailed quantitative analysis of the third-person present plural based on a broad selection of EModE texts including the works of Shakespeare, Queen Elizabeth I and Spenser, Schendl (1996, 2000) provides strong evidence that the distribution of variant forms in Early Modern London English conforms to the NSR. In his earlier study, Schendl (1996:150) finds that "none of the c.160 instances of plural *-(e)s* in Shakespeare occurs in the pattern "they + adjacent plural indicative verb", though this construction is attested more than 300 times in Shakespeare's works". In other words, the constraint on inflected endings with adjacent pronominal subjects is maintained categorically; there is not a single incidence of an adjacent *they* token co-ocurring with a verbal form in *-s*/*-th*.

Naturally, the nature of the effect should not be exaggerated; the actual frequencies of third-person plural variants show that the rule operated in Early Modern English essentially as a low frequency variant, but the rate of incidence is nonetheless comparable to Montgomery & Robinson's (1996) figures for Ulster Scots for roughly the same period.[12] The quantitative results of Schendl's (1996:152) study indicate that in the prose passages of Elizabeth I, plural *-s* occurs at an overall rate of 18.6% as opposed to

[11] The *-en* variant also very occasionally occurs in the poetry of Shakespeare and Spenser as a stylistic marker but is generally considered a literary archaism. However, no study as far as I am aware has considered whether its distribution is restricted syntactically (see Schendl 2000:266 with references).

[12] Montgomery & Robinson (1996:132) report 46% *is* and 43% *-s* with full NP subjects in the Duntreath letters (1609-1631) and 18% *is* and 20% *-s* in the McClelland papers (1612-1624). The position-of-subject constraint operates categorically.

standard -*Ø* at 81.4% (*N* = 70). Nominal subjects trigger 67.7% -*∅* and 32.3% -*s* (*N* = 31), and adjacent pronoun subjects trigger 100% -*∅* (*N* = 24) while non-adjacent pronoun subjects trigger 25% -*s* and 75% -*Ø* (*N* = 4).[13] It is remarkable nonetheless that when the inflected variant occurs, it is categorically licensed by the NSR. Schendl's (2000) quantitative analysis of the thirty-six plays of Shakespeare's *First Folio* reveals similar results. Based on a corpus of 2669 plural tokens the results demonstrate that inflected forms occur at an average rate of 11% with non-pronominal subjects. At 15%, relative pronoun subjects trigger a rate of inflected forms just over the average, while the figure rises to 42% in the case of coordinated NPs of the type. Crucially, not a single *-(e)s* or *-(e)th* form occurs directly after a personal pronoun subject. Once again despite the variable nature of the Type of Subject Constraint in EModE, the occurrence of inflected forms conforms categorically with the stipulations of the NSR. Some examples taken from Schendl's EModE data (Schendl 1996:150, 2000:270-71, that provide evidence for the working of both the subject and adjacency constraints in EModE, are given in (12):

(12) a. *whereby **they make** their porridge fat, **and** therewith **driues** out the rest with more consent* (Deloney, Jack of Newbury 72

b. *For if neither **thay can** doo that they promise **& wantes** greatest good* (Elizabeth, Boethius 48.11)

c. ***They laugh** that **winnes*** (Shakespeare, Othello 4.1.121)

d. *Oh Gertrude, Gertrude, When **sorrowes comes**, **they come** not single spies, But in Battaliaes* (Shakespeare, Hamlet 4.5.74)

e. *your **feete hits** the ground **they step** on* (TN III.4.276

f. *But see where **Somerset and Clarence comes*** (3H6 IV.2.3)

Schendl (1996:151-52) also notes the extension of the adjacency constraint found in co-

[13] The verse passages of *Boethius* highlight the function of *-s* as a stylistic marker. The overall occurrence of inflected plural forms with nominal subjects shoots up to 80% (*N* = 16) compared with 32% in the prose passages (Schendl 1996:152). The following is an example provided by Schendl (2000:271) of an *-s* form being used by Shakespeare to provide the rhyme: *I know a banke where the wilde time blowes, Where Oxslips and the nodding Violet growes* (MND II.2.259).

ordinated verb-phrases of the type *they eat and drinks* to coordinated verb-phrases involving full NP subjects, thus *And these dread curses ... recoil And turns* (Shakespeare, 2*Henry* 6 3.2.330 [Schendl 1996:151]), and *the Tartars and the Eastern theeues…Presume a bickering with your emperor, And thinks to rouses us* (Marlowe, *Tamburlaine* I, 920 [Schendl 2000:272]).

As mentioned above, Schendl (1996:152-53) views the variable patterning of EModE is the product of competing systems that derive from language contact between northern and Midland varieties of English.

> […] the present indicative *-(e)s* forms after plural subjects in the emerging EModE standard are the result of linguistic contact between two radically different present indicative paradigms: between the Midland system of subject-verb concord based on number (plural form by that time *-Ø*) and the northern (and Scots) "system based on subject type and proximity" (Montgomery 1994:93). As a result of this intersystemic contact, analogical extension along the lines of the "mixed" paradigm described by McIntosh (1983) for a limited area of the Midlands […] seems to have taken place. In other words, the zero form was maintained when the personal pronoun subject was in contact with the verb […]; in all other subject-verb constellations, the 3sg pres suffix was extended into the plural in analogy to the "northern" system.

A contact-derived explanation is also put forward by Wright (2002) to account for the presence of what she refers to as the "*they*-constraint" in London English by the Early Modern period. The Bridewell Court Minute Books record the speech of transportees to the colonies in North America during the early seventeeth century, many of whom included young children and vagrants. Despite considerable differences in the social background of the speakers, the patterning of plural inflected forms in these documents is commensurable to that found by Schendl (1996; 2000) in the speech of educated speakers of high social status. Inflected verb forms (mainly in *-th*) occur at a rate of 22% with nominal subjects while adjacent *they* triggers the unmarked zero form categorically. Inflected plural forms also occur variably in non-adjacent pronominal environments (Wright 2002:253). In addition to a northern input brought about by trade and migration, Wright (2002:251) suggests that the aforementioned 'mixed' system identified by McIntosh (1989), in which the distribution of southern *-th* conformed to the NSR, may have expanded its scope to London.

Further evidence of syntactically-keyed inflected plural endings in the southeast

of England comes from Bailey et al.'s (1989) variationist study of the correspondence of the Cely family written during the last quarter of the fifteenth century (1472-1488). The results of the study show the workings of a robust NP/PRO constraint across lexical verbs and *is* in both the third-person singular and plural. The tendency noted here for the NSR to affect the third-person singular environment is not an isolated incidence. An adjacency constraint has also been noted to operate in the third-person singular in nineteenth-century vernacular southern American English (Schneider & Montgomery 2001:400), hence "it bear a fine colour and grows well." Cukor-Avila (1997:299) found that the oldest African Americans in her sample (born in the second decade of the 20th century) showed some evidence of this constraint in third-person singular, though the differences were not statistically significant. Bailey et al. (1989:294) themselves compare the tendency found in their EModE data with that found in vernacular African and European American speech in Texas whereby NP subjects in both the third-person singular and plural favour *-s* over zero forms: "When the frost hits … let's see how it look down there." In chapter 4 we shall see that the third-person singular environment also came under the effects of the NSR in ONrth.

To return to Bailey et al.'s data for EModE, where in the plural environment the constraint is stronger, *they* triggers zero at a near categorical rate of 93% and full NPs occur with consonantal forms in 62% of the cases with roughly equal proportions of *-s* and *-th*. Although the Cely family were wool merchants based in London their possible ties with the north may go some way to explaining NSR-like patterns in their speech. Montgomery et al. (1993:353, fn. 2) and Montgomery (1997b:137, fn.1) point out that a reanalysis of the Cely letters in which existential contexts are excluded shows that only the speech of Richard and William Cely exhibits a NP/PRO constraint. The authors highlight the fact that Richard Cely Jr. was "probably" raised in the North which would account for the presence of NSR-like patterns in his speech. Nothing, however, is known about William's upbringing. Interestingly, while high rates of *-s* usage predominate in Richard's use of the constraint, William's NSR system involves high rates of *-th* (Bailey et al. 1989:289-290), further bolstering the observation that the internal constraint remains stable regardless of surface morphology. Similarly, the letters of Richard Layton to Thomas Cromwell from about 1537 conform to the same zero/*-th* alternation, e.g. *They sell their malte to ale wyffs at ther owne price, and causeth all the towne to be ale-typlers* (Schendl 1996:155). Layton was an educated, well-travelled speaker born in Cumberland in the North and educated at Cambridge whose professional commit-

ments required him to travel substantially around the country. In explaining Layton's speech patterns, Schendl points out that northern influence clearly cannot be ruled out given Layton's northern origins but also suggests that the NSR constraint in *-(e)th* may already have had a "certain currency in the early 16th century among standard speakers" (Schendl 1996:155).

Further corroborating evidence for believing the NSR was operational in southern varieties of EModE comes unexpectedly from an extensive investigation of seventeenth- to eighteenth-century Ulster-Scots by Montgomery & Robinson (1996). The study includes the early seventeenth-century Plantation Papers (1611-1622), which are regarded by the authors as displaying the features of Southern British English, and are included in the study as a point of contrast with Ulster-Scots. Montgomery & Robinson (1996:418), cited in McCafferty (2003:121-22), conclude that there are substantial differences in the concord systems of the two varieties:

> [I]t is the Plantation Papers, which we would expect to display Southern British English, which appear to be exceptional among the five data sets. While in the other four collections, both copular *is* and suffixal *-s* on non-copula verbs occurred with third plural nominal subjects to roughly equivalent degrees, suffixal *-s* never occurred in the Plantation Papers (although in 7 out of 13 cases *is* was used rather than *are* in third plural contexts).

However, McCafferty (2003:122) is justified in noting that:

> the high rate of *is* with plural NPs in the Plantation Papers (54%), although based on few tokens (7/13), does not indicate a sharp distinction between English and Scots. This rate is, in fact, exceeded by only one of the other [Ulster Scots] data sets … and is well beyond rates reported for *be* in Montgomery's (1994) historical survey of Scots...If the Plantation Papers are typical of Southern British English, then the result might be read as evidence of the operation of the NSR in Southern Britain.

There is another crucial detail of Montgomery & Robinson's (1996) data that has been overlooked and further testifies to the effects of the NSR in the Plantation Papers with both *be* and lexical items (and in EModE southern English dialects in general). The fourteen tokens of full NP subjects with non-copular verbs found in the Plantation Papers include four verbs ending in *-eth*, which Montgomery & Robinson (1996:418)

disregard and code as zero. Had the -*th* ending been interpreted as a variant of -*s,* the results for NP subjects would have been 4/14 (29%), a less easily dismissed rate, higher in fact than that found by the authors for NP subjects in the Ulster-Scots McClelland papers dating from the same early seventeenth century period (*N* = 6/30: 20%). This is an apt example of how fixation with the -*s* ending in analyses of the NSR, i.e. the equation of the rule with 'plural verbal -*s*' can be extremely misleading. The syntactically conditioned contrast between zero and -*th* discernable in the Plantation Papers parallels the manifestation of the NSR in varieties of Middle English in the East Midlands, and in other varieties of EModE.

3.2.2 Southwest varieties of English

Moving from the southeast to the southwest of England, several studies coincide in showing that a variable NP/PRO subject constraint operated in the southwest dialects of British English (Bailey & Ross 1988; Godfrey & Tagliamonte 1999; Polack and Tagliamonte 2001; Tagliamonte 2009).

Dialect in the southwest of England is generally considered to have traditionally exhibited a generalised use of present tense -*s* across the whole paradigm irrespective of the type and position of the subject (Ihalainen 1994:209-214; Klemola 2000:329). There is however evidence to suggest that where competition between competing forms occurs in southwestern dialect it is governed by subject effects. One such source of evidence comes from Godfrey & Tagliamonte's (1999) work on present-tense markings in Devon English, a contemporary non-standard variety of British English spoken in the Southwest England. The results of their study show that the working of the NSR are "fully operational" in this particular variety of present-day English. Their data derive from the speech of eight elderly rural speakers of the traditional vernacular around Tiverton in Devon.

In the language of these speakers, -*s* is variable across all grammatical persons but is governed by a series of internal linguistic features that constrain its use. In addition to phonological conditioning, verbal aspect also exerts a statistically significant effect on verbal -*s* usage in third-person singular and first-person environments. In the third-person singular, habitual contexts, i.e. events that take place continuously, as in *I go to museum Wednesdays, I goes to the museum* favour -*s* (Godfrey & Tagliamonte 1999:106). On the other hand, punctual contexts in which an event is understood to have occurred just the once, as in *I forgets now, how long I*

stayed there, is the most favouring context for -*s* in first person contexts (Godfrey & Tagliamonte 1999:105). An association between habitual meaning and verbal-*s* forms is a well-documented feature of southwest England, but it is not confined to this region. The *SED* reports its presence in Northern dialects. Shorrocks (1999:116) notes that informants in Lancashire use verbal-*s* when "describing habitual behaviour, or their more permanent tastes and opinion." See also Pietsch (2005:146) and Cole (2009:102) for a discussion of aspect in other northern varieties and Henry (1995:18) for the use of the narrative present in Irish English. Godfrey and Tagliamonte find that in the third-person plural context, the foremost conditioning effect on the occurrence of verbal -*s* in Devon English is that of subject type and adjacency. There is a strong statistically significant effect according to which non-adjacent and adjacent NPs favour -*s*, with factor weights of .84 and .64, while both non-adjacent and adjacent pronouns disfavor, at .43 and .42. It should be pointed out that non-adjacent NP environments in this analysis include NP subjects and verbs separated by an intervening adverb, as in *The bill soon runs up*, and NP subjects separated from their accompanying verbs by a relative pronoun, as in *That's me two grandsons that lives here*, neither environment would be expected to behave differently from adjacent NP subjects in a NSR system and have been widely shown to favour verbal -*s* (or its variant forms). Irrespective of Godfrey & Tagliamonte's coding procedure, the results of the analysis essentially reveal that a NP/PRO constraint is operational in the southwest and is substantiated by Tagliamontes's (2009:115, 118) survey of the NSR in speakers from Wincanton, Somerset whose speech exhibits an even more pronounced NP/PRO constraint.

Other accounts of subject-verb concord in Devon English find the constraint to be variably operative. Such is the case of Peitsara's (2002) survey of -*s* usage based on material taken from the Helsinki Devon Corpus. It comprises speech recorded in the 1970s from 32 male informants, aged 40-80, originating from localities spread across the northeast of Devon. The corpus is comparable in size ($N = 1280$) to that of Godfrey & Tagliamonte's ($N = 1250$). Peitsara tests for the effects of person, phonological conditioning and for the effects of the NSR, but concludes that there is no clear evidence of variable -*s* being rule-governed in the speech of her informants. In the case of the NSR she notes that, "Though the non-standard -*s* clearly tends to occur with Sn [noun-phrase subjects] more frequently than with Sp [pronominal subjects] … the instances are too few and scattered to be considered as evidence of the NSR" (2002:218). Nonetheless, her data show that while -*s* endings occur at a rate of 54%

with NP subjects ($N = 46$), the personal pronoun subject *they* has a notably lower rate of *-s* at 21% ($N = 48$).[14]

The variable effects of subject type and adjacency in Devon English are also discernable in the entries provided for Devon in the *Survey of English Dialects* (*SED*, Orton et al., 1962-1971). While the *SED* has to be used with caution, it provides an indication of the distribution of plural *-s* in the traditional dialects. A strip running broadly speaking from the southern counties of Sussex, Surrey and Hampshire up to the West Midland counties of Oxfordshire, Herefordshire and Worcestershire shows variable verbal-*s* usage with plural third-person pronoun and NP subjects alike (Klemola 2000:332-35; Wright 2002:247), but the distribution in Devon differs strikingly. A survey of the responses given to Question 3.10.7, which asked informants to say the usual cries animals make (e.g. bulls bellow, horses neigh, cows bellow etc.) reveals an incidence of 52% *-s* usage with full NP subjects. This figure is based on data that include both the actual answers to the question asked (e.g. *bulls bellow*, *horses brays*, *cats mews*) and the spontaneously produced utterances known as "incidental material" that in this particular case involve both *is* and lexical verbs (e.g. *the roads is all slushy*, *your fields soon begins to bog*, *some of them says, horses whickers* [= neighs], *some of them reads the Bible*, etc.). With regard to morphological markings co-occurring with *they*, no response to Question 8.5.2 'But some lazy people like to read the Sunday papers so they [stay at home]' and Question 4.6.2 'Some people have a shed and a wire-netting run at the bottom of their gardens in which they [keep hens]' involved the generalized *-s* marker. In answer to Question 8.5.1 'What do good people do on Sundays?' which elicited the answer 'They go to church', a relatively low 36% of incidences violate the NSR, i.e. *they goes*, *they puts*. In the other cases the verb is uninflected (*They go to church*). Interestingly, the only three instances of non-adjacent *they* triggered verbal forms in *-s* (*They always gives, They only shaves, They generally tastes*), although given the nature of the intervening adverb, the *-s* ending in this case might have an aspectual function. The general impression to be gleaned from the *SED* is that inflected verb forms are more common with non-pronominal subject types.

Further support for believing the NSR characterized southwest English comes

[14] Peitsara's data is at times marred by a lack of categorial differentiation. The numbers and percentages of instances of non-standard verb endings given for each informant do not distinguish third-person singular non-standard forms, i.e. zero, from non-standard plural forms, i.e. *-s* (2002:229). Nor are the figures broken down according to subject type or person, which means that the possibility of the NSR being more prominent in the speech of certain speakers cannot be evaluated.

from Bailey & Ross's (1988) research on "Ship English" spoken by British sailors, many of whom hailed from the southwestern counties of England. The authors' survey of the language of British ships' logs and the papers of the Royal African Company from the sixteenth- to eighteenth-century reveals a concord system in which verbal-s occurs variably across the paradigm, except in the second person (Bailey & Ross's 1988:199). Despite the limited data and lack of quantitative analysis there are indications that third-person plural verbal morphology was governed by a NP/PRO constraint. Full NPs favour the use of *-s* while pronouns disfavour *-s* forms. The following subject hierarchy is established as favouring *-s* in descending order: coordinated NPs > NP + relative clause > simple NPs > pronouns (Bailey & Ross 1988:199-200). The use of *was* as a plural form is widespread even with pronoun subjects (*they was hulked, we was belonging*), although the authors give no indication as to whether higher rates of *were* occur with *they* (Bailey & Ross 1988:205). The present tense of *be* exhibits variation mainly between *is* and *be*, a West country retention of Middle English *be* and *ben*, while *are* remains relatively uncommon until the eighteenth century. An analysis of the data provided by Bailey & Ross (1988:200) for present-tense *be* suggests plural *is* generally occurs with 'heavy' NP subjects including simple NPs, coordinated NPs, existential *there* subjects and with NP + relative pronoun subjects, while *be* is more common with *they,* as in *They bee well sett people…* (Sloane 3833, 1669 [Bailey & Ross (1988:200)].

In line with the general fixation with *-s* found in the literature, little importance is given by the authors to the patterning of plural *-th* in the log material. Only two instances of plural *-th* are found in the data (Bailey & Ross 1988:200, 206). These are illustrated in (13). Note how *-th* appears to pattern as a variant of *-s* with non-adjacent pronoun subjects and full NPs in conformity with the NSR.

(13) a. *…we in that adventure produceth no more profit*
b. *there is three Castles Belongeth to the [?] and is seated at ye East*

Bailey & Ross argue that in the case of "Ship English" the variable use of *-s* in every grammatical person, coupled with the application of a NP/PRO constraint in the third-person plural, indicates that the concord system recorded in these documents may be the result of dialect mixing between people from different regions. Nevertheless, despite quantitative and methodological differences the results of the studies discussed

above reveal a striking continuity between the southwest dialect spoken by EModE sailors and that of contemporary vernacular dialect in the southwest of England. All three studies (Bailey & Ross 1988; Godfrey & Tagliamonte 1999; Peitsara 2002) point to the frequent but variable use of *-s* across the paradigm combined with a tendency for verbal-*s* to be favoured by full NP subjects rather than pronoun subjects in the third-person plural.[15]

Evidence of the NSR in southwest dialects also emerges indirectly from research on the constraint in Southern Irish. It can safely be assumed that the NSR must have reached the Northern Irish province of Ulster via the speech of Scottish settlers during the seventeenth century. Its occurrence in varieties outside the Scottish-settled districts in Ulster, such as in the Mid-Ulster English dialects of districts settled by the English and in Southern Irish English has generally been attributed to diffusion from Ulster-Scots dialects, so Montgomery (1997a:249-50) who concludes that the NSR diffused south as a result of contact between Scots and other speakers of English. More recently, McCafferty (2003, 2004) has convincingly argued that English rather than Scots input may explain the presence of the constraint in Irish English outside the Scottish-settled districts of the North. Although Scots heavily outnumbered English settlers in Ulster, few Scots settled beyond Ulster. Colonisation in the South of Ireland relied on English settlers, mainly from the southwest of England (especially Somerset and Devon) and London, but also from the North of England and the North Midlands (see McCafferty 2004 with references). McCafferty (2004) focuses on the northern element and suggests that the NSR spread to Southern Ireland via the speech of northern migrants rather than via contact with Ulster-Scots, but there is also the southern English influence to consider. Boling's (2003) survey of the NSR in the letters of emigrants to Ireland in the eighteenth century provides evidence of the NSR in the speech of speakers originating from the southwest of England. The Quaker connections of the writers and the northern association of this religious group are put forward as a possible explanation for the speakers' robust use of the NSR (Boling 2003:655-6), but in view of the strong NP/PRO constraint found in varieties of English in Devon and Somerset (Godfrey & Tagliamonte 1999; Tagliamonte 2009) there appears to be no need to resort to a northern contact motivation.

In an attempt to contribute to the reconstruction of subject-verb concord patterns

[15] The studies also coincide in showing that verbal *-s* is variable in the third-person singular where unmarked forms also occur, although not as frequently as non-standard *-s* in the plural (Godfrey & Tagliamote 1999:100; Peitsara 2002: 212; Bailey & Ross (1989: 199).

in earlier varieties of non-standard English, Clarke's (1997) surveys present-day Newfoundland Vernacular English (NVE). Most speakers of NVE are descendants of settlers that originated from southwest England, in particular Dorset and Devon, as well as southwest Ireland. So the present-tense markings of NVE may reasonably be expected to reflect the concord systems of southern Irish and southern English source dialects. Far from exhibiting signs of NSR-like concord, however, NVE has extremely high rates of *-s* with pronominal and nominal subjects alike, 86% and 79% respectively. The surveys of eighteenth-century Irish English discussed above (McCafferty 2004; Boling 2003) show that the constraint was prevalent in the speech of Southern Irish emigrants originating from Dublin, Wexford and Carlow in the southeast of Ireland, areas heavily settled from the seventeenth century onwards by emigrants from the southwest of England. Godfrey & Tagliamonte (1999:110-111) suggest that subject-verb concord in NVE "may reflect subsequent linguistic change rather than original absence." Clarke's data involves speakers from different generations with widely differentiated frequencies of verbal-*s* overall. Speakers under 35 have much higher rates of *-s* (62%) than speakers over 60 (35%). Clarke fails to consider the effect of subject type in the speech of different age groups, which would have clarified whether a generational shift in the loss of the constraint had occurred. Godfrey & Tagliamonte (1999:117, fn.33) discuss research on verbal *-s* in third-person plural in North Carolina by Wolfram, Thomas & Green (2000) which demonstrated that one of the major differences between older and younger speakers is the lack of the type-of-subject constraint among younger African Americans. Comparable shifts are found by Cukor-Avila (1997).

Evidence that a generational shift may also have occurred in NVE comes from incidental historical evidence gleaned from William Taverner's 1718 survey report of costal Newfoundland written (Clarke 1997:237). Taverner came from a merchant family engaged in the Trans-Atlantic Poole-Newfoundland fisheries trade and based in Poole, Dorset. While Taverner's speech essentially follows standard usage, instances of non-standard *-s* in third-person plural contexts are to be found. Thirteen out of a total of sixty third-person plural tokens display non-standard *-s* mainly in existential there clauses 'There is Two Rivers empty Themselves into it....', with coordinated NPs 'Spout Cove and East Bay is Tolerably good for Salmon' and with relative clauses with third-person plural antecedents 'all French ships or planters that fishes on that Coast....' (Clarke 1997: 237, 255 fn.5).

3.2.3 Summary

To sum up, subject type (and to a lesser degree) adjacency is found to be a crucial factor in determining the occurrence of competing morphology well beyond the traditional northern boundaries. NSR-like patterns in the southeast of England during the Early Modern period have generally been attributed to importation via the speech patterns of migrants from the Northern and Midland counties during the fifteenth and sixteenth centuries (Schendl 1996, 2000; Nevalainen & Raumolin-Brunberg 2000a; Wright 2002). The general assumption is that the spread of verbal-*s* southwards brought with it some of its original patternings of variability. Schendl (1996:153) views the NSR in EModE as the intersystemic analogical extension of the third-person singular -*s* form (the widely-accepted 3sg form by the early seventeenth century) into the plural environment in conformity with the northern system and in line with the "mixed" paradigm of the ME East Midland system described by McIntosh (1989) and discussed above. It has also been argued (Wright 2002:251) that the ME East Midland system, in which the NSR operated with the variables -*th* and zero, may have gradually expanded its scope of influence southwards towards the capital.

But can the presence of the NSR in the southeast of England be explained solely as a contact phenomenon between northern and southern varieties? Schendl explicitly refutes the possibility that internal as well as external factors may have been at work in determining the observed outcome: "Since this is a highly complex syntactic rule […], it is extremely unlikely that it could have developed independently, i.e. without Northern influence, in the standard language" (2000:264). The distribution of competing -*s* and -*Ø* forms in southwestern varieties, where a 'northern Englishes' effect cannot be held to account for the observed concord pattern, would seem to indicate that such a spontaneous and independent development is in fact perfectly feasible. Furthermore, it suggests that where variation occurs there is a tendency for competing variants to be governed by subject and adjacency effects. We shall return to this issue in what follows.

3.3 Extraterritorial Englishes

So far we have considered the NSR mainly in varieties of British English, but its prevalence in varieties of English around the world also needs accounting for. In explaining the prevalence of NSR-type concord in non-standard varieties of American English, diffusionist accounts generally suggest the subject-verb concord system was

taken to the northern Irish province of Ulster by Scottish settlers in the seventeenth century and reached North America via the migration of Ulster-Scots in substantial numbers in the eighteenth century (Montgomery 1989, 1997a, 1997b; Montgomery & Robinson 1996, 2000; Montgomery & Fuller 1996; Montgomery, Fuller & DeMarse 1993) and by other British settlers whose speech had the NSR. For instance, input from Southwest dialects of English has been posited as an explanation for NSR-like patterns found in American varieties of English including AAVE (Godfery & Tagliamonte 1999; Polack and Tagliamonte 2001). I will briefly consider the NSR in varieties of Irish English before moving on to discuss NSR-rule like patterns outside the British Isles.

3.3.1 Irish English

Research into the retention of the NSR in twentieth-century varieties of Irish English reports its resilience in both Northern Irish English (Harris 1993; Henry 1995 and in Southern Irish English (Kallen 1991; Filppula 1999) as a low variant feature in line with the erosion of the constraint witnessed in the northern counties of England and in Scotland.

The historical work on subject-verb concord in varieties of Irish English from the early seventeenth-century plantation era through to the nineteenth century testifies to the strength of the NSR in Irish English at this time. The earliest evidence of the NSR in Irish English comes from seventeenth-century Ulster-Scots data analysed by Montgomery (1997b) and Montgomery & Robinson (1996). The data comprises the Duntreath letters dating from 1609-1631 and the McClelland papers (1612-1624), which conjointly represent the Ulster-Scots spoken during the earliest Plantation period, alongside the records of church meetings found in the Templepatrick Session Book (1646-1647) that are representative of second-generation Ulster-Scots. The Ulster emigrant letters span several generations (1736-1871) and effectively document the nature of the language transplanted to North America by Ulster-Scots immigrants. In these documents, the incidence of verbal-*s* with NP subjects ranges from 18%-55% for present-tense *be* (*is*) and from 20%-55% for lexical verbs. Adjacent *they* occurs categorically with uninflected verb forms, while instances of verbal-*s* with *they* are licensed by the proximity constraint of the NSR.

Further work by Montgomery (1997) documents the NSR in the speech of two Irish-born traders who emigrated to America as young men around the mid-eighteenth century. The linguistic analysis is based on letters written by George Galphin and

George Croghan between the 1750s-1770s. The speech of both speakers indicates a categorical use of the zero inflection with adjacent *they*. In the case of NP subjects, the NIrE speaker George Galphin reflects a near categorical use of the NSR with an incidence of between 93%-98% plural -*s*/*is*/*was*, while the effect is slightly weaker in the SIrE dialect of George Croghan (70%-75% plural -*s*/*is*/*was* with NP subjects). The letters written by George Galphin do not contain any non-adjacent *they* contexts, but those of George Croghan register an incidence of 56% plural -*s*/*is*/*was* with non-adjacent *they*.

The work of Kallen (1991) extends the study of the NSR in Irish English from letters to the use of literary dialect in works of the nineteenth century. The literary representation of vernacular dialect provided by the Ulster-born writer William Carleton in his tales and sketches describing the Irish peasantry shows average rates of 65% -*s* and 64% *is* across NP subject types and categorical absence of –*s*/*is* with adjacent *they*. Interestingly, the language of novelists born outside of Ulster, such as John and Michael Banim, Edward Adderly Stopford and Gerald Griffin, register a slightly weaker NSR effect with rates of 54% -*s* and 59% *is* across NP subject types and 11% -*s* and 5% *is* with *they.* Unfortunately Kallen does not differentiate adjacent and non-adjacent pronominal contexts, but the examples provided, such as the following excerpts taken from Griffin, document instances of both non-adjacent -*s,* as in *it's they that does come round uz* and generalized -*s,* as in *they says hasn't e'er a bottom at all to it*.

McCafferty's (2003, 2004) study of the correspondence of Irish immigrants during the second half of the nineteenth century further corroborates the linguistic continuity of the NSR from the seventeenth century right through to the turn of the twentieth century. Using data drawn from letters written by Irish immigrants in Fritzpatrick's (1994) study of Irish emigration to Australia, McCafferty documents the workings of the rule in varieties of Irish English across the country. The incidence of -*s* across NP subjects in Ulster is a robust 77% in Ulster-Scots and 70% in Mid-Ulster Scots. This rate drops to 61% in the West and Midland regions of Ireland and to 27% in the Eastern and Southern regions. Despite differing rates of -*s* with NP subjects across regions, the constraint prohibiting verbal-*s* with adjacent *they* holds categorically across varieties; not a single instance of verbal-*s* is found with adjacent *they* subject types (McCafferty 2004:68-69).

The detailed analyses of Irish English from the seventeenth to the nineteenth centuries discussed above document the non-categorical yet robust workings and lin-

guistic continuity of the NSR across a period of roughly three hundred years. The results also suggest that the rule was consistently stronger in Northern Irish English and more variable in southern varieties, but that the effect of the rule was equally distributed across forms of *to be* and lexical verbs regardless of region.

3.3.2 The Northern Subject Rule beyond the British Isles

The extensive work of Michael Montgomery and his associates (Montgomery, Fuller, & DeMarse 1993; Montgomery & Fuller 1996; Montgomery 1997b; Montgomery & Robinson 1996; Schneider & Montgomery 2001) demonstrates that the constraints found to govern verbal-*s* in both African and European American English parallel those of British and Irish immigrants during the same period. Significant too, both for its breadth and repercussions, is the work of Shana Poplack and Sali Tagliamonte and their associates whose cross-linguistic studies also highlight the similarities between the dialect of early settlers and later varieties of American English (Poplack & Tagliamonte 1989, 2001; Godfrey & Tagliamonte 1999; Tagliamonte & Smith 2000). These commonalities have led the aforementioned scholars to argue that British and Irish input explains the prevalence of the rule in African and European vernacular varieties. Nevertheless, as other grammatical features brought over by the settlers did not survive in the emerging koine, this suggests that the subject effects at the crux of NSR concord system had special status as a vernacular universal.

Figure 1 summarises the distribution of verbal-*s* across noun phrase and pronoun subject types in a representative sample of African and North American English that spans the colonial period through to PdE. Evidence of the type of British immigrant linguistic input argued to have influenced varieties of American English comes from the McCullough letters written during the period 1823-1874 by members of the McCullough-Hutchinson-Montgomery family, Irish immigrants from Ulster who emigrated to South Carolina (Montgomery, Fuller & DeMarse 1993; Montgomery & Fuller 1996). The Ulster letters dating from 1736-1871 are also representative of the speech patterns of Ulster-Scots immigrants to North America (Montgomery & Robinson 1996; Montgomery 1997b) while the Croghan letters (1749-71) and Galphin letters (1752-1755) reflect the speech of Irish-born immigrants from Dublin and North Armagh respectively (Montgomery 1997a). Evidence of post-colonial speech patterns are provided by Schneider & Montgomery (2001) who survey the early Southern English of white Plantation overseers in North and South Carolina from 1814-57 and by

the Freedman letters, a collection of letters written by slaves or recently emancipated African Americans during the 1850s and 1860s (Montgomery, Fuller & DeMarse 1993). Montgomery (1997b) is part of a long line of research on the Appalachian speech of descendants of Ulster-Scots immigrants that have remained relatively isolated from mainstream developments (see also Wolfram & Christian 1976; Christian, Wolfram & Dube 1988). Clarke (1997) provides data for present-day Newfoundland Vernacular English. Data taken from a bi-ethnic enclave community in North Carolina form the basis of Wolfram, Thomas & Green's (2000) research on present-day African and European-American vernacular speech. In a similar vein is Bailey et al.'s (1989) study of African American and European American in Texas and Poplack & Tagliamonte's survey of vernacular White English and AAVE in Novia Scotia. Research on African American enclave communities in Nova Scotia and Samaná in the Dominican Republic also provides an idea of the development of the NSR in 'export' varieties (Poplack & Tagliamonte 1989, 1991, 2001).

Besides providing a perspective on present-day African and European American vernacular English and on transplant African American communities in Samaná and Nova Scotia, the data document the linguistic continuity of the rule over a period of roughly four hundred years and provide an overview of the NSR in the speech of British and Irish settlers to North America and in African and European American English in post-colonial times. The NP/PRO constraint is replicated in the vast majority of varieties except in the case of Vernacular Newfoundland English where extremely high rates of plural verbal-*s* are found across the board regardless of subject type (see section 3.2.2). To these findings may also be added those of Mallinson & Wolfram (2002:750) for the vernacular African American and European American speech of Beech Bottom, North Carolina. In both groups there is a statistically significant NP/PRO effect whereby full noun-phrase subjects and collective nouns as opposed to *they* favour verbal-*s* usage (African American English: NP = .96, Collective NP = .76, PRO = .31 European American English: NP = .83, Collective NP = .91, PRO = .22).

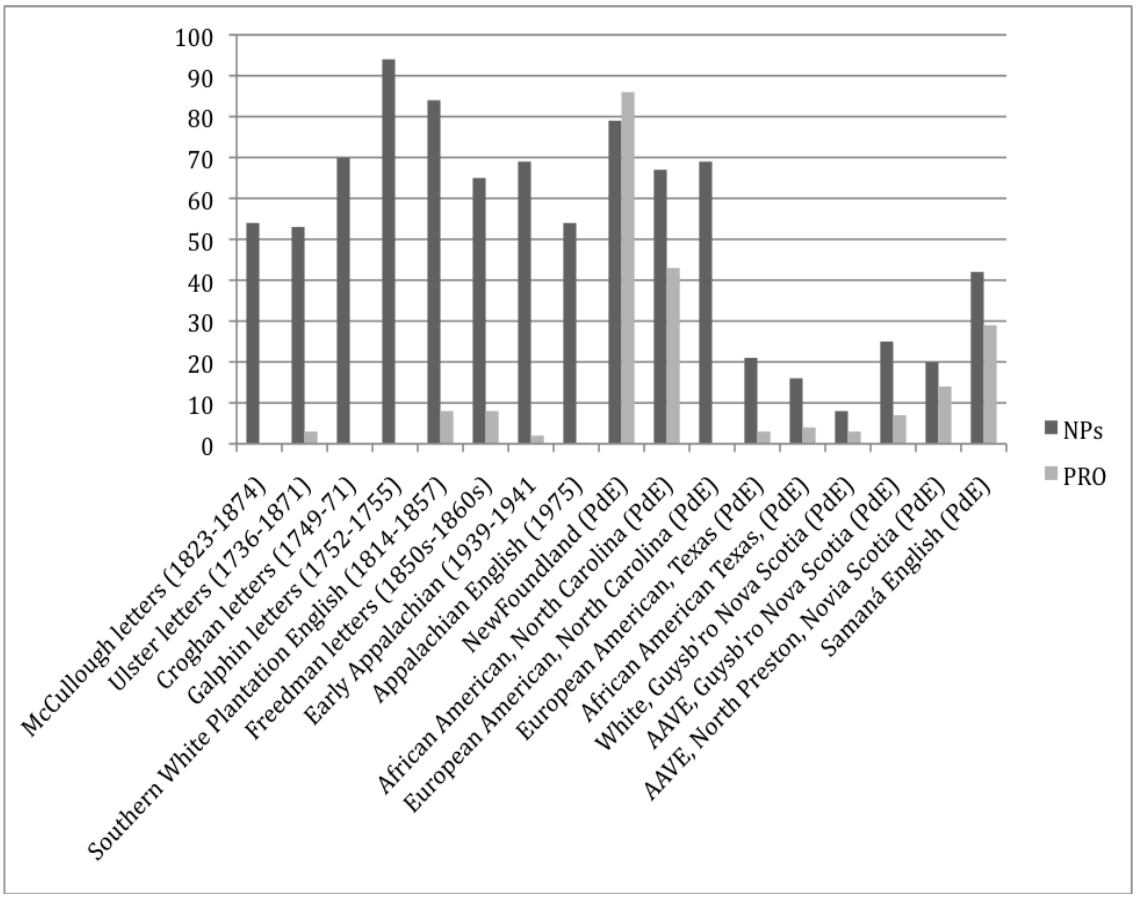


Figure 1. Distribution of verbal-*s* in third-person plural contexts according to type of subject across varieties. *Sources*: McCullough letters, 1823-1874 (Montgomery, Fuller & DeMarse 1993); Ulster letters, 1736-1871 (Montgomery & Robinson 1996; Montgomery 1997b); Croghan & Galphin letters, 1750-1770s (Montgomery 1997a); Southern White English, 1814-57 (Schneider & Montgomery 2001); Freedman letters, 1850s-1860s (Montgomery, Fuller & DeMarse 1993); Early Appalachian English, 1939-1941 and Appalachian English, 1975 (Montgomery 1997); Newfoundland vernacular English (Clarke 1997); North Carolina bi-ethnic communities of Hyde County, North Carolina (Wolfram, Thomas & Green 2000); African American and European American, Texas (Bailey et al. 1989); African American and European American English, Novia Scotia (Poplack & Tagliamonte 1991, 2001); Samaná English, Dominican Republic (Poplack & Tagliamonte 2001).

3.3.3 AAVE and the NSR

The syntactically governed usage of verbal-*s* has figured prominently in the ongoing and controversial debate surrounding the genesis of African American Vernacular English (AAVE). Numerous studies have considered whether AAVE is traceable to a creole-like grammar unrelated to English or whether the variety developed out of the British dialects transplanted by earlier British and Irish settlers to North America during colonial times (Schneider 1983, 1995; Poplack & Tagliamonte 2001; Wolfram &

Thomas 2002). Early studies of verbal-*s* in AAVE and English-based creoles concluded that that the distribution of -*s* was random and indicative of hypercorrection (Labov et al. 1968; Wolfram 1969). A crucial piece of evidence that militated in favour of a creole derivation for AAVE rested upon the notable correlation between verbal-*s* usage and aspectual interpretation in Early AAE and English-based creoles whereby verbal-*s* was found to function as a marker of habitual or/and durative aspect rather than of tense. Given the aspect-prominent nature of African languages compared with English, it was argued that such aspectual usage derived from African substratum influence (Roberts 1976).

Over the last thirty years, however, the creolist hypothesis of the 1970s described above has given way to a reformulation of the current position on the development of African American English. Emerging evidence from earlier written records of semiliterate African Americans (Montgomery, Fuller, & DeMarse 1993; Montgomery & Fuller 1996) suggests the earlier speech of some African Americans was not appreciably different from that of European-American varieties. This discovery in addition to the results of numerous studies that have compared the speech of cohorts of European American vernacular speech with that of Black American vernacular speech (Poplack & Tagliamonte 1991; Wolfram, Thomas & Green 2000; Mallison & Wolfram 2002), and the findings of analyses that have compared the speech patterns of both Black and White American vernacular speech with those of early British dialects (Bailey et al. 1989; Montgomery, Fuller, & DeMarse 1993; Montgomery & Fuller 1996; Montgomery 1997; Godfrey & Tagliamonte 1999; Poplack & Tagliamonte 2001; Clarke 2004) all shape/fuel the now widely-held view that post-colonial African American speech, just like European American vernacular speech, developed out of the early British dialects brought to North America by settlers from the seventeenth century onwards.

The results of these studies suggest that many of the salient grammatical characteristics of AAVE can be traced back to earlier non-standard patterns of usage found in British English dialects. The combined effect of subject type and adjacency on the distribution of verbal -*s*, in particular, has been viewed as a diagnostic of settler influence. The subject-type constraint hierarchy widely reported in the historical record for British English is virtually identical to that identified in the literature for Early AAE and AAVE (Poplack & Tagliamonte 1989, 1991, 2001; Montgomery, Fuller, & DeMarse 1993; Montgomery & Fuller 1996; Wolfram, Thomas & Green 2000; Godfrey & Tagliamonte

1999; Mallison & Wolfram 2002).[16] Similarly, habitual aspect also contributes to the presence of *-s* in British dialects (Godfrey & Tagliamonte 1999; Poplack & Tagliamonte 2001, see also Shorrocks 1999:112, 116-17 and Pietsch 2005:146 for a discussion of verbal-*s* as a marker of aspect in northern varieties of British English).[17]

3.4 The Northern Subject Rule and finite forms of the verb *be*

As will have become apparent, the effects of the NSR are not strictly confined to lexical verbs nor to present-tense markings but also condition the distribution of present and preterite forms of the verb *to be,* with *are*/*were* occurring in the plural with pronoun subjects and *is*/*was* with full NPs as exemplified by the Scots examples below in (14), taken from Montgomery (1994:90-91):

(14) a. ***he and his heall famellie is*** *to be in Scotland* (*The Red Book of Grandtully*, 184)

b. ***the pointis*** *of the ordre* ***is*** *grete meryt* (*The Buke of Knychthede*, 18)

c. *there* ***is*** *over* ***mony*** *that belevis in the opinione* (*The Complaynt of Scotland*, 28)

d. *that syk* ***letters wes*** *to cum* (*Correspondence of Mary of Lorraine*, 21)

e. ***nois and cryis wes*** *mad* (*Legends of the Saints*, 40)

The adherence of *is*/*was* to the NSR constraint is generally explained in terms of analogical extension whereby the constraint spread to *be* in both the present and preterite with *is* /*was* and *are*/*were* behaving like the *-s* and zero forms of other verbs (Murray

[16] Despite historical similarities there is evidence to support the contention that present-day European and African American vernacular speech is diverging (Poplack 1999:27; Labov 1998:119; Wolfram, Thomas & Green 2000). Wolfram, Thomas & Green's survey of a bi-ethnic enclave community in western North Carolina suggests that the retention of certain dialect features historically shared by European and African American cohorts, such as plural verbal-*s* and the NSR, varies according to ethnicity, while newer, "common-core" AAVE features features such as habitual BE + verb-*ing* (as in *Sometimes, you think a ghost be following you*) are being adopted by younger AAVE speakers in favour of local dialect features. Labov has expressed the current position on the development of AAVE succinctly (1998:119, cited in Mallison & Wolfram 2002:744): "The general conclusion that is emerging from studies of the history of AAVE is that many important features of the modern dialect are creations of the twentieth century and not an inheritance of the nineteenth."

[17] Copula absence (as in *She nice*) is also a salient trait of AAVE. The presence of this structure in the speech of southern rural European-American English speakers has been attributed to assimilation from African-American speech rather than to British input (Wolfram 1974). Emerging evidence would suggest, however, that original absence of the structure in the donor dialect cannot be assumed. The Daybook kept at the Knaresborough Workhouse in Yorkshire near the close of the eighteenth century (2003, eds. García-Bermejo Giner & Montgomery) documents fifteen instances of copula absence which points towards the prevalence of the vernacular structure in older varieties of colloquial British dialect.

1873:213; Montgomery 1994:84; Pietsch 2005:149). Murray (1873:213) explains the development in the following terms:

> In the verb BE where the plural (*aron*, *aren*, *are*, *ar*, *er*, *yr*) did not end in -*es*, the presence or absence of the pronoun did not affect the form of the verb originally; but at a later date, the analogs of the other verbs, in which a form identical with the 3rd pers. sing. *was* used in the plural in the absence of the pronoun, led to the use of *es*, *is*, in like cases for *ar*, *er*, though only as an alternative form: in the same way, *was*, *wes*, intruded upon *wer*, *war*, in the past tense.

It would appear that the extension of the NSR to finite forms of *be* never reached the level of categoricality documented among lexical verbs in northern ME and Scots (Forsström 1948:193, 207; Montgomery 1994:90). In the late Middle and EMod Scots data analysed by Montgomery (1994:90-92), both *was* and *is* occur with plural NP subjects at an average incidence rate of just 23% (N = 43/201), whereas lexical verbal-*s* forms are near categorical. Montgomery (1994:92) notes that the weak NSR effect on *be* in the fourteenth century gains in strength during the fifteenth and sixteenth centuries and views this as corroborating evidence for Murray's suggestion that the NSR spread to finite forms of *be* analogically. We shall return to whether or not this might have been the case shortly.

The participation of *be* in the NSR in northern Middle English is observed by Forsström (1948:193) who reports the use of *is* and *was* in plural environments, but also highlights the non-categorical nature of this usage:

> […] the 3sg. *is* often met with in a plural function. As a rule it is used only when a personal pronoun does not precede or follow. It is especially common in the phrase *ther es* (*is*) + a plural subject and also in relative clauses. In no text, however, does it predominate over the normal plural forms.

With reference to the preterite form of *be*, Forsström (1948:207) notes that "the sg form *was* (*wes*) is frequently used in the function of a plural […]. The singular form is particularly common in relative clauses and in the phrase *ther was* followed by a plural subject. It is very seldom instanced immediately preceded or followed by a personal pronoun."

In Montgomery's Scots data existential *there*, coordinated NP subjects and relat-

ive clauses also account for 31% (*N* = 28/94) of plural *was* tokens as opposed to 18% (*N* = 22/122) of *was* with common nouns. Recall how the tendency for existential *there*, coordinated NP subjects and relative clauses to inhibit a subject-type effect is characteristic of 'weaker' NSR systems such as the heavily standardised modern varieties of northern English and the dialects spoken in the transitional Midland zones identified by Pietsch (2005) (see section 3.1.2). The propensity towards using a singular form in a plural function with these subject types is also extensively documented in the historical record for non-northern dialects, as the examples in (15), taken from Visser (1970:§83), indicate. Note too how singular forms in a plural function are not confined to the aforementioned subject types outside of the North, but also occur with simple noun-phrase subjects and with lexical verbs, which suggests that the pattern was not as geographically delimited as is often assumed.

(15) a. On þæm selfan hrægle **wæs** eac awriten **þa naman** ðara twelf heahfædra. (Ælfred. *Cura Pastoralis*, 6,15)

b. **All his wundres** þat he do, **is** þurh þene vend. (O.E. Miscell., Passion Our Lord 49)

c. Here **is** grete **merveylles**. (c1489 Caxton, *Four Sonnes of Aymon* 444. 31)

d. And **þere was** in þat tyme many gode holy **men** & holy **heremytes.** (c1400 *The Travels of Sir John Mandeville* 51,35)

e. The kyng…axeth where **his wyf and his child is**. (c1386 Chaucer, C. T. B. 878)

f. **The kyng Alymodes and all his oost was** right sore affrayed. (c1489 Caxton, Blanchard 119,29)

g. And **the arm and the hond þ**at he putte in our lordes side…**ys** yit lyggynge in a vessel withouten the tombe. (c1400 *The Travels of Sir John Mandeville* 115,2)

h. **Seue maistres is** her come (c1300 Rich.Coer de Lion)

i. **Hægl** se heardam and **hrim Þeceð** (Old English Riddles 81,9)

j. Forðæm **leaf and gærs** bræd geond Bretene, **Bloweð** and **groweð. (***Meters of Boethius*. 20, 98)

k. **Þær fæder and sunu and frofre gast** in prinnesse Þrymme **wealdeð. (**Andreas 1684)

Analogy with the patterning of present-tense markings does not fully explain the

historic pervasiveness of *is* and *was* to occur in plural contexts in both northern and non-northern dialects, nor does the assumption that the prevalence of these forms with full NPs in the sixteenth and seventeenth centuries is due to a 'northern Englishes effect' that spread southwards (Tagliamonte & Smith 2000:154; Visser 1970:§83). The pervasive nature of the tendency in both the historical record and in varieties of present-day non-standard English highlights the strong vernacular tendency in English towards levelling and for the variation that accompanies such processes to be constrained by subject type effects. It is my contention that what has traditionally been viewed as the analogical realignment of *is*/*are* and *was*/*were* usage in accordance with the NSR is best viewed as an independent process of levelling that is subject to the same constraints. It might reasonably be argued that the generalisation of *was* in English and *-s* reflects the tendency in most Germanic languages to level out person/number distinctions to varying degrees. The levelling of *was* throughout the paradigm mirrors the use of the invariant form *var* in the mainland Scandinavian countries, and that of *was* in Afrikaans, or the slightly less invariant paradigm of Dutch that has a generalised singular form (*was*) and a generalised plural form (*waren*). Similarly, the levelling of the present-tense marker *-s* parallels developments in the Scandinavian languages whereby *-r* has emerged as the invariable present-tense marker for all persons and forms. Dutch and many of the Low German dialects also have heavily simplified paradigms.

3.5 Levelling processes in Germanic languages

Levelling to *was* in English has a well-documented history traceable to the northern varieties of ME including the northwest Midlands (Forsström 1948:163, 203). In the northern ME texts surveyed by Forsström (1948:203), *was* is the universal form in the second-person singular which suggests the process of levelling collapsed the three persons of the singular, initially creating a generalised singular form and a generalised plural form (as in Standard Modern Dutch), before gradually affecting the plural. This process of regularisation is paralleled in the present indicative by the extension of *-s* throughout the paradigm. The later initiation of the process that regularised *was* meant the development met with more pressure from the impact of standardisation resulting in a variable patterning in which the inherited concord system based on person and number continued to play a role.

These processes of levelling cannot be understood in isolation but should be

viewed within a broader framework of diachronic change, as part of a long-term trend towards the eradication of grammatical agreement - at different rates and with differing outcomes - that characterises most Germanic languages from Proto-Germanic to present day. In the transition from Proto Germanic to Old English the three persons of the plural fell together in *-að*. In the case of Old Norse the process of regularisation took a different course and initially collapsed the three persons of the singular in *-r*; the first stage of a levelling process that would eventually level *-r* throughout the paradigm although the process was not to reach completion in the mainland Scandinavian languages until a much later data. Holmqvist (1922:4, fn.2) notes that in Danish where this levelling process was first carried to completion, *-r* was not the universal ending in the present-indicative plural until c.1500 (cf. Haugen 1982:138). In Swedish, competition between the derived inherited plural form *-a*/*e* and the use of singular *-r* in the plural began in the fifteenth century (Larsson 1988) and was played out in the written language until well into the twentieth century (Larsson 2005:1276; Haugen 1982:138).

In the case of the preterite forms of *be,* the *was*/*were* alternation found in Standard English is the result of an ancient sound change known as Verner's Law (see Trudgill 2008 for discussion). The inherited PIE stem final voiceless fricative /*s/ in P.Gmc **wesanan* underwent voicing in voiced environments after unstressed syllables resulting in the alternation **was*/**wa:zun* 'was/were' that rhotacized to **was*/**wa:run.* Trudgill (2008) argues that most Germanic languages have tended to smooth out the *s*/*r* alternation over time with differing outcomes. Some Germanic languages have eliminated the alteration but maintained a person and number distinction. Such is the case of the Westphalian dialects of Plattdeutsch which have *s*-generalisation but retain a singular/plural distinction, a characteristic shared by other Low German dialects (see Trudgill 2008 with references):

	sg	*pl*
1	was	wassen
2	wast	wassen
3	was	wassen

Standard German also retains a person and number distinction, but has a generalised *r*-form, as do some varieties of Low German and North Frisian and northern Germanic languages such as Icelandic, illustrated below:

	sg	*pl*
1	var	vorúm
2	varst	voruð
3	var	voru

There are other Germanic languages, however, that opt not only to level out a stem alternation with little collateral damage to the distinctive person and number endings, as is the case of Icelandic or German, but to effectively eliminate the inherited person/number agreement system by generalising an invariant form throughout the paradigm. This is true of Afrikaans that has invariant *was* and of the mainland Scandinavian languages that have *var* throughout the paradigm. The tendency is also to be found in non-standard varieties of English. Trudgill views all of the cases in which the *r*/*s* alternation has been eradicated in the Germanic languages, regardless of whether or not a person/number distinction has been retained, as part of a wider pattern that involves the analogical elimination of Verner's Law, so too therefore English *choose*, *chosen* (cf. OE *ceosan*, *curon* pret.pl.) and German *küren*, *gekürt*, which indeed they are, in part. But the tendency to level a default invariant form that effectively neutralises person and number distinctions must be viewed as a separate tendency.

While the inherited *s*/*r* alternation has been preserved in Standard English and in Modern Standard Dutch (sg. *was*, pl. *waren*), levelling to *was* in English has a well-documented historical continuity traceable to Middle English as we have seen and continues to characterise non-standard varieties of PdE. In fact *was*-levelling is so widespread in contemporary varieties of English around the world that Chambers regards it as a primitive "vernacular universal" (1995:242). According to Chamber's theory of 'Vernacular Roots' certain phonological and grammatical processes, including default singulars, or subject-verb non-concord, as in *They was here* appear to be primitives of vernacular varieties in the sense that they occur ubiquitously all over the world. Their occurrence, according to Chambers, is not the result of diffusion, but rather the general tendency of all nonstandard varieties to gravitate towards more "primitive" (i.e. "not learned") linguistic patterns that belong to the language faculty (Chambers 2004:129). Such features, however, exist in a continuous state of flux due to pressure and competition from standard forms. Despite the universal nature of the levelling process, it is subject to constraints, constraints which in themselves are universal in nature. In the case of *was*-levelling Chambers (2004:141) observes "the remarkable regular hierarchy of

subject types" which constrains the occurrence of non-standard *was* and identifies the following scale *There* + NP (pl) → *You* → *We* → Full NP (pl) → *They* whereby *was* occurs more frequently in existential plural constructions with *there* and less so with the 3rd plural pronoun *they*.

A second pattern in English involving *were*-generalisation has also been widely identified. The tendency to generalise *were* across the paradigm instead of *was* is common in Lancashire and Yorkshire, parts of the Midlands and in the dialects of southwest England (Shorrocks 1999; Anderwald 2001; Britain 2002; Pietsch 2005). Its occurrence appears to be strongly conditioned by negative polarity such that levelling to *was* is preferred in affirmative contexts and levelling to *weren't* is preferred in negative contexts (see Shilling-Estes & Wolfram 1994; Tagliamonte 1998; Britain 2002).

Chamber's view that *was*-generalization represents a case of the "default singular" has been challenged by Trudgill (2008:342) who argues that such a concept is not an appropriate explanation for *was*-generalization. The phenomenon "is not a question of singular versus plural with *was* representing a case of the "default singular." [But rather] a matter of *r*-forms of the past tense of the verb *to be* versus *s*-forms, with forms such as *were*, *war*, *wor* representing the *r*-variant and forms such as *was*, *wiz*, *wus* representing the *s*-variant. This *s*/*r*-alternation, as is well known, is a Germanic alternation of very considerable antiquity but one that has been analogically levelled out in most Germanic dialects over the millennium." Trudgill (2008:347-348) argues that this perspective of past tense *be* regularisation as a gravitation towards the use of a default 'singular' fails to take into account levelling to *were* which is common not only in varieties of English, but also in many Germanic languages (Trudgill 2008:347-348, with references). Adopting the view that "*s*-generalization in England was initially particularly associated with the Home Counties - the counties around London - and other areas of southeast England," Trudgill (2008:350) suggests that *were*-levelling may actually have been more widespread than *was*-levelling up until the eighteenth century but was superseded by the non-standard south-eastern form *was.* He further suggests that "*s*-generalization in Scotland and the far north of England - Cumbria, Durham, and Northumberland - must be a separate development" (Trudgill 2008:350). This is not borne out by the results of the ME data surveyed by Forsström (1948) which shows *was* usage in the plural and second-person singular environments in a range of texts stretching from the far northern regions down to Yorkshire and the Midlands. The view that *were*-levelling is a later development is further corroborated by Tagliamonte's (1998:177-79) finding

that levelling to *were* in York (Yorkshire) is a generational change being pushed forward by younger cohorts, especially females.

3.5.1 Processes of was-levelling in present-day varieties of English

Was/*were* variation is undoubtedly one of the most common vernacular features worldwide, and one of the most widely studied, probably because it proves to be an excellent case for an in-depth examination of regularization patterns in modern varieties as it is one of the few areas of modern English where these processes can be observed (see section 5.3.3 for levelling processes affecting lexical verbs in the preterite in ONrth). The correlative links which exist between regularization patterns found in modern varieties of English and those attested in the historical record can be treated more clearly if the findings found in the literature on *was*/*were* variability are first set out.

A plethora of studies exist on *was*/*were* variation in modern varieties of English including, amongst others, North American varieties in Alabama (Feagin 1979), the Appalachians (Christian, Wolfram & Dube 1988; Montgomery 1997b), Novia Scotia (Poplack & Tagliamonte 1991, 2001) and North Carolina (Shilling-Estes & Wolfram 1994; Mallison & Wolfram 2002); Inner Sydney English (Eisikovits 1991); New Zealand (Hay & Schreier 2004); British English varieties (Tagliamonte 1998; Smith & Tagliamonte 1998; Britain 2002); Samaná English in the Dominican Republic (Tagliamonte & Smith 2000) and Tristan da Cunha English (Schreier 2002). The breadth of data on *was*-levelling in related varieties around the world allows us to compare and examine whether all dialects follow the same pattern, and in turn, assess 'regularisation' as a linguistic process.

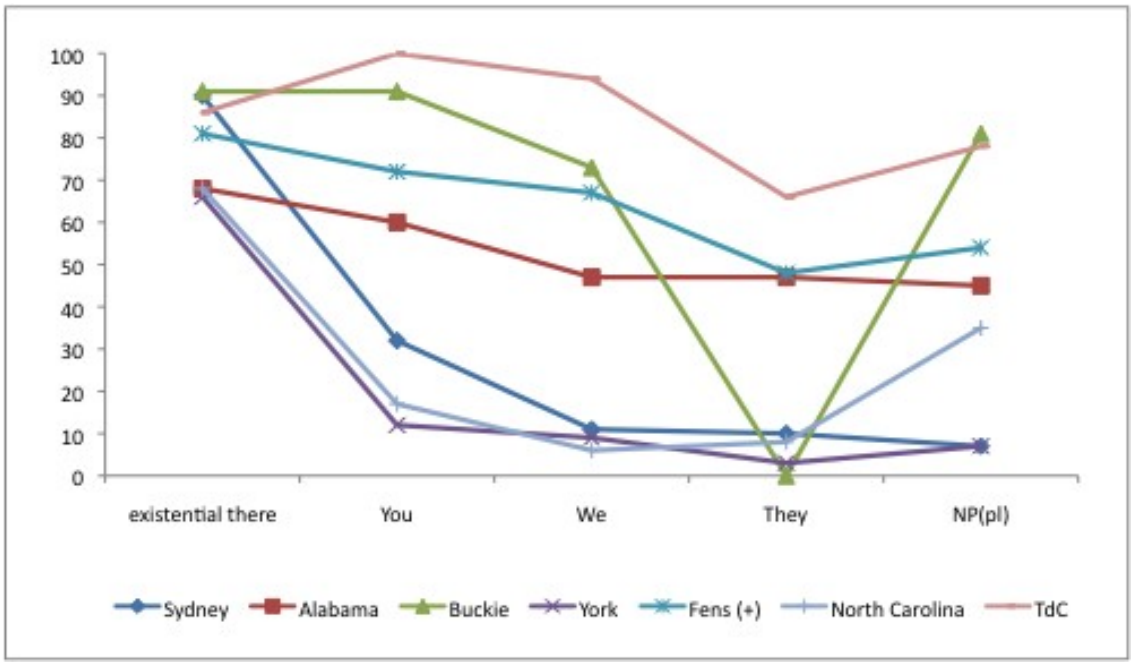
The percentages of levelling to *was* reported in the literature are summarized in Table 4 and represented graphically in Figure 2. The analytical and methodological inconsistencies between these studies mean that such comparative studies need to be viewed with a degree of caution. For instance, whereas some studies provide a representative sample of social class and age (Alabama English, Feagin 1979; York English, Tagliamonte 1998; Fens English, Britain 2002), other studies only analyse data for working-class speakers (Inner Sydney English, Eisikovits 1978; Appalachian English, Christian, Wolfram & Dube 1988). Similarly, the data for Buckie is limited to elderly speakers of the speech community, while Eisikovits focuses on the speech of

adolescents in her study of Inner Sydney English. With regards to internal constraints, studies aren't consistent in providing a breakdown of second-person singular and plural contexts, nor of positive and negative polarity (Smith & Tagliamonte 1998; Tagliamonte 1998; Britain 2002). Methods of categorising subject types often vary, thus, in the Appalachian study a detailed breakdown of the distribution across personal pronouns is not provided. Syntactic contexts may also be unequally represented across studies. Another complicating factor involves discrepancies in how authors report their findings with some studies using raw figures and percentages and others the factor weight results of variable rule analyses.

Table 4. Distribution of non-standard *was* usage across varieties of present-day English.

Variety		**Ext (pl)**	***You***	***We***	***They***	**NP (pl)**
Inner Sydney English (Eisikovits 1991)		90%	31.7%	10.5%	9.5%	17%
Alabama, U.S., (Feagin 1979)		68.4%	60.4%	47.2%	46.6%	45%
Appalachian U.S. (Christian, Wolfram & Dube 1988)		92.4%	(all pronouns: 76.6%)			68.5%
Buckie, Scotland. (Smith & Tagliamonte 1998)		91%	91%	73%	0%	81%
York, England. (Tagliamonte 1998)		66%	12%	9%	3%	7%
Fens English (Britain 2002)	(+)	81%	72%	67%	48%	54%
	(-)	0%	5%	0%	5%	33%
Ocracoke North Carolina (Schillings-Estes & Wolfram 1994)		68%	17%	6%	7.5%	35%
Tristan da Cunha Middle-aged speakers (Schreier 2002)		86%	100%	94%	66%	78%

Figure 2. Distribution of non-standard *was* usage across varieties of present-day English.



Nonetheless, a pattern emerges that allows for broad conclusions to be drawn. Despite quantitative differences in the occurrence of levelling to *was*, with certain speech communities showing extremely high overall values of *was*-regularization and others such as Fens and York comparatively low overall values, the comparative cross-dialectal analysis in Table 4 and Figure 2 sheds an interesting light on the internal constraints conditioning regularization and shows there is a clear correlation between regularization and subject type. The broad pattern identified by Chambers is found to hold across dialects regardless of overall frequencies, although some dialects (Alabama and Sydney English) manifest variation in the differential frequency relations between *they* and full NP subjects and the following scale: *There* + NP (pl) → *You* → *We* → *They* → Full NP (pl). Interestingly, the pronominal hierarchy *you* → *we* → *they* generally holds across the board. In pronominal contexts *you* is generally the most permissive environment while *they* is repeatedly the most conservative in behaviour. Further detail in this respect comes from data provided by Tagliamonte (2009:113) which reveals that the hierarchy *you* → *we* → *they* holds in the Novia Scotia regions of North Preston and Guysborough Enclave. The highly conservative nature of *they* is observed elsewhere. A particularly noteworthy instance is that of Tristan da Cunha

(Schreier 2002) where despite near categorical *was*-levelling among elderly speakers, *they* is the only subject type that triggers standard *were* at all (albeit at an extremely low rate of 1.3%).

Note too the effect of polarity; in Fens English *was* in contexts of positive polarity occurs at a similar rate with both full NP subjects and *they.* In contexts of negative polarity, however, the effect of subject type is far more marked with *weren't* being favoured notably more so by the pronoun subject *they* than by full NP subjects (Britain 2002:27). The apparent interaction that exists between subject type and polarity is also documented for non-standard *were*, in other words in singular environments. In their survey of the vernacular variety spoken in Ocracoke, North Carolina, Schilling-Estes & Wolfram (1994:283) find that while third-person singular contexts of positive polarity trigger near categorical standard *was*, negative contexts not only trigger much higher rates of non-standard *were* but there is also a notable difference in behaviour between full NP subjects and the pronoun subject *he* whereby utterances of the type *the duck weren't* are less favoured at a rate of 24% than *he weren't* at 55%). The results of Schilling-Estes & Wolfram's study for the distribution of non-standard *was/n't* and non-standard *were/n't* are summarised in Table (5) and illustrate the strength of the subject effect in both plural *and* singular environments.

Table 5. Varbrul weightings for non-standard *was/n't* and non-standard *were/n't* in Ocracoke, North Carolina (*Source*: Schilling-Estes & Wolfram 1994:284)

Levelled *was/n't*		Levelled *were/n't*	
Ext.*there/it*	.87	Ext.*there/it*	.85
NP	.72	NP	.29
PRO	.31	PRO	.52
Positive	.50	Positive	.41
Negative	.47	Negative	.99

A similar interaction between polarity and subject type is identified by Tagliamonte (1998:162, 177) in her York data; third-singular NPs trigger *weren't* at a rate of just 8% while the pronoun *it* occurs with *weren't* forms at a rate of 62%. Interestingly, tag questions of the type *He was shorter and stockier, weren't he?* are a favouring syntactic context for non-standard *weren't* Tagliamonte (1998:164, 178). This tendency parallels

the favouring effect of inversion on the uses of non-standard singular forms in plural environments identified by Pietsch (2005:166) in the *SED* such as *They're very affectionate, is pigs* and *Doesn't'em*? Thus, it appears that the syntactic constraints that govern processes of levelling share commonalities regardless of the direction of the levelling process, i.e. regardless of whether the extended form is non-standard *was/n't* or non-standard *were/n't*.

To return to the data in Table 4, the manner in which the levelling process diverges most dramatically from other varieties in the third-person plural pronoun context in Buckie English, Scotland requires explaining. Despite high rates of *was* in other pronominal environments (*you* sg. 91%, *we* 73%) and with existential *there* (91%) and third-person plural NP subjects (81%), *they* triggered the standard variant *were* categorically (N = 118). Crucially, what differentiates Buckie English from the other varieties is the strength of the NP/PRO constraint in northern varieties. The results in Figure 2 demonstrate that a robust NSR effect is preserved in the third-person plural context in the speech of elderly people (80+) in this small Scottish community. The data gathered for younger age groups (22-31 years, 50-60 years) reflects a slight decrease in the use of nonstandard *was* across all grammatical persons, but the constraint remains robust, and the constraint that impedes the use of *was* with *they* holds without exception (Adger & Smith 2005).

Continuity with the historical record can also be held to account for the high occurrence of non-standard second-person singular *was* in Buckie English. The use of *was* in the second-person singular is a feature traceable to Middle English for the North as previously mentioned. Traditionally however in the north, the occurrence of verbal-*s* with *we* and (pl.) *you* (as with *they*) would have been subject to an adjacency constraint as Montgomery's Scots examples in (8), repeated here as (15) illustrate.

(15) a. *Alswa,* ***we grant*** *and ley* ***hechtis*** (Old Scots Legal Document, *Memorials of the Montgomeries*, vol.2, 17)

b. ***Thai see****, or* ***heris*** *tell* (*Complaynt of Scotland*, 11)

c. ***Ye haif*** *begylit thaim and causit thaim to skayll their fokkis* ***and*** *now* ***hes*** *gadderit oder souerance* (*Correspondence of Mary of Lorraine*, 15).

There are only two contexts of finite preterite *be* with non-adjacent pronoun subjects in Montgomery's fourteenth- to seventeenth-century Scots data and in both cases *were*

occurs, although clearly the rarity of the syntactic context impedes conclusive comment. Nevertheless, a variable proximity constraint does appear to govern the distribution of *is* in Montgomery's data (Montgomery 1994:90). This suggests there is reason to believe the effect of proximity also extended to the distribution of *was*. Unfortunately, the occurrence of *was* in plural second-person contexts in Buckie cannot be assessed due to the fact that examples of second-person plural *you was/were* did not occur in the data. In contrast, the widespread (73%) use of *we was* in the first-plural context is an innovation in line with non-standard usage in other varieties. The fundamental question is whether this innovation, i.e. the use of *we was* as opposed to *we were*/*we always was* is the result of dialect levelling or the next step in the advancement of the system towards a fully regularised paradigm.

Pietsch (2005:149) suggests that accounting for *was*/*were* variability and non-standard *was* usage in northern varieties is complicated by the fact that under the effects of dialect-levelling, *was*-regularization occurs alongside other non-standard verbal concord patterns such the Northern Subject Rule system.

> Variation between *was* and *were* in the northern dialects is a highly complex field. This is due to the fact that it tends to follow only partly the pattern defined by the NSR, with *was* and *were* behaving the *-s* and zero forms of other verbs. This pattern is often overlaid with other complementary or competing rules of variation specific to *was* and *were* alone.

But are the historical patterns of Buckie English overlaid with unrelated rules of variation, or are the effects of the NSR and those found to govern *was*/*were* variability in other dialects part and parcel of the same process? The distribution of plural *was* in non-northern varieties is no less random than in the northern varieties. In all of these varieties of English we witness the breakdown of the person and number distinction and the effect of subject type emerges as a robust linguistic constraint across the board. The manifestation of the effect of subject need not have been identical in all dialects but the drive towards the eradication of the inherited person and number distinction is shared by all non-standard varieties alike, as is the tendency for subject type to govern the resulting variability. From this perspective, the NSR is the local manifestation of a constraint that characterises all levelling processes in English.

The third-person plural noun phrase vs. pronoun effect at the crux of the NSR is

also observed in Tristan da Cunha English spoken in the South Atlantic (Schreier 2002) and has also been identified as conditioning the distribution of *was* in southern British dialects in Somerset and Devon (Tagliamonte 2009:1150), which suggests that the term Northern Subject Rule may in fact be a misnomer for a constraint which is in fact less local and rather more universal than has previously been assumed. In a comparative study of the distribution of *was* in thirteen different dialects, Tagliamonte (2009) confirms the existence of strongly ordered opposition pairs such as NP vs. pronoun and existential vs. nonexistential, although only the latter constraint is afforded universal status by virtue of the fact that it is considerably less region dependent. Her results show that the strength of the 'Northern' Subject Rule constraint varies according to local conditions, but is not necessary restricted to northern (or northern influenced) dialects.

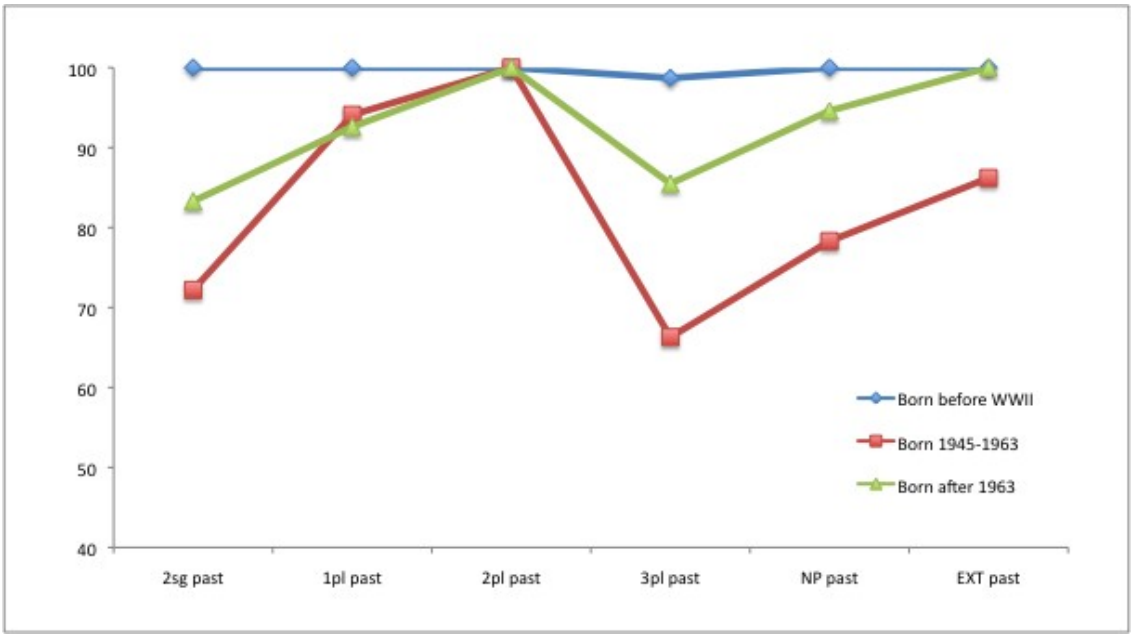
Tagliamonte's data are culled from speech communities selected to explore the hypothesis that AAVE is a direct descendant of colonial British English rather than of a creole precursor. The speech communities involved African American enclaves in Novia Scotia (Canada) and Samaná (Dominican Republic), several Irish, Scottish and northern English communities and those of Tiverton and Somerset in southwest England. All of these communities demonstrated a robust NP/PRO constraint with the exception of the community of Samaná where *was* levelling was equally advanced (and near categorical) in both NP and pronominal environments. For many scholars (Godfrey & Tagliamonte 1999; Poplack & Tagliamonte 2001) the striking parallels between non-standard varieties of English is a diagnostic of settler influence. It is argued that the NP/PRO constraint in particular is a legacy of the dialects brought across the Atlantic by British settlers. Given that the NSR has traditionally been one of the defining characteristics of northern English dialects including Scots since Middle English times and was first attested in the northern dialects, its occurrence outside of the region is generally attributed to diffusion, and indeed it often is. The NSR in Ulster-Scots is undoubtedly due to Scots influence and from here diffused across the Atlantic. In explaining the prevalence of NSR-type concord in non-standard varieties of American English, diffusionist accounts generally suggest the subject-verb concord system was taken to the northern Irish province of Ulster by Scottish settlers in the seventeenth century and reached North America via the migration of Ulster-Scots in substantial numbers in the eighteenth century (Montgomery 1997).

An alternative hypothesis might propose that the pervasiveness of the

morphosyntactic constraint and the geographical breadth of its influence suggest a predisposition within varieties of vernacular English to accommodate a concord system based on subject type that is in effect triggered when morphological variation brought about by processes of levelling effectively eradicates the inherited system based on person and number. Evidence that such a system can come into play without contact influence comes from Tristan da Cunha in the south Atlantic.

The speech community of the islands of Tristan da Cunha in the south Atlantic is a particularly interesting case of *was*-regularization (Schreier 2002). The unique sociolinguistic situation of this once extremely isolated community and the contact dynamics effecting the speech patterns of early settlers led to *was* regularization advancing to the point where *were* forms no longer existed in the speech of the oldest members of this speech community, in other words, *was*-levelling went to completion (showing 100% levelling to *was* across all subject types except the third-person pronoun *they* which shows near categoricality at 98.7%). In recent years, standard *were* has been reintroduced back into the speech community due to increasing geographical mobility and exposure to a prestigious standard variety. This would not in itself be remarkable were it not for the pattern this 'deregularization' process adheres to. Schreier shows that non-standard-levelled *was* is not lost haphazardly, but that subject type is a crucial factor in determining where non-standard *was* continues to occur. Interestingly, the patterning of *was* among the younger age group (born after 1963) as against the middle-aged age group (born 1945-1963) deviates from what is usually found. Middle-aged speakers use more standard forms (i.e. less non-standard *was*) than younger speakers. Despite these quantitative differences, the subject constraint retains the same direction of effect across age groups with a distinct tendency for NP subjects to trigger non-standard *was* more so than *they* subjects, as a comparison of the data for different-aged speakers in Figure 3 shows.

Figure 3. Distributional analysis of *was* levelling in Tristan da Cunha English (based on Schreier 2009:73)



The hypothesis that the NSR-like patterns do not necessarily rely on northern input gains support from the case of Tristan da Cunha English. Comparable too, is the pattern of 'deregularisation' observed in the southwestern dialects of England that had undergone the generalisation of *-s* over the whole paradigm, hence *I*/*you*/*he*/*we*/*they reads* (Ihalainen 1994:210; Klemola 2000:329). The introduction of a competing uninflected variant has resulted in variation between *-s* and zero that adheres variably to the same subject effects found at the crux of the NSR (see section 3.2.2).

Further evidence that subject-type effects can develop spontaneous and independently from external influence comes from recent developments in East Anglia where a concord system that displays an apparent reversal of the NSR has emerged in recent years (Rupp 2006; Britain & Rupp 2005). The constraint applies to present tense *-s* markings and to the past tense variants of *be*. It was found that *-s* markings and *was* (when they occurred) were more common after pronouns than NPs in both the singular and plural, hence: *the cat purr* versus it purrs and *the cats were purring* versus *they were purring*. The constraint had been recorded for an area stretching across East Anglia, a region where traditionally *-s* is absent (Trudgill 1974:1998), from the Fens to Essex.

The findings of these studies add a further interesting dimension to the issue of whether NSR-like patterns found outside of the north of Britain are the result of

independent development or diffusion. Recall Schendl's assertion that external factors alone could be held to account for NSR-like patterns in Early Modern London English: "Since this is a highly complex syntactic rule […], it is extremely unlikely that it could have developed independently, i.e. without Northern influence, in the standard language" (2000:264). Both Wright (2002:244) and Schendl (1996:153-154, 2000:264) suggest that the NSR pattern became a feature of the koinë spoken in Early Modern London English by northern speakers migrating to London. Yet northern input cannot explain NSR-like patterns in Tristan da Cunha, or in southwest England, nor the recent developments of East Anglia. The results of the present study also show that variation between competing variants in a similar sociolinguistic scenario of population and language contact is also governed by subject and adjacency effects regardless of external influence (see section 5.5 for discussion of the hypothesis that the NSR is the result of Celtic substrate influence).

Evidence to emerge from the literature on regularisation processes in other Germanic languages also bolsters the hypothesis that a language-internal family universal trend, rather than external input, may explain the prevalence of the subject-type constraint in varieties of vernacular English. In section 3.4 I mentioned a regularisation process comparable to the levelling of *-s* in Old Northumbrian and that of *was* in vernacular varieties of English that occurred in the present indicative in the mainland Scandinavian languages whereby the singular *-r* ending was levelled into the plural. Larsson (1988) is the most detailed analysis of this process in Swedish. His study documents the levelling of the present-indicative singular *-r* ending into the plural in Swedish in a range of fifteenth- to nineteenth-century texts including late medieval legal documents, dramatic texts, letters and memoirs. During the Early Modern Swedish period a dual system of inflection developed in Swedish whereby the singular verb form *-r* was generalised in the spoken language and *-a* generalised in the written language, thus replacing the inherited plural verbal inflections *-um*/*om*, *-in*/*en*, *-a* (Larsson 2005:1276). Nonetheless, competition between the systems was a feature of both the spoken and written language and is witnessed in a variety of text types from the early Modern period onwards.

Larsson's (1988) quantitative analysis of *r*-levelling in Swedish demonstrates that the regularisation process is sensitive to subject type, word order and phonological context. With regards to the effect of subject type, non-pronominal subject types such as full NPs, relative pronoun subjects with plural antecedents and in particular,

coordinated NP subjects favour -*r*, whereas personal pronoun subjects continue to occur more frequently with the inherited plural endings (Larsson 1988:73-75). The effect is particularly robust in the non-dramatic texts. The results of Larson's analysis for the first, second and third person plural are summarised in Table 6.

Table 6. Distribution of -*r* ending in plural contexts according to subject type in fifteenth- to nineteenth-century Swedish texts. *Source*: after Larsson (1988:73-74, Tables 12 & 13). [Percentages in parenthesis indicate small data samples].

	Personal prn %	Relative prn %	NP %	NP + NP %	Other %
Dramatic texts	14.9%	15.1%	18.5%	42.9%	21.9%
Arboga	2.3%	54.8%	5.2%	57.8%	2.4%
Letters	5.8%	7.4%	17.8%	83.2%	(20%)
Memoirs	8%	20.3%	20.9%	69.5%	(17%)

While this patterning constitutes a reversal of the pattern witnessed in Late Old Northumbrian in the sense that in Swedish the levelled -*r* ending is favoured by non-pronominal endings whereas -*s* in Old Northumbrian is favoured by pronoun subjects, the observed variation is nevertheless indicative of the working of a NP/PRO constraint. Furthermore, the patterning of -*r* replicates the same direction of effect observed for plural *was* usage in non-standard varieties of English and strengthens the hypothesis that a concord system based on a pronominal versus non-pronominal distinction comes into play when an inherited agreement system based on person and number features becomes opaque.

The relative positioning of the verb with regards to its subject is also a relevant determiner of the rate of plural-*r* in Swedish. Verb-subject word order triggers higher rates of the singular ending with both pronominal and non-pronominal subjects, particularly in the dramatic texts (Larsson 1988:78). Larsson notes that phonological context, namely the nature of the following segment, also plays a role in determining the appearance of the singular ending. In the early dramatic texts, there is as statistically significant effect whereby a following pause favours the occurrence of plural-*r,* especially in subject~verb word order. The effect, however, is reversed in the *Arboga stads tänkebok* records where a following pause favours the retention of the inherited forms in contrast with following consonantal and vocalic segments that are found to favour plural-*r* (Larsson 1988:79-82).

3.6 Summary

The detailed survey of subject and adjacency effects in historical and present-day varieties of English, as well as in other Germanic languages, demonstrates that subject type is a key feature in determining the distribution of morphological variation. When set within a broader framework of variation, the NSR in northern varieties may plausibly be viewed as the categorical manifestation of a tendency prevalent in English as a whole for subject type to govern the selection of morphological variants in linguistic situations in which levelling or erosion has triggered variation. However, the trend manifests itself differently across varieties; the constraints that are categorical in some dialects are tendencies in others. The similarities between the type of subject that is favoured by default markers in non-northern varieties and in weaker manifestations of the rule in transitional zones between the North and Midlands and in northern varieties heavily affected by standardising influences, such that existential *there*, relatives clauses and coordinated NP subjects behave similarly in their choice of morphological variant compared with personal pronouns (note too how such patterning characterised levelling processes in Swedish) suggest that we are dealing with manifestations of the same tendency. The variability found in non-northern manifestations of the rule may be the result of other pressures such as competing grammars and standardisation.

In variable terms, the NSR would predict a higher rate of one variant with non-pronominal subject types than with pronoun subjects and this broad trend is observable in a variety of English dialects outside the North. While there is no denying that the prevalence of the constraint in overseas varieties of English suggests NSR-like patterns found in non-standard varieties of American English and AAVE are traceable to the patterns of speech brought over by early British and Irish settlers, the prevalence of the rule in these varieties also indicates a predisposition within the grammatical system for subject type to compete with person and number as an alternative concord system. The fact such rules are operative in varieties where northern input plays no role, including other Germanic languages other than English, suggests that while contact scenarios are conducive to morphological variation and the triggering of levelling processes that bring about variation, the constraint mechanisms governing the occurrence of competing variants are internally motivated. Chapter 4 will discuss the first attested manifestation of a subject type effect in English.

4. A variationist study of *-s*/*-ð* present-tense markings in Late Old Northumbrian

Two analyses constitute the basis of the present dissertation; a multifactorial statistical analysis of variation between the present-tense suffixal forms *-s* and *-ð,* discussed here in chapter 4, and a contextual and quantitative analysis of reduced verbal morphology in the gloss discussed in chapter 5. I begin chapter 4 by discussing methodological preliminaries in relation to these data analyses such as data collection and coding criteria before going on to outline the methodology employed. A further aspect I consider is the unreliability of the text editions of medieval sources for linguistic research. The rest of chapter 4 discusses the results of several multivariate and statistical analyses of the factors influencing the distribution of *-s* and *-ð* in late Old Northumbrian. Each explanatory variable, including those found not to have a statistically significant effect, is discussed in detail.

4.1 Data and Methodology

4.1.1 Methodological preliminaries

Methodological problems arise in the study of historical data at the best of times and these problems are particularly acute in the case of late Old Northumbrian. Extant northern material from the relevant period is far from abundant and that which remains is limited in scope consisting solely of interlinear glosses to Latin manuscripts. The skewing effect of the Latin original on the English gloss and the constraints and requirements of the glossing process itself have been noted repeatedly in the literature (Pulsiano 2001; van Bergen 2008; Benskin 2011), and make it debatable to what degree written documents of this nature are accurate representations of actual speech. Certainly word-for-word glosses do not yield evidence on word order, although in the case of morphological and phonological considerations they might be considered more reliable. Unfortunately for a variationist study of the present kind in which social factors undoubtedly played a role in conditioning variation, the Old Northumbrian texts do not lend themselves to sociolinguistic analysis, as there is no way of weighing up language-external explanatory variables such as age or social class (or gender), or stylistic considerations like text type or register. While it seems safe to assume that our witnesses for the Old Northumbrian period were probably written by male scribes of

the same status, nothing is known of their provenance. In the case of *Lindisfarne*, the glossator's command of the Northumbrian dialect suggests a northern birthplace, but northern as opposed to southern Northumbrian origins cannot be assumed, as previously discussed. His likely reliance on other sources in writing the glosses (or the possible involvement of other hands of unknown provenance) further complicates the picture of pinpointing the geographical provenance of the linguistic features.[18] It is also debatable to what degree the linguistic forms used in such texts reflect the vernacular of the writers themselves, and not the dialectal forms of the sources upon which the scribe may have relied, or an attempt to capture a conventionalized norm. Furthermore, given the liturgical nature of the genre, we cannot assume that word frequency in these texts necessarily represents word frequency in Old Northumbrian. As Gries & Hilpert (2010:297) note:

> Corpora are always incomplete models of some linguistic reality, but they are of course particularly imperfect when it comes to diachronic data. That is to say, they are spotty in the sense of covering only particular genres, particular kinds of authors, particular kinds of dialects … the fact we are dealing with an ultimately finite sample of data from the past makes it impossible to even approach the sizes and degrees of representativity of data that synchronic studied of PdE can utilize.

The shortcomings of the data are compensated, however, by the fact that the late Old Northumbrian texts offer a substantial record of tenth-century verbal morphology in the North that constitutes a synchronic snapshot of the change in progress under discussion. Our written witness in this case also affords an ample data set, even by modern sociolinguistic standards, that provides interesting informative insights into the factors conditioning variation between *-s* and *-ð* in late Old Northumbrian.

4.1.2 Data collection and coding

The data for the present study were drawn from the standard edition of the Latin

[18] As previously mentioned in chapter 2, the question is one of importance because influential hypotheses have been built on the assumption that the language of the gloss reflects the speech of northern Northumbria. Several scholars (Thomason & Kaufman 1988:280, 303; Samuels 1989:276; Millar 2000:47, fn.17) have observed that the *Lindisfarne* glosses might not be the most apt reflection of contact-induced change given the text originated in the northern part of Northumbria that lay outside of the most heavily Scandinavianized area known as the 'Scandinavian Belt' (Samuels 1989:111). This perspective, however, is not unproblematic, principally because it assumes the glossator was from Bernicia, northern Northumbria, and in doing so ignores the fact that nothing is known about Aldred's birthplace, if indeed Aldred was single-handedly responsible for writing the gloss at all (see section **).

Gospelbook known as the *Lindisfarne Gospels* (Skeat 1871-87) collated with the facsimile copy of the manuscript (Kendrick, T. D. et al., 1960), and comprise a corpus of ** words. Skeat's edition is marred by inaccuracies and editing conventions that arguably obscure phonological and morphological change and makes a collation with the original manuscript indispensable.[19] The problems posed by Skeat's editorial practice for a quantitative variationist study on verbal morphology of the present kind, and especially for a study on reduced verbal morphology, will be discussed as they arise in the cause of what follows. Here I limit myself to discussing the two main areas in which Skeat's editorial methods potentially undermine the accuracy of data solely reliant on Skeat's text as their source.

A peculiarity of scribal practice in the gloss is the glossator's frequent use of abbreviated forms that are generally marked with a slanting horizontal stroke or serpentine squiggle in the MS (see section 2.3). Abbreviated present-indicative forms include *ondatt*' ~ *confitebantur* f. 241rb 20; *cym*' ~ *ueniemus* f. 245ra 17-19; *geberht*' ~ *clarificabit* f.248ra 5 and *behald*' ~ *videte* f.121vb 11. In order to facilitate "general utility", Skeat expands the truncated forms found in the gloss using italics to denote the letters which are omitted in the MS, for instance *cym* ~ *ueniemus* f. 245ra 17-19 is expanded to cym*as* at (Lindis.Jn.Skeat1871, 14:23). He does so by his own admission, "as required by the grammar" (1871-87, xxviii). But as Fernández-Cuesta (2009) points out, "judging by his expanded forms, the grammar Skeat is referring to is not the Northumbrian grammar, but the West Saxon semi-standard, as described in the paradigms of the traditional Old English Grammars." In the case of expanded present-indicative verbal forms, Skeat's general preference for suffixes ending in -*s* suggests a conscious effort to retain the northernness of the text, thus cym[*as*] ~ *ueniemus* (Lindis.Jn.Skeat1871, 14:23), geberht[*es*] ~ *clarificabit* (Lindis.Jn.Skeat1871, 16:14), behald[*as*] ~ *videte* (Lindis.Mk.Skeat1871, 13:9) and ondatt[*að*] ~ *confitebantur* (Lindis.Jn.Skeat 1871, 12:42) Skeat's insertion of -*s*/-ð endings is nevertheless arbitrary and random and obscures the phonological and morphosyntactic constraints conditioning present-indicative suffixal variation in the gloss, so clearly these tokens were not included in the dataset.

A further criticism that might be levelled at Skeat is that he categorically

[19] An unpublished collation of Skeat's edition against the manuscript by Ross & Chadwick reveals "about twelve hundred errors" (Blakeley 1949/50:15-16, quoted in Benskin 2011:167, fn.24). See also Fernández Cuesta (2009) for detailed discussion of Skeat's editing conventions and Lass (2004) for more general discussion on the use of editions for linguistic analysis.

interprets alterations made to forms in the MS as correction. Ross, Stanley & Brown (1960:19) note that alterations made to forms in the MS by under- or over-lining, dotting and so on, do not necessarily remove erroneous forms, but is simply a short-hand way of indicating variant forms: "the alteration is merely from one (correct) variant form to another." A further example of Skeat's methodology comes from Matthew. In the margin, he notes that the pronoun *hia* in the sequences *ða ondueardas ł hiaondsuerigað him ~ tunc respondebunt ei* at f. 80ra 9 (Mt. 25:37) and *ða ðe ne suppas hia deað ~ gustabunt* at f. 60vb 15 (Mt. 16:28) has been either under- or over-lined which Skeat interprets as a correction on the glossator's part leading him to exclude the pronouns from the main body of the text.

Occasionally in the MS there are also instances where < s > is added as an alternative suffix to < ð >, or vice versa, sometimes with dotting above and/or below the original suffix. The excerpts in (16) illustrate instances in the MS where alternative forms are added by the glossator. Instances of this particular phenomenon are restricted to the Gospels of St. Mark and St. John.

(16) a. Li. *friond uutudlice ðæs brydgumes seðe stondas 7 geheres hine mið gefea* ***gefeað/s***[20] *ł bið glæd*
L. *amieus autem sponsi qui stat et audit eum gaudio gaudet*
f. 216vb 1 (Lindis.Jn.Skeat1871, 3.29)
"the friend of the bridegroom who stands and hears him, rejoices"

b. Li. *seðe spreces ðec mið he is ł ðe is... þte ðaðe ne* ***geseað/s***[21] *hia geseæ*
L. *qui loquitur tecum ipse est... ut qui non vident videant*
f. 233vb 17 (Lindis.Jn.Skeat1871, 9.37-39)
"it is he who speaks with thee...that whoever sees they might not see"

c. Li. *ne se gestyred heorta iuerro ne æc* ***ondredes/ð***[22] *ł ne onscynað*
L. *non turbetur eor uestrum neque formidet*
f. 245rb 18 (Lindis.Jn.Skeat1871, 14.27)
"Let not your heart be troubled not afraid"

[20] A superscripted < s > appears written above the < *ð* > of *gefeað* with no dotting.
[21] With dotting above and below the < ð > of *geseað* and a superscripted < s >.
[22] The form *ondredes occurs* with dotting above the < s > and a superscripted < *ð* >.

d. Li. *gemynas gie uordes mines ðone ł þ ic cuoeð iuh...iuh hia* ***geoehtas/ð***[23]
L. *mementote sermonis mei quem ego dixi uobis...uos persequentur...*
f. 246vb 20 (Lindis.Jn.Skeat1871, 15.20)
"Remember the word that I have said unto you...they will persecute you"

e. Li. *þte...bycges ł ceapas him mette ða* ***ettes/ð***[24]
L. *ut...emant sibi cibos quos manducent*
f. 107rb 17 (Lindis.Mk.Skeat1871, 6.36)
"that...they buy themselves food to eat"

Skeat interprets the alternative verbal suffixes added by the glossator as corrections rather than as alternative forms. Yet, the commonplace scribal practice of providing alternative glosses for a single Latin term, separated by Latin *vel* 'or' (abbreviated to ł in the manuscript), extends not just to nominal and verbal forms, as in the double gloss *berað* ł *bringeð* for the Latin plural imperative form *adferte* at f. 258rb 1 (Jn.21:10), but even to pronouns, so at f. 247rb 8 (Jn.15:26) the Latin nominative plural demonstrative form *ille* is double glossed as *he* ł *ðeilca.* Similarly, *hia* ł *ða ~ ille* at f. 30rb 3 (Mt.2:5) and *hea* ł *ða ilca ~ eos* at f. 33vb 12 (Mt. 4:22) are also double glosses. The excerpts in (17) are a good example of how scrupulous the glossing process could be:

(17) a. Li. *giwiasge ł gebiddas 7 gesald bið iuh soecað ge 7 ge infindes ł ge begeattas cnysað ge ł cnyllas…*
L. *petite et dabitur uobis quærite et inuenietis pulsate*
f. 39ra 23 (Lindis.Mt.Skeat1871, 7:7)
"Ask, and it shall be given you; seek, and ye shall find; knock …"

b. Li. *cyðnisse ł uitnessa usa ł userna ne onfoasgie*
L. *testimonium nostrum non accipitis*
f. 215vb 1 (Lindis.Jn.Skeat1871, 3:11)
"our witness ye receive not "

Some double glosses attempt to capture the precise meaning of the Latin by providing English synonyms such as *gie doas* ł *wrycas ~ facitis* f. 109ra 15 (Mk.7:13), whereas

[23] The < s > of *geoehtas* has a superscripted < *ð* > and no dotting.
[24] The < s > of *ettes* has a dot above it and a superscripted < *ð* >.

others provide alternative grammatical/morphological forms as in *ne habbas* ł *nabbas* ~ *non habent* (f. 55vb 20, Mt.14:16) or *næfis* ł *nehæfeð* ~ *non habet* (f. 52ra 18, Mt.13:12). The present study follows Ross, Stanley & Brown (1960:19) in viewing these alternative endings as variants forms. It adopts the view that the insertion of alternative verbal suffixes should be interpreted within the broader framework of double glossing, a textual commonplace in the gloss. The insertion of *-s* at f. 233vb 17 (example 16b), as an alternative ending to *-ð* (*geseað/s*), is merely a shorthand way of indicating the same sort of variation which is more explicitly stated by the glossator on other occasions, as in the case of *ge seaðgie* ł *giegeseas* ~ *uideritis* at f. 192va 8 (L.21:20).

Another instance that highlights the unsuitability of text editions for linguistic analysis is that of Lindis.Mt.Skeat1871, 7:7, illustrated in (17). In the manuscript, the pronoun <gie> is in immediate proximity to the verb form <giwias>, thus <giwiasgie> and <ł gebiddas>, with no immediately following pronoun subject, has been inserted above as an alternative. Similarly, a couple of lines further on <cnysað ge> occurs in the main body of the text with the alternative form <ł cnyllas> inserted above. Skeat, however, edits these sequences as *giwias* ł *gebiddas ge* and *cnysað* ł *cnyllas ge,* thus rendering the text edition both useless and misleading for the purposes of an investigation into the effects of adjacency on ONrth verbal morphology.

Apart from fragmentary excerpts, none of the extant tenth-century Old Northumbrian documents have been tagged or parsed, so occurrences of verbal forms with *-s, -ð* and vocalic 'reduced' endings were retrieved manually.[25] While manually collecting data is clearly laborious and time consuming, it has the advantage of providing the researcher with a more contextual and insightful understanding of the dynamics of the text. The automatic retrieval of parsed forms would have had the effect of reducing the verb forms to less informative inventory-style lists devoid of context. In the absence of fully tagged transcriptions the extraction of tokens relies on reading and note-taking and there may be errors/omissions. In order to reduce the possibility of omissions the extracted tokens were also collated against Blakeley's word lists for *Lindisfarne* (1949/50:29-46) which were complied using Chadwick's *Index Verborum to the Lindisfarne Gospels* (1934) and the collated text. I trust that any errors that might remain are minor and do not undermine the validity of the findings discussed herewith.

[25] See the *Seville Corpus of Northern English* (*SCONE*) http://ingles3.us.es/ for parsed editions of early Old Northumbrian material that have been collated against facsimiles of original MSS including excerpts of the *Lindisfarne* glosses.

For the study of 'reduced' verbal morphology in the present indicative, all occurrences of present-indicative verbal forms with no consonantal ending were extracted from the text. In order to carry out an investigation into the possible historical source(s) of reduced plural morphology, all instances of preterite-present and preterite indicative and subjunctive morphology were gathered from the gospels. These tokens were analysed contextually and qualitatively and coded according to subject type in order to carry out a quantitative study. Given the near categorical use of reduced forms in the present subjunctive (de Haas 2008:123), these verbs forms were not assessed quantitatively. Only instances of 'reduced' verb forms with vocalic endings of the type *giebidde* f. 37rb 20 (Mt.6:9), *genomo* f. 109ra 18 (L.20:20) were considered, as opposed to fully abbreviated forms such as *bismer*' f.199ra 23 (L.23:36) or *ondatt*' f.241rb 20 (Jn.12:42). The token lists of preterite present and preterite forms upon which the analyses discussed in Chapter 5 are based are provided in Appendices F and G respectively.

For the multivariate analysis on variation between *-s* and *-ð*, every instance of a first, second, third plural and third singular present form with an *-s* or *-ð* ending, including spelling variants, was extracted from the gospels, including the forms found in the prefaces. The resulting corpus consisted of 3053 present-indicative and imperative tokens with *-s* or *-ð* endings. The resulting token lists, which form the basis of the analyses discussed in chapter 4, can be found in Appendix D.

Owing to the idiosyncrasies of scribal practice and the glossing process itself, very specific dilemmas arise in coding a text of this nature. In the case of multiple glosses of the kind described above, such as *ne habbas* ł *nabbas ~ non habent* f. 55vb 20 (Mt.14:16); *berað* ł *bringeð ~ adferte* f. 258rb 1 (Jn.21:10) both variants were included in the counts. Instances of verb forms with a 'double' subject of the type, ***worda mina*** *in iuh* ***hia*** *gewunias ~ verba mea in uobis manserint* 'My words in you they abide' f.246ra 6 (Jn.15:7), or ***he*** ł ***ðe ilca*** *cyðnise getrymes of mec ~ ille testimonium perhibebit de me* 'He bears witness of me' f. 247rb 8 (Jn.15:26) received double entry, i.e. the verb form was coded for each subject type. On those occasions where the glossator double glosses a Latin verb form and inserts a pronominal subject, but does not do so specifically for each verb form, for instance compare *gie doas* ł *wrycas ~ facitis* f. 109ra 15 (Mk. 7:13) with *ge nimeð* ł *ge gihabbað ~ retinueritis* f. 257ra 16 (Jn. 20:23), both verb forms were deemed to be governed by the same pronominal subject and were coded accordingly. This at least was the coding criterion

adopted for the analysis of subject-type discussed in sections 4.2.2 and 4.2.3. In the analysis that tested for the effect of adjacency (section 4.2.5, the element of a double gloss that was not in immediate proximity to the personal pronoun due to an intervening *vel* element (*wrycas* in the example above) was coded as having a non-adjacent pronoun subject.

A further methodological issue in *Lindisfarne* is whether to treat the text as a whole or to divide it according to some data-driven criterion. Older studies on *Lindisfarne* tended to divide the data taken from the gloss strictly according to gospel (Holmqvist 1922). Since Brunner (1947/48) the custom has been to divide the whole gloss arbitrarily into sections of equal length (Blakeley 1949/50) or to subdivide the data at the point Brunner found a marked change in linguistic properties around Mark 5:40 (van Bergen 2008). A similar approach was adopted in the present study; by randomly splitting the data up into sections of equal length data-driven patterns in the text emerged (see section 4.2.4 for detailed discussion). These preliminary analyses demonstrated a marked difference in behaviour between Matthew and the rest of the gospels which suggests the effect of subject type is lost as the process of levelling nears completion. For the purpose of the multivariate analyses discussed in this chapter and in order to control for the near-invariant effect of the Matthew data, the data were therefore divided into two data sets comprising Matthew/Mark/Luke/John (N = 3053) and Mark/Luke/John (N = 2016).

Excerpts from the text are from the facsimile of the manuscript (Kendrick et al. 1960) by folio, column and line; chapter and verse are also provided for convenience and ease of verification. Citations form the preface material are indicated by the insertion of an asterisk and are by page and line. Latin and OE abbreviations are silently expanded except in the case of verbal forms. In these cases, apostrophes indicate abbreviations in the Old English gloss where these are explicitly marked as such by the glossator. The symbol *7* represents the abbreviation for Old English *and,* while the symbol ł is the abbreviation used for Latin *vel* 'or' which occasionally occurs even when no second gloss follows as in <clænsunge ł> (L. purificationem) f. 214ra 13. In order not to force parses upon the reader that were not originally intended by the scribe, renderings from the manuscript respect the original word-division conventions intended by the scribe. There is a tendency throughout the gloss to attach clitic elements such as personal pronouns and negative particles to verb forms but to separate compound elements and affixes from stems, e.g. *ge seaðgie* ł *giegeseas* ~ *uideritis* at f.

192va 8 (L.21:20). Throughout this paper *-ð* will be used to refer to the present-indicative voiceless interdental fricative ending [θ] in OE whereas *-th* will be used for ME and EModE. In excerpts taken from particular manuscripts, however, the exact spelling variant that occurs (*ð*, *þ* or *th*) will be reported. The suffixes represented by *-ð, -th, -s, -n* also imply *-eð, -eth, -es, -en* and all the numerous alternative vocalic spellings with *i*, *y*, *u*, *a*, *o*, u depending on mood, tense and dialect. The non-consonantal realisation of the plural marker in any tense or mood is referred to as either 'reduced' or *-e*/*Ø* with *-e* implying *-a*/*o*/*u* where relevant.

4.1.3 Explanatory variables

In view of the various factors that have proved important in previous literature on present-tense marking patterns, it was decided to test for the effects of the following independent variables listed in Table 7. The effects of ADJACENCY and WORD ORDER were also evaluated (see section 4.2.5), as were factors specifically pertinent to the genre and dialect under scrutiny, such as the possible priming effect exerted by the Latin original upon the scribe's choice of verbal inflection (see section 4.4.2). The relevance of these explanatory variables and the results of the data analyses will be discussed in what follows.

Table 7. Linguistic factor groups considered in *Rbrul* logistic regression analyses

Factor Group *Factors*	*Example Token*
GRAMMATICAL PERSON	
personal pronoun *he, hiu*	*he hæfeð lif ece ~ habeat uitam aeternam* 'He will have everlasting life' (Jn.3:15)
personal pronoun *we*	*þæt ue gesegun we getrymes ~ quod uidimus testamur* 'What we have seen we testify' (Jn.3:11)
personal pronoun *gie*	*huu minum uordum gelefes gie ~ quomodo meis uerbis credetis* 'How will ye believe my words?' (Jn.5:47)
personal pronoun *hia*	*nedro hia niomas ~ serpentes tollent* 'They shall take up serpents' (Mk.16:18)
noun phrase (sg)	*se gast ðer uil oeðað ~ spiritus ubi uult spirat* 'The spirit blows where it will' (Jn.3:8)
noun phrase (pl)	*ða scipo stefn his geheras ~ oues uocem eius audiunt* 'The sheep hear his voice' (Jn.10:3)
'zero' subject (2pl)	*huæt bituih iuh gefraignes ł frasias ~ quid inter uos conquiritis* 'What question (ye) among yourselves?' (Mk.9:16)
'zero' subject (3sg)	*heono eauunge sprecað ~ ecce palam loquitur* 'Behold, boldly

	(he) speaks' (Jn.7:26)
'zero' subject (3pl)	*7 noht him cuæðas ~ et nihil ei dicunt* 'And (they) say nothing to him' (Jn.7:26)
relative clause (sg)	*lomb godes seðe nimeð ł lædeð synne middangeardes ~ agnus dei qui tollit peccatum mundi* 'The Lamb of God who takes away the sin of the world' (Jn.1:29) seðe *gelefeð in sunu… ~ qui credit in filium* 'He that believes in the Son…' (Jn.3:36) *seðe word* […] *min gehaldes deað ne gesiið ~ qui sermonem* […] *meum seruauerit mortem non uidebit* 'He that abides in my word, shall not see death' (Jn.*5:17)
relative clause (pl)	*uðuutum ðaðe wallas in stolum geonga ~ scribis qui uolunt in stolis ambulare* 'Scribes who love to parade in long garments' (Mk.12:38) [*stefn sunu godes*] 7 *ðaðe geherað ~ uocem filii dei et qui audierint uiuent* 'Those that hear [the voice of the Son of God]' (Jn.5:25)
demonstrative pronoun	*huoenne ł ðonne ðas alle onginnað ~ quando haec omnia incipient* 'When shall all these things begin?' (Mk.13:4)
indefinite pronoun	*gif hua uord min gehaldað deað ne geseað in ecnisse ~ si quis sermonem meum seruauerit mortem non uidebit in aeternum* 'Whoever abides in my word, shall never see death' (Jn:8.51)
pl. imperative *gie*	*geseas gie ~ videte* 'Take heed!' (Mk.13:5)
pl. 'zero' imperative	gaeð *ł* faereð ~ *ite* 'Go!' (Mt.8:32)

FOLLOWING PHONOLOGICAL SEGMENT

vowel	*cymað æfter (*Mk.1:17)
glide	*geongas ge* (Mt.10:7)
liquid	*hæfeð lif ece* (Jn.3:16)
alveolar fricative	*stondes sendon* (Mk.3:31)
interdental fricative	*forebodages ðus cueðende* (Mt.10:7)
other consonant	*gie gebiddas cuoeðað* (L.11:2)
pause	*geherað* ¶ (L.14:35)

STEM ENDING

vowel	*gie ne geseað* (L.13:35)
affricate /ʧ, ʤ/	*gie soecas mec* (Jn.6:26)
alveolar sibilant /s/	*seðe losað* (L.9:24)
labial /b, p, m/	*alle cymmes to him* (Jn.3:26)
dentals /d, ð/	*ðaðe geuorðias hine* (Jn.4:23)
other consonant	*alle cymmes to him* (Jn.3:26)

POLARITY

negative	*nabbas* (Mt. 16:7)
positive	*behaldas ge* (Mt.16:11)

MORPHOSYNTACTIC PRIMING

preceding *-s*	*cymes 7 byes ł eardegas* (Mt. 13:32)

preceding -*ð*	*gehereð stefn his 7 forcymeð* (Jn. 5:28-29)
INFLECTIONAL VOWEL	
inflectional /a/	*hia gedrifes* (Mt.12:27)
inflectional /e, æ, i/	*he wyrcað* (Jn. 5:20)
LEXICAL ITEM	63 word types
LOG LEXICAL FREQUENCY	

4.1.4 Methods

Having described the data coding process and the explanatory variables under scrutiny, I will now discuss the methods used to statistically analyze the variation observed between -*s* and -*ð* and the design of the models. The data were subjected to a series of multivariate analyses with the aim of determining the relative weighting of each explanatory variable in explaining variation between -*s* and -*ð*. No study to date has applied statistical methodology to the change in progress witnessed in Old Northumbrian, indeed such methods have traditionally been regarded as pertaining to realms outside philology. So, Ross (1934:69) writes of Holmqvist's numerical data for the distribution of the -*s* endings in *Lindisfarne*, "The interpretation of these statistics is of course primarily a mathematical problem, not a philological one, of which the detailed discussion would be out of place here." A major methodological issue addressed by this project is the importance of statistical analysis in assessing change in progress and its possible causes and the need to remedy the tendency in the field of historical linguistics to shy away from statistical analysis. This is particularly true when small samples are at issue, as is often the case with historical materials.

The methodology adopted for this present study was a quantitative variable rules analysis. The variable rule approach has widely been used in the analysis of corpus data over the last thirty years, predominantly, in the field of sociolinguistics, but increasingly so in the fields of second language acquisition and historical linguistics, particularly sociohistorical linguistics (Gries & Hilpert 2010; Nevalainen & Raumolin-Brunberg 2003; Young & Bayley 1996). As is widely known, the theoretical underpinnings of the approach date back to work by Labov in the late 1960s which showed that variation in language, far from being random, is rule governed. The mathematical implementation

of the approach quickly followed suit in the 1970s with the development of the variable rule program (Cedergren & Sankoff 1974). By means of stepwise logistic regression, and using a maximum likelihood algorithm, a variable rule program creates a multivariate statistical model which identifies what factors, either linguistic and/or social, significantly condition patterns of variation between alternative forms in language use. Statistical methodology of this nature is informative in that it estimates the magnitude of an effect, its direction and significance. It is capable of identifying smaller effects, while at the same time controlling for the effect of other factors, and it establishes the relative importance of a particular effect as a mechanism of change with regard to other factors. In a nutshell; it allows researchers to address the multifactorial nature of most language change.

The best-known current version of the variable rule program is Goldvarb X (Sankoff et al. 2005), which provides descriptive statistical information in addition to a multivariate binary logistic regression analysis of the data. In recent years however there has been a tendency for Goldvarb to be superseded by more powerful and up-to-date statistical analysis applications, most notably the open-source statistical program R (R Development Core Team 2008) and its derivative Rbrul (Johnson 2009a). Rbrul is a new version of the variable rule program that replicates Goldvarb in so much as it carries out multiple regression and reports effects in factor weights, but its ability to handle and compute data is more powerful and refined. In effect it bridges the gap between old and new.

The correct choice of variable rule analysis test for a set of data depends on the dependent variable (or response) and the independent (explanatory) variables believed to be influencing patterns of variation between alternative forms. In the present study the dependent variable is binary, i.e. it only has two variants, *-s* or *-ð*, and the explanatory variables are categorical in the main, except for the continuous independent variable LEXICAL FREQUENCY. The inclusion of a continuous independent variable however made Rbrul a more suitable tool as Rbrul allows continuous and discrete variables to be combined in a single analysis, unlike Goldvarb.

A continuous variable has numeric values which in themselves are significant. Examples of continuous variables in linguistics include speaker age, temporal periods, lexical frequency or formant measurements. A categorical (or nominal) variable has no naturally measured numerical value. The numerical values assigned to these values function as labels rather than as numbers. For example, a categorical variable for

gender might use the value 1 for male and 2 for female. The actual magnitude of the value is not significant; coding male as 7 and female as 3 would work just as well. Other examples of categorical linguistic variables include language-internal factors such as phonological environment, subject type or external influences such as social class. Continuous independent variables can only be treated in Goldvarb by dividing the range into discrete categories (e.g., young, middle-aged, old for age; high, medium, low for lexical frequency). Much debate has arisen in the literature as to how best to deal with continuous data such as frequency. Guy (2010) suggests that a discrete analysis can actually be more informative than a continuous analysis for curvilinear, non-monotonic effects and warns that simply including a continuous variable in a quantitative model without carefully analysing its effect can lead an investigation widely astray. Continuous variables in many, if not most, variationist studies do not have a linear or monotonic effect on the dependable variable, i.e. in the case of *-s /-ð* variation, if frequency is selected as having a significant effect on the occurrence of *-s*, it cannot be assumed that the relationship between the independent variable LEXICAL FREQUENCY and the dependent variable is linear and monotonic, in other words that the incidence of *-s* steadily increases or decreases as lexical (token) frequency increases. We shall return to this issue in our discussion of lexical item and lexical frequency in section 4.5.

Logistic regression parameters can be reported on either the logit or probability scale. Most statistical programs use the logit scale which expresses coefficients in units called log-odds. They range from positive infinity to negative infinity and the larger the number the greater the effect size. Goldvarb provides factor weights on the probability scale ranging from 0 to 1. Factor weights over 0.5 favour the application values, i.e. the *-s* ending in the case of this present study, and the closer to 1.0, the bigger the effect. Rbrul displays the results in both formats; this has the advantage of retaining the system familiar to linguistics while making their work more accessible to members of the wider academic community, who may have a broad understanding of mainstream statistics, but not be familiar with Goldvarb's mode of presentation (Johnson 2009b:361-362). The present study displays the results in both formats but refers to factor weights in its discussion of the results.

Rbrul can also be used to detect and model interactions between factors. Interaction effects occur where the influence of one independent variable is dependent on the influence of another. By way of example, Clark (2010) shows that the rhotic

realization of dental stops in intervocalic position in Liverpool English is conditioned by an interaction effect between gender and preceding phonological environment. A preceding schwa and preceding FOOT vowel favours rhoticity among women (and disfavours it in men), whereas a preceding KIT and LOT vowel favours rhoticity among men (and disfavours it among females).

Interactions between independent variables should not be confused with multicollinearity, which occurs when substantial correlations exist between two or more of the independent variables; this normally occurs when two explanatory variables share very similar features and are thus collinear. Highly correlated variables cannot be simultaneously included in a regression model. In order to test for multicollinearity, the data in the present study were subjected to chi-square independence tests and Cramer's V tests. Chi-square indicates whether or not a significant relationship exists between variables but it does not measure the degree of independence. Cramer's V is a post test that compares strengths of association between variables. The values of this test range form 0 to 1. Values close to 0 indicate little association between variables while values close to 1 are indicative of a strong association. In the present study the design of the statistical models was influenced by the fact that chi-square independence tests detected multicollinearity between the independent variables LEXICAL FREQUENCY and LEXICAL ITEM ($p = < 0.0001$, V-Cramer 1, df 14214 χ^2 140438) and between STEM ENDING and LEXICAL ITEM ($p = < 0.0001$, V-Cramer 0.9253603, df 1545, χ^2 13071.29). Highly correlated variables cannot be simultaneously included in a regression model, so separate and independent multiple regression analyses were carried out. The association between STEM ENDING and LOG LEXICAL FREQUENCY was also high (V-Cramer 0.7), but was not deemed strong enough to merit eliminating this combination of variables from a simultaneous analysis. Thus for each data set Matthew/Mark/Luke/John ($N = 3053$) and Mark/Luke/John ($N = 2016$) LEXICAL ITEM and GRAMMATICAL PERSON were tested alongside MORPHOSYNTACTIC PRIMING, POLARITY, FOLLOWING PHONOLOGICAL SEGMENT and INFLECTIONAL VOWEL. The second analysis involved STEM ENDING and GRAMMATICAL PERSON alongside MORPHOSYNTACTIC PRIMING, POLARITY, FOLLOWING PHONOLOGICAL SEGMENT and INFLECTIONAL VOWEL. The third analysis was the same as the second but also tested for the effect of LOG LEXICAL FREQUENCY.

Rbrul can also compute fixed-effects models. Mixed-effects models differentiate between two types of factor that can affect a response. Fixed effects are predictor variables whose levels, i.e. male/female, noun phrase/pronoun subject, preceding

vowel/glide/pause, would be replicable in a further study. In contrast, random effects such as speaker and word are not usually replicable – two different studies might both involve men and women, but probably not the same individuals. Nor would the same word tokens occur. As Johnson explains (2009b:365), "Including a speaker random effect takes in account that some individuals might favour a linguistic outcome while others disfavour it, over and above (or 'under and below') what their gender, age, social class, etc. would predict." A fixed-effect model works only with grouped token averages and may as a result overestimate the significance of social effects such as speaker age and gender, when in fact the variation observed can be accounted for by individual speaker variation. Rbrul uses the R mixed-effects modelling function *glmer* to run mixed-effects logistic regression analysis that establishes a balance between group (fixed) and individual (random) effects.

These different approaches allude to a fundamental issue in linguistic theory which in turn raises the question of how theoretically sound the adoption of a random-effect approach to words and speakers is in the first place. Do words and speakers behave considerably differently with respect to linguistic variables? The question of course has a long history in linguistic theory and there are arguments and counter arguments for both perspectives. The idea that linguistic change progresses through the lexicon at different rates, that words in effect have their own identity once grammatical and phonological factors have been considered will be discussed in further detail in section 4.5. In addition to word identity, speaker identity is also a good candidate for a random intercept as speaker identity is believed to be a strong predictor of linguistic behaviour. Speakers belonging to the same speech community may differ in the rates at which they use different variants, even after social status, gender and age are taken into account (Guy 1980, 1991; Johnson 2009; Gries & Hilpert 2011). Others hold that there is no strong evidence to suggest that either words or speakers display strong idiosyncrasies (Labov).

In the case of the present study, in view of our ignorance regarding the authorship of the gloss and the likelihood of the text being based for the most part on previously published translations that would have led to dialects and differing speech norms being superimposed over each other in a single text, it would be a mistake to try and infer a Labovian style speech community from the evidence that we have. Word identity on the other hand was a potentially good candidate for a random intercept in the present study. Fortunately, however, the computation of a random-effects model was

encumbered by the disproportionately high number of levels (factors) included in the explanatory variable LEXICAL ITEM with regards to the total number of tokens in the dataset. This was not deemed problematic however given that the effect of lexical item could still be tested within a fixed-effects model.

This raises the question of whether or not the number of factors (levels) included in the model is justified considering the sample size. In his survey of phonological variables in New Zealand English using seven datasets of between 3000-5000 tokens, Sigley (2003:251-52, fn.6) suggests "there is still a reasonable safety margin for constructing models with up to 100 factors in all of these datasets". Guy (1980:20, cited by Sigley 2003:251.52, fn.6) also proposes a similar empirical limit of 10–30 tokens per factor per speaker for each factor group. Following Sigley (2003:251) and Hoffmann (2011:21) the threshold value for the maximum number of *S* parameters (factors/levels) per *n* number of tokens used in this study is that stipulated by Freedman (1987:237) of n > 10 (*S*+1). The data in the present study is essentially analysed as the speech of one speaker and comprises just over three thousand tokens (3053), a figure comparable to two of Sigley's New Zealand datasets. Although the factors included in the factor groups GRAMMATICAL PERSON and LEXICAL ITEM were numerous, a threshold of $n = > 13$ per factor (level) per speaker was established which is within the limit specified by the aforementioned authors.

Once the most parsimonious model for a data set had been computed, it had to be discerned whether the model was a good fit for the data. Rbrul provides a deviance parameter for indicating the quality of fit. It also calculates an R2 (Nagelkerke-R2) value for logistic regression models which computes the amount of variation explained by the best model (Nagelkerke-R2 values range from 0 to 1 with 0 corresponding to 0% of variation explained and 1 to 100% of variation explained). The cross-validation estimate of accuracy for the best model was also calculated using the ten-fold cross-validation method within R (R Development Core Team 2008). This test assesses the predictive accuracy of the model by randomly partitioning the data into ten subsets or "folds" and using each fold as a test-set against which to test the model's accuracy. The predictive accuracy of the model is guaranteed if this procedure yields a high value for the cross-validation parameter.

The results of the logistic regression analyses are detailed in Tables 1 to 7 in Appendix A. Only factors selected as significant are listed and these are organised in the order of their significance. For all logistic regression models discussed in this study

raw frequencies, probabilities and log odds logits coefficients, in addition to model fit parameters (deviance), Nagelkerke-R2 and cross-validation estimates of accuracy are indicated.

4.1.5 Summary

Having outlined and discussed the methodology used in the present study, the following sections will discuss the explanatory variables included in the data analyses and the results of the multivariate Rbrul analyses.

4.2 Grammatical person, subject type, number, person and adjacency effects

Lindisfarne hosts a substantial variety of different subject types which for the purposes of the statistic method employed had to be categorised into distinct, clearly defined environment types. While the classification of full noun phrases posed no particular problem, delineating strict boundaries between other subject-type categories was not always a straightforward task, as a certain degree of overlapping inevitably exists between certain sub-categories.

Van Bergen (2003:4-5) notes how generative studies, which examine the differential behaviour of pronominal and nominal subjects in Old English in aspects of word order, tend to make a strict division between personal pronouns on the one hand and all other categories on the other.[26] This results in a pronominal/nominal allocation in which most types of pronoun are classified as nominal. Van Bergen (2003), however, extends the clitic status attributed to personal pronouns in Old English (van Kemenade 1987; Pintsuk 1991) to the Old English indefinite pronoun *man.* Building on older, less comprehensive studies, van Bergen's study of the syntactic behaviour of the Old English indefinite pronoun *man* shows that any "resemblance to the nominal pattern of

[26] This continues to be the trend in generative analyses of the NSR as well. Thus, de Haas & van Kemenade (2009, fn.4) describe their coding criteria in the following terms, "Only instances of the personal pronouns *we*, *you*, and *they/hi* were counted as Spro … All other subjects, including independently used adjectives and pronouns like *alle*, were counted as SNP." Such a classification is justified for Middle English under the analysis of van Kemenade & Los (2006) and van Kemenade (2009), which upholds that in the transition to Middle English the highest inflectional position in the clausal configuration became exclusively reserved for nominative personal pronouns. This signalled a syntactic innovation with regards to Old English. In Old English this position typically hosted nominative personal pronouns, but any element that carried specific reference to an antecedent in the discourse ("discourse-given" elements in the terminology of Van Kemenade, Milicev & Baayen, 2008), could in fact occur in this position, including independently-used demonstrative pronoun subjects and objects and personal pronoun objects. Research on the NSR in mid and late twentieth century English coincides in showing that demonstratives and indefinite pronouns (and the dialect subject form 'them') behave similarly to full NPs in being strongly favouring environments for verbal-*s* (Harris 1993; Shorrocks 1999; Pietsch 2005; Cole 2009).

behaviour is superficial only, and that *man* should not be grouped with nominals in any environment". Her findings also show that "there are indications that the classification of certain other types of pronoun as 'nominal' is unsafe. This holds specifically for the demonstrative pronoun *se*, and possibly also for the indefinite pronoun *hwa* 'someone'" (2003:4). Recent generative studies corroborate this argument for demonstrative pronouns. Van Kemenade, Milicev & Baayen (2008) and van Kemenade (2009) show that independently used demonstrative pronoun subjects behave similarly to nominative pronouns in Old English in that they both typically occupy the (higher) subject position before the tensed verb. Following this observation, and given the difficulty of classification in Old English, the present study coded each subject type (i.e., each pronoun subclass, etc.) as a separate factor. This approach also allowed morphosyntactic similarities or divergences in the behaviour of different subject types to be ascertained.

4.2.1 Overview of OE subject types

4.2.1.1 Pronoun subjects

Pronoun subjects found in *Lindisfarne* include personal, demonstrative, interrogative, indefinite and also relative pronouns, although relative pronouns partake in 'heavy' subject constructions of the type *NP + relative clause.* Personal pronouns in the gloss comprise *he*, *hiu*, *we*, *gie*, *hia*, including spelling variants (no instances of *hit* with present-indicative lexical verbs were found in the data); the demonstrative pronouns *ðis, ðes, ðe* and *ða, ðas* and the indefinite pronouns *hwæd, alle, noht, monigo, hua, huæle, nænig, ænig, oðer, boege, ðe* (*ðio*) *ilca* and *sume*.

4.2.1.1.1 Personal pronoun subjects

With regards to the glossator's use of personal pronouns, Old English, unlike Latin, is not a pro-drop language with verbal inflections that identify the persons of the plural. The different persons can only be identified by the glossator adding personal pronouns where they do not exist in the Latin original. In *Lindisfarne*, the personal pronouns *he*, *hiu*, *we, gie* and *hia* are either inserted by the glossator where no personal pronoun occurs in the Latin text or they gloss Latin equivalents. Only the coding of second person plural personal pronoun *gie* required special attention.

Stein (1987:639-640) notes how the inclusion of the imperative plural in Berndt's (1956:204) figures for the second person plural in the *Durham Ritual* obscures

the peak of -*s* endings found in the second-person plural indicative. In order to identify a potential indicative versus imperative effect, second-person plural tokens were initially coded for both subject type ('zero' versus pronominal *gie*) and mood. It was found that when lexical item was not included as an explanatory variable in the variable rule analysis, imperative *gie* constructions, like *geseas gie ~ videte* (Mk.13:5) had a rather neutral effect on the occurrence of -*s*, in contrast to the favouring effect of the indicative *gie* environment (zero environments were not significantly differentiated). Careful consideration of the data file, however, revealed that seventeen out of twenty nine of the imperative contexts involved the lexical item *willan,* as in *nallað ge ~ nolite* (L.2:10). Statistical multiple regression techniques of the type employed in the present study can model the simultaneous, multi-dimensional factors impacting on the choice of a variant. When a factor group testing for lexical conditioning was included in the model, the multiple regression procedure identified a significant verb-specific effect that attributed the lower occurrence of -*s* with imperative *gie* to the conservative lexical effect of *willan;* we will return to the issue of word specific effects in section 4.5.2.1. When verb-specific effects were taken into account, imperative and indicative *gie* subjects were found to pattern similarly, which suggests mood plays no role in conditioning the occurrence of -*s a*nd -ð. This correspondence justified collapsing the factors into a single *gie* category.

4.2.1.1.2 Demonstrative pronoun subjects

In the third person environment demonstrative pronouns appear to be used interchangeably with personal pronouns (cf. Mitchell 1985:§344): the demonstrative pronouns *ðis, ðes, ðe* and *ða, ðas* and the personal pronouns *he* and *hia* all occur as glosses for the Latin demonstratives. Double glosses involving both a personal and demonstrative pronoun also frequently occur, for instance *ðe onfoes ł he onfoeð ~ accipiet* (Mt.10:41), *hea ł ða ~ illi* (Mt.2:5). The apparent interchangeability of demonstrative and personal pronouns no doubt derives from the fact that, unlike in present-day English, the demonstrative pronouns in Old English could be used independently to refer to animate objects, as in *cuæðes ðes ~ dicit hic* "this (man) says" (Jn.6:42).

4.2.1.1.3 Indefinite pronoun subjects

As noted above, the indefinite pronoun category included *hwæd, alle, noht, monigo,*

hua, huæle, nænig, ænig, oðer, boege, ðe (*ðio*) *ilca* and *sume.* The classification of indefinite pronouns in Old English is notoriously controversial with no clear consensus in the literature on whether certain items such as *alle* and *monigo* should be classed as pronouns or adjectives (see Mitchell 1985:§§239-241, and references therein, for discussion). The coding criteria applied to indefinite pronouns in the present study follows Mitchell (1985:§§361-519) and includes only those indefinite pronouns used independently in pronominal function. Indefinite pronouns followed by a prepositional phrase, such as *nænig of iuh wyrcas ae ~ et nemo ex uobis facit legem* 'none of you keep the law' (Jn.7:19) were also coded as full noun-phrases. This code included both singular (x37) and plural forms (x8) and two instances of the interrogative pronoun *hua* comprising *hua ðec soecað to acuoellanne ~ quis te quaerit interficere* 'Who seeks to kill thee?' (Jn.7:20) and *hua eauað iuh geflea from tocymenda wraðe ~ quis ostendit uobis fugire a uentura ira* 'who has warned you to flee from the wrath to come?' (L.3:7).

4.2.1.2 Relative clauses

The relative clause code in the present study includes NP + relative clause subjects and relative clause subjects. NP + relative clause subjects in *Lindisfarne* can involve both definite relative clauses and indefinite relative clauses. Definite relative clauses, those referring to a specific antecedent, as in ***all ł eghwelc forðon treu ðy*** *ne wyrcas wæstm... ~ omnis ergo arbor quae non facit fructum...* 'therefore every tree that brings forth no fruit...' (Mt.3:10), are generally introduced by the compound relative *seðe* in the singular and *ðaðe* in the plural (*ðeðe*, *ðe*, *þæt, ða* also occur). When forms of *se* are used alone (without the particle *ðe*), distinguishing their relatival, as opposed to possible demonstrative function, is facilitated in the gloss by the Latin original (see Mitchell (1985:§2109-2110, with references, for discussion of this much-debated issue). Indefinite relative clauses with no specific antecedent, like ***seðe*** *gelefeð in sunu... ~ qui credit in filium...* 'He that/Who believes in the Son…' (Jn.3:36), involve the compound relatives *seðe and ðaðe*, but also combinations such as *sua hua*, *sua hwæle* (Mitchell 1985:§2103). Indefinite relative clause subjects also constitute an extremely common subject type in *Lindisfarne*. Instances include ***seðe word*** **[...]** ***min gehaldas*** *deað ne gesiið ~ qui sermonem* [...] *meum seruauerit mortem non uidebit* 'who abides in my word […] will not see death.' (Jn.*5:17) and ***seðe gelefeð in sunu*** *hæfeð lif ece ~ qui credit in filium habet uitam eternam* 'He that/Who believes in the

Son will have everlasting life' (Jn.3:36), in which the clauses *seðe word* [...] *min gehaldas* and *seðe gelefeð in sunu* function as the subjects of the verbs *gesiið* and *hæfeð* respectively. No instances of definite adjective clause subjects were found in the gospels.

During the first steps of the analysis separating NP + relative clause subjects and relative clause subjects did not prove statistically significant, so they were coded as a single group, distinguished only by number. This code also included five plural tokens including two clause subjects introduced by the indefinite pronoun *alle* of the type: ***alle ðaðe in byrgennum sint*** *gehereð stefn his 7 forcymeð ~ omnes qui in monumentis sunt audient uocem eius et procedent* 'Everybody who is in a grave shall hear his voice and come.' (Jn.5:28-29).

4.2.1.3 Zero subjects

Zero subjects, i.e. verb forms with no explicit subject, like those illustrated in Table 7 and repeated here as (18) are also extremely commonplace in the gloss, especially in third-person environments as in (18a) and (18b). In the second-person plural environment, zero subjects are rather less common (*N* = 17). During preliminary analyses, collapsing second person plural pronominal *gie* subjects and second person plural null subjects, like (18c), turned out to be statistically justified.

(18) a. Li. *heono eauunge sprecað*
L. *ecce palam loquitur*
f. 227va 1 (Lindis.Jn.Skeat1871, Jn. 7:26)
"Behold, boldly (he) speaks"

b. Li. *7 noht him cuæðas*
L. *et nihil ei dicunt*
f. 227va 2 (Lindis.Jn.Skeat1871, Jn. 7:26)
"And (they) say nothing to him"

c. Li. *huæt bituih iuh gefraignes ł frasias*
L. *quid inter uos conquiritis*
f. 113ra 8-9 (Lindis.Jn.Skeat1871, Mk. 9:16)
"What question (ye) among yourselves?"

In summary, the factor group GRAMMATICAL PERSON in Table 7 broadly comprises what has been variably referred to as both the NP/PRO constraint and the Heaviness Constraint in studies examining concord patterns in EModE and non-standard varieties of present-day English (Bailey et al. 1989; Poplack & Tagliamonte 1989; Clarke 1997). Rather than collapsing groups, however, it was decided to adopt a coding schema involving finely discriminated environments in order to get a detailed view of the effect of subject type on the variable under investigation. The categories reflect both the grammatical category of the subject (i.e. personal pronoun, demonstrative pronoun, full noun phrase, 'zero' subject, etc.) and its person and number.[27]

4.2.2 Results for the effect of grammatical person

The results demonstrate that in addition to robust morphosyntactic priming, lexical and stem ending effects, GRAMMATICAL PERSON is a crucial factor in determining the distribution of competing variants (see Tables 1 and 2 in Appendix A). The results for GRAMMATICAL PERSON are provided below in Table 8. In the plural environment there is a propensity for the personal pronoun subjects *gie*, *hia* and *we* to favour *-s* (with factor weights of 0.66, 0.63 and 0.58 respectively), in contrast to 'zero' subjects and heavy subjects such as full NPs, NP + relative clause and relative clause subjects, which favour the inherited interdental variant -ð. This is precisely the patterning we would expect in a NSR system.

Table 8. Effects of grammatical person on the probability of *-s* (as opposed to -ð) in plural and third person singular environments in Matthew, Mark, Luke and John (*N* = 3053).

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
GRAMMATICAL PERSON (p = < .001)	*gie*[a]	314/526 (60%)	0.638	0.66
	hia	73/116 (63%)	0.517	0.63
	dem.prn.	23/38 (61%)	0.409	0.60
	we	29/51(57%)	0.337	0.58
	'zero' pl. imp.	206/357 (58%)	0.120	0.53
	relative cl.sg.	222/449 (49%)	-0.025	0.49

[27] The codes for demonstrative pronoun, indefinite pronoun and clause subject types included both singular and plural tokens. The extremely low count of plural tokens with these subject types would have resulted in very low cell counts had they been coded separately. This strategy was adopted in order to avoid the problematic ramifications brought about by small cells during a multivariate analysis (see Guy 1988:129-132 on the problems of low cell counts).

relative cl.pl.	66/132 (50%)	-0.073	0.48
he	34/67 (51%)	-0.120	0.47
full NP pl.	96/196 (49%)	-0.148	0.46
'zero' 3pl.	61/131 (47%)	-0.231	0.44
indef.prn.	42/84 (50%)	-0.239	0.44
full NP sg.	185/446 (42%)	-0.444	0.39
'zero' 3sg.	153/460 (33%)	-0.742	0.32

[a] This code includes indicative *gie* tokens (*N* = 395), imperative *gie* (*N* = 113) and second person plural zero subjects (*N* = 18). During preliminary analyses, collapsing these groups turned out to be statistically justified.

A second multiple regression analysis run on the Mark/Luke/John data set (*N* = 2016) revealed that the subject-type effects found to condition alternation between suffixal *-s* and *-ð* are more marked when the near invariant Matthew data were removed. This in turn suggests that the effect of subject type is stronger during the earlier stages of the replacement process. The main effects of MORPHOSYNTACTIC PRIMING, LEXICAL ITEM and STEM ENDING found in the Matthew/Mark/Luke/John data are found to hold in Mark, Luke and John, all at the p = < 0.001 level (see Tables 5 and 6 in Appendix A). Table 9 below summarises the results for GRAMMATICAL PERSON in Mark, Luke and John.

Table 9. Effects of grammatical person on the probability of *-s* (as opposed to -ð) in plural and third person singular environments in Mark, Luke and John (*N* = 2016).

Factor Group (significance)	*Factors*	*-s/total* (% -s)	*Log Odds*	*Factor Weight*
GRAMMATICAL PERSON (p = < .001)	*gie*[b]	172/354 (49%)	0.869	0.71
	hia	28/60 (47%)	0.716	0.67
	we	18/37 (49%)	0.528	0.63
	indef.prn.	36/71 (51%)	0.372	0.59
	'zero' pl.imp.	101/227 (44%)	0.206	0.55
	he	15/36 (42%)	0.151	0.54
	dem.prn.	10/22 (46%)	0.149	0.54
	relative cl.sg.	101/297 (34%)	0.022	0.50
	relative cl.pl.	25 /84 (30%)	-0.223	0.44
	'zero' 3pl.	26/89 (29%)	-0.296	0.43
	full NP sg.	70/290 (24%)	-0.615	0.35
	full NP pl.	24/112 (21%)	-0.805	0.31
	'zero' 3sg.	60/337 (18%)	-1.030	0.26

[b] This code includes indicative *gie* tokens (*N* = 284), imperative *gie* (*N* = 58) and second person plural zero subjects (*N* = 12).

Most notably, the effect of the NP/PRO constraint on the occurrence of *-s* endings in the third-person plural environment is significantly more robust in Mark, Luke and John

($\chi^2$11.798 p = < 0.001) than in data taken from all four gospels (χ^2 5.713 p = < 0.05). Furthermore, the results in Table 9 reveal that a NP/PRO constraint exists in the third person singular environment, with the personal pronoun subject *he* favouring the occurrence of *-s* significantly more so than full singular NP subjects (χ^2 5.7284 p = < 0.05). These findings, which establish a NP/PRO constraint in both the plural and singular environments, parallel findings by Bailey et al. (1989) for varieties of EModE.

The results also suggest that the pronominal effect in Old English extends to demonstrative pronouns and indefinite pronouns. In the case of demonstrative pronouns the strong favouring affect holds in both data sets. With factor weights of .60 in the Matthew/Mark/Luke/John dataset and a more moderate .54 in the Mark/Luke/John, demonstrative pronouns show a preference for the innovative form. The favouring effect of indefinte pronouns, on the other hand, which starts off strong at the onset of the change appears to wanes as the proliferation of *-s* advances and becomes more nominal in effect. The tendency for demonstrative pronouns to pattern similarly to personal pronoun subjects is not surprising in the case of Old English. In the glosses, personal pronouns are often used interchangeably with demonstrative pronouns, as is common in Old English (cf. Mitchell 1985:§344), no doubt because demonstrative pronouns in Old English could be used independently to refer to animate objects, as in *cuæðes ðes ~ dicit hic* 'this (man) / he says' (Jn.6:42). Double glosses involving both a personal and demonstrative pronoun also occur frequently in *Lindisfarne,* such as *ðe onfoes ł he onfoeð ~ accipiet* (Mt.10:41); *hea ł ða ~ illi* (Mt.2:5). In the case of indefinite pronouns, a comparison of the data in Tables 8 and 9 suggests this subject type has a stronger favouring effect during the earlier stages of the replacement process, which loses force as the levelling process advances. Commonalities between the morphosyntactic behaviour of personal, demonstrative and indefinite pronouns bolsters van Bergen's hypothesis, discussed above, that demonstrative and indefinite pronouns behave similarly to personal pronouns in Old English and should not be classed a nominals.

Interestingly, third person 'zero' subjects pattern similarly to heavy subjects in Old Northumbrian, with a clear tendency towards favouring the interdental variant *-ð*. This tendency echoes concord patterns found in later varieties of northern English, including Scots and present-day Northumbrian dialect. In previous research on the retention of the NSR in contemporary northern dialect in the Tyneside region, Cole (2009) finds that *was*/*were* variation is conditioned by a NP/PRO constraint with full

NP and NP + relative subjects favouring *was* forms and pronominal *they* favouring *were*, as examples in (19) taken from the 1994 recordings of *NECTE* (Corrigan et al. 2001-2005) illustrate. Note too, that *was* is also licensed if the subject pronoun is absent, as in (19d) and (19e):

(19) a. *I worked with **these women** which I thought **was** old then...to me **they were** old*.

b. ***My parents was** thinking of getting a shop…**they were** also thinking of moving.*

c. *… **barracks which was** occupied by soldiers in those days.*

d. [*They*] ***was** the first bombs.*

e. *You know* [*they*] ***was** like innocent times.*

In a diachronic study of subject-verb concord in Scots, Montgomery (1994) provides evidence that full NP subjects, non-adjacent pronoun subjects and 'zero' subjects, also pattern similarly in fourteenth- to seventeenth- century Scots. In addition to showing, not surprisingly for a northern dialect, that adjacent pronoun subjects in both the plural and first-person singular environments favour *-Ø,* while NP subjects and non-adjacent pronoun subjects favour *-s,* he notes how subjects with no overt subject (at least in the first person singular) also trigger verbal *-s* forms.[28] Examples of this distribution pattern are given in (20):

(20) a. ***I have** spokyn with my lord Maxwell and **hes** deleverit your lordship wrytinge* (*The Scottish Correspondence of Mary Lorraine,* 15; [Montgomery 1994: 83])

b. [*I*] ***committis** zow to God his halle protectioun,* [*I*] ***rests*** [,] *Zour loving mother at power*, (*Memorials of the Montgomeries*, 184; [Montgomery 1994: 89])

Similar syntactically-keyed agreement is found in eighteenth-century Yorkshire dialect by García Bermejo & Montgomery (2003:32-33), as sentences (21) illustrate.

[28] The effect is not necessarily confined to the first person singular; this is simply the category of pronoun that occurs in this context with certain frequency in his data.

(21) a. ***I have*** *gotton 18 pound of worsit spun this week but* ***desines*** *to make an Advance.*

b. [*I*] ***knows*** *not what she would be at.*

Following Murray (1873:211-12), who describes the proximity constraint in terms of the verb being accompanied (or not) by a pronoun subject, rather than strictly in terms of adjacency, Montgomery's (1994:89) analysis of non-adjacent personal pronoun subjects for Scots classifies zero subjects of the type illustrated in (20b) together with non-adjacent verb forms like (20a). This appears justified given the manner in which these types of subject pattern similarly. We shall return to this issue in the discussion on adjacency in section 4.5.

4.2.3 Subject type, person and number effects

Different coding schemata have been employed in the literature for testing grammatical person effects. The factors outlined in the factor group GRAMMATICAL PERSON in Table 7 and analysed in section 4.2.2 reflect both the grammatical category of the subject (i.e. personal pronoun, demonstrative pronoun, full noun phrase, 'zero' subject, etc.) and its person and number. This coding schema is probably the most common in research that has looked at the effect of grammatical person and was adopted in the present study. Nevertheless, in order to test for the separate and individual effect of subject type, person and number on the occurrence of *-s*, analyses were also carried out in which the relevant categories were split into three different factor groups; SUBJECT TYPE, PERSON and NUMBER. This coding schema is illustrated in Table 10.

Table 10. Coding schema for subject type, person and number effects

SUBJECT TYPE	PERSON	NUMBER
personal pronoun	first person	singular
indefinite pronoun	second person	plural
demonstrative pronoun	third person	
relative clause		
'zero' subject		

4.2.3.1 Results for subject type, person and number effects

Multivariate analyses of both data sets, Mt./Mk./L./Jn. (*N*=3053) and Mk./L./Jn. (*N* = 2016), analysed the separate effect of SUBJECT TYPE, PERSON and NUMBER alongside the other predictor variables outlined in Table 7. The effects of STEM ENDING, LEXICAL ITEM and MORPHOSYNTACTIC PRIMING were found to remain consistent with previous analyses (see Table 3 and Table 7 in Appendix A). The results for SUBJECT TYPE, PERSON and NUMBER, summarised below in Tables 11 and 12, reveal that whereas the effect of SUBJECT TYPE is consistently the most influential factor in conditioning the presence of *-s*, followed by that of PERSON, the effect of NUMBER varies. In the analysis of Mt./Mk./L./Jn. (*N*=3053) SUBJECT TYPE emerges as the most robust factor at the p = < .001 level, followed by NUMBER at the p = < .01 level and PERSON at the p = < .05 level. Table 11 summarises these results.

Table 11. Number, person and subject effects on the probability of *-s* (as opposed to -ð) in plural and third person singular environments in Matthew, Mark, Luke and John (*N* = 3053)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
SUBJECT TYPE (p = < .001)	dem.prn.	23/38 (61%)	0.500	0.62
	personal prn.	438/742 (59%)	0.153	0.54
	relative clause	288/581 (50%)	0.108	0.53
	indefinite prn.	42/84 (50%)	-0.092	0.48
	noun phrase	281/642 (44%)	-0.237	0.44
	'zero' subject	432/966 (45%)	-0.433	0.39
NUMBER (p = < .01)	plural	866/1543 (56%)	0.162	0.54
	singular	638/1510 (42%)	-0.162	0.46
PERSON (p = < .05)	second	520/883 (59%)	0.253	0.56
	first	29/51 (57%)	-0.089	0.48
	third	955/2119 (45%)	-0.164	0.46

In data taken from Mark, Luke and John (*N* = 2016), SUBJECT TYPE and PERSON both exert a statistically significant conditioning effect at the p = < .001 level, however, NUMBER does not play a significant role in conditioning the occurrence of *-s*. These results are outlined in Table 12. Recall that a NP/PRO constraint operated in both the third singular and plural environments in the Mk./L./Jn. dataset. We may infer from this that agreement in Mark, Luke and John relies essentially on a pronominal~ nonpronominal constrast rather than a person ~ number features.

Table 12. Number, person and subject effects on the probability of -*s* (as opposed to -ð) in plural and third person singular environments in Mark, Luke and John (*N* = 2016)

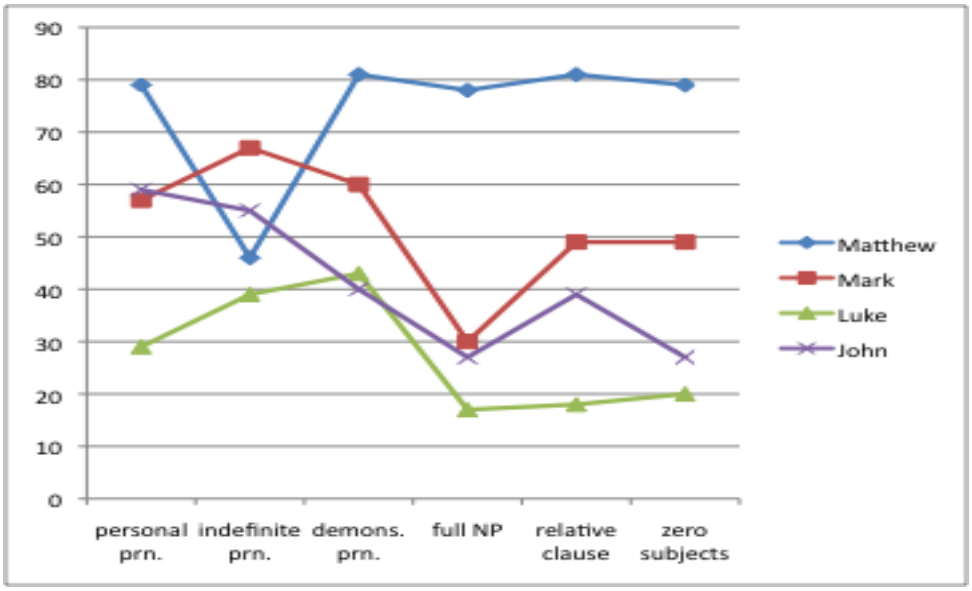
Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
SUBJECT TYPE (p = < .001)	indefinite prn.	36/71 (51%)	0.499	0.62
	dem.prn.	10/22 (46%)	0.282	0.57
	personal prn.	227/475 (48%)	0.273	0.57
	relative clause	126/381 (33%)	0.064	0.52
	noun phrase	94/402 (23%)	-0.536	0.37
	'zero' subject	193/665 (29%)	-0.581	0.36
PERSON (p = < .001)	second	273/581 (47%)	0.415	0.60
	first	18/37 (49%)	0.014	0.50
	third	395/1398 (28%)	-0.401	0.40

To explore the impact of subject type in further detail, let us consider the raw frequencies of the overall distribution of -*s* endings according to subject type for each gospel given in Table 13 and depicted graphically in Figure 4. In John, Mark and Luke, the differing morphosyntactic behaviour of personal, demonstrative and indefinite pronouns in contrast with full NP subjects is readily observable; consistently higher percentages of -*s* occur with pronoun subjects than with NP subject types. Conversely, this effect appears to neutralise in Matthew where the percentages for each subject type are practically identical across the board with only indefinite pronoun subjects exhibiting a notably much lower incidence of -*s*.

Table 13. Present tense -*s* markings according to SUBJECT TYPE in Matthew, Mark, Luke and John

	John -*s*/total (% -*s*)	*Mark* -*s*/total (% -*s*)	*Luke* -*s*/total (% -*s*)	*Matthew* -*s*/total (% -*s*)
personal prn.	116/197 (59%)	62/110 (57%)	49/167 (29%)	211/267 (79%)
indefinite prn.	17/31(55%)	8/12 (67%)	11/28 (39%)	6/13 (46%)
demon. prn.	4/10 (40%)	3/5 (60%)	3/7 (43%)	13/16 (81%)
full NP	38/139 (27%)	26/87 (30%)	30/176 (17%)	187/240 (78%)
relative clause	64/163 (39%)	36/73 (49%)	26/145 (18%)	162/200 (81%)
zero subjects	49/183 (27%)	79/161 (49%)	65/322 (20%)	239/301 (79%)
Total	288/723 (40%)	214/448 (48%)	184/845 (22%)	818/1037 (79%)

Figure 4. Incidence of *-s* ending according to subject type in Matthew, Mark, Luke and John



As raw frequencies are merely indicative only of potential effects rather than of significant effects, a multivariate analysis of the Matthew data (*N*=1038) was carried out which effectively confirmed the lack of a subject effect in Matthew; of the subject-related factors, only NUMBER was found to have a significant effect on the occurrence of *-s,* with the third-person singular environment exhibiting a tendency to lag behind. The results for STEM ENDING and MORPHOSYNTACTIC PRIMING were in the expected direction. This suggests that subject type loses its effect as the change in progress nears completion.

With regards to the effect of person, previous studies on Old Northumbrian verb inflection have highlighted the differentiated distribution of *-s* across the various persons (Holmqvist 1922; Blakeley 1949/50; Berndt 1956; Stein 1986). The second-person plural is argued to favour the innovative form, in contrast with the inhibitive effect of the third person. The figures provided by Holmqvist 1922 (13-15), Berndt (1956:204) and Stein (1986:641) are summarized in Table 14. Despite the employment of different data sources, the figures distinctly point in the direction of a peak in the second-person plural and a dip in the third plural.

Table 14. Distribution of *-s* endings in Late Old Northumbrian [*Sources*: Holmqvist 1922 (13-15), Berndt (1956:204) and Stein (1986:641)]

	1st plural	2nd plural	3rd plural	3rd singular
Holmqvist (1922) *Li.*	63%	64%	49%	39%
Berndt (1956) *Li. Ru*[2]	66%	67%	45%	33%
Stein (1986) *Li. Rit. Ru*[2]	42%	66%	42%	31%

The results for the effect of PERSON on the occurrence of suffixal -s in Tables 11 and 12 would appear to corroborate this view, but a closer look at the effect of PERSON reveals a crucial nuance. The hierarchy established by older studies relies upon data in which the first- and second-person environments solely comprise personal pronoun subjects, i.e. a 'favouring' subject type, whereas in the third-person context personal pronoun subjects are conflated with 'disfavouring' nonpronominal subject types. In other words, older studies have assumed homogeneity in the behaviour of different subject types across the third-person and in doing so have masked the effect of subject type. When the data are reduced to encompass a single subject type in which present-tense *-s* markings for person are comparable, the special prominence of the second person reported in the literature does not exist. The figures in Table 15 demonstrate that the rate of *-s* across the three person types for the pronoun subjects *we*, *gie*, *hia* and *he* is in fact remarkably similar, especially among the plural pronouns. No statistically significant difference in behaviour is detected between *we*/*gie* versus *hia* (χ^2 0.553, p = 0.457), nor *we*/*gie*/*hia* versus *he* (χ^2 2.090, p = 0.148).

Table 15. Distribution of *-ð* and *-s* endings with *we, gie* and *hia* in *Lindisfarne* (*N* = 741)

	OE *-ð* *N* (%)	OE *-s* *N* (%)	Total *N*
we	22 (43%)	29 (57%)	51
gie	206 (41%)	302 (59%)	508
hia	43 (37%)	73 (63%)	116
he	33 (49%)	34 (51%)	67

The preference of *hia* for *-s* is obscured in older studies by a lack of categorial distinction. The inclusion of disfavouring subject types such as NPs and zero subjects in the count for the third person artificially deflates the overall rate for the third person and effectively obscures the subject constraint operative in the glosses.

4.2.4 Implications of the distribution of the subject-type constraint in Lindisfarne

In section 2.2.2 I discussed the findings of two studies on the distribution of variant forms in the glosses that appear to substantiate the view that of the language of the gloss is not that of a single scribe; either Aldred did not single-handedly compose the gloss or he relied on a variety of pre-existing translations (Brunner 1947/48; van Bergen 2008). Both the aforementioned studies suggest a change in scribe in the exemplar around the beginning of the Gospel of St. Mark and towards the end of the Gospel of St. John. In order to test whether the distribution of the NP/PRO constraint tends in the same direction, the data gathered for the present study were partitioned into a series of sections, and a preliminary analysis of the distribution of *-s* was carried out. Broadly following the methodology of Brunner (1947/48), the text was divided into a number of sections. Bearing in mind the demarcation established by previous studies at Mk.5:40, it was important to determine whether the distribution of *-s* remained stable throughout the last few chapters of Matthew and the first few chapters of Mark up to Mk.5:40 with a sharp change around Mt.5:40 or whether the change occurred earlier or later, or not at all. The only division imposed upon the data, therefore, was that of Mk.*1:1-Mk.5:39, which consisted of 130 verb tokens. The rest of the text was divided into sections also comprising roughly 130 verb tokens. Two linguistic features were analysed: the overall occurrence of the *-s* variant and the presence of a NP/PRO constraint.[29] Subject effects were calculated using a pairwise chi-square evaluation. These results are set out in Table 16.

Table 16. Distribution of NP/PRO constraint and overall percentage of *-s* usage in *Lindisfarne*

	Total *-s* %	NP *-s*/total	%	PRO *-s*/total	%	$\chi 2$	p
Mt.1*heading – Mt.*19:8	74%	25/38	66%	14/19	74%	0.365	0.545
Mt. *19:6 – Mt.6:1	75%	18/24	75%	20/24	83%	0.615	0.253
Mt.6:1 – Mt.8:9	81%	36/42	86%	37/47	79%	0.735	0.391

[29] The NP/PRO constraint analysis included third-person singular and plural personal pronouns and noun phrases and first- and second-person plural pronouns.

Mt.8:9 – Mt.11:19	84%	26/29	90%	17/22	77%	1.148	0.284
Mt.11:9 – Mt.15:4	81%	26/34	77%	26/34	77%	0.000	1.000
Mt. 15:4 – Mt.20:25	89%	25/29	86%	33/36	92%	0.174	0.676
Mt. 20:25 – Mt.24:26	87%	13/16	81%	45/49	92%	0.975	0.323
Mt.24:26 – Mt.28:19	61%	18/28	64%	19/36	53%	0.855	0.355
Mk.*1:1 – Mk.5:39	24%	4/36	11%	8/17	47%	8.271	< 0.01
Mk.5:40 – Mk.10:33	56%	10/21	48%	27/39	69%	2.697	0.100
Mk.10:33 – Mk.14.13	56%	11/23	48%	20/43	47%	0.010	0.918
Mk. 14:13 – L.1:34	40%	4/20	20%	7/13	54%	4.062	< 0.05
L. 1:35 – L.7:22	20%	5/34	15%	9/35	26%	1.292	0.255
L.7:22 – L.10:24	18%	2/22	10%	7/27	26%	2.016	0.156
L.10:24 – L.12:40	15%	4/30	13%	6/28	21%	0.423	0.515
L.10:40 – L.16:13	18%	3/27	11%	4/20	20%	0.373	0.541
L.16:13 – L.20:44	34%	12/27	44%	7/20	35%	0.426	0.514
L.20:46 – L.21:8	25%	1/23	4%	16/37	43%	10.394	< 0.001
Jn.*1.1 – Jn.3:32	29%	7/26	27%	9/22	41%	1.049	0.305
Jn.3:32 – Jn.6:57	39%	9/29	31%	20/30	67%	7.491	< 0.01
Jn.6:57 – Jn.10:8	33%	8/29	28%	18/34	53%	4.151	< 0.05
Jn. 10:9 – Jn.13:35	46%	8/25	32%	19/27	70%	7.656	< 0.01
Jn.13:38 – end Jn.	46%	6/30	20%	50/85	59%	13.378	< 0.01

The results reveal demarcations strikingly similar to those posited by Brunner and van Bergen. There is a clear demarcation at the beginning of Mark. At this point of the narrative, the consistently high rate of *-s* usage found throughout Matthew drops sharply to just 24% and maintains an overall average of 34% throughout Mark, Luke and John. The effects of subject type are also detected for the first time at the beginning of Mark with pronominal subjects clearly favouring the innovative ending. These effects remain stable throughout the Mark/Luke/John data, becoming notably more robust from the around the beginning of John onwards. In order to test for subject effects that might not emerge in such small data samples, tokens were grouped according to the demarcations established by these findings and tested for the present of a NP/PRO constraint. These results are summarised below in Table 17:

Table 17. Distribution of NP/PRO constraint in *Lindisfarne*

	PRO		NP			
	-s/total	%	*-s*/total	%	$\chi 2$	p
Mt.*heading – Mt.*19:8	187/240	(78%)	211/267	(79%)	0.092	0.761
Mk*1:1 - Jn.3:32	63/289	(22%)	120/298	(40%)	23.325	p = 0.000
Jn.3:32 - end	31/113	(27%)	107/176	(61%)	30.7	p = 0.001

The results show that a type-of-subject effect does not operate in the first data set that

comprises Matthew. Subject effects are felt from the beginning of Mark, throughout the rest of the data, and are particularly strong in John from about the end of chapter 3 onwards. The evidence of the *s*-endings appears to corroborate the hypothesis that there must have been at least two changes of scribe in the exemplar - one in Mark and another around the beginning of John (van Bergen 2008:291), although the sharp drop in *-s* and the subject effects felt around the start of Mark suggest a slightly earlier cut-off point than Mk.5:40, as posited by Brunner (1947/48) and van Bergen (2008:291). In fact, the break at the beginning of Mark and at the beginning of John established by these results is remarkably in line with the patterning of palaeographical variation outlined by Ross, Stanley & Brown (1960), and discussed above. Recall that the bold, vigorous hand of the outset becomes smaller at the beginning of Mark at ff. 93r/99v. Similarly at f. 203v, i.e. the beginning of John, the writing becomes neat and compact and the dilapidation that characterises the last parts of Luke becomes less common (Ross, Stanley & Brown 1960:23-24).

Leaving aside the distribution of *-s* in the gloss for a moment, variation between *-s* and *-ð* records a generational change in progress, which the historical record shows goes to completion in the north (except in contexts constrained by the Northern Subject Rule). Modern sociolinguistic theory (Labov 1994, 2006) would therefore predict that we are dealing with 'change from below', linguistic change which avoids stigmatization and is pushed forward to completion by successive cohorts. Unlike 'change from above' which characterises both stigmatized and prestige features and leads to stable variation, change from below, on the other hand,

> […] is expressed as a gradual shift in the behavior of successive generations, well below the level of conscious awareness of any speakers. In most cases, the shift begins with a particular group in the social structure and is gradually generalized in the speech of other groups. Usually the initiating group has low status in the social hierarchy – otherwise the change would be transformed into overt pressure from above. (Labov 1966:128)

The distribution of *-s* would be subject to the same internal constraints across the generations, but would differ notably in how often it occurred. In fact, the linguistic constraints governing the competing variants would be constant factors across the entire course of the change, with the only change being in the increased probability of use of

the innovative grammar over time (Kroch 1989). The replacement of -*th* by -*s* in EModE has been shown to conform to such pervasive sociolinguistic tendencies, with -*s* entering the grammar via speakers of lower status and being pushed forward by women (Nevalainen & Raumolin-Brunberg 2003:195).

If this 'change from below' interpretation is correct, then higher rates of the innovative -*s* form would clearly be expected among younger cohorts than in older generations, but the observed variation in *Lindisfarne* cannot be explained simply by attributing the drastic quantitative differences in -*s* usage prevalent across the glosses to different aged scribes. If Aldred relied on pre-existing vernacular translations as appears to be the case, then the glossator may well have preserved the linguistic forms found in these sources, while incorporating his own. In the case of the present-tense markings, the glossator's reliance on southern sources may well explain the higher rates of -*ð* found in some sections of the gloss, such as Luke. Given the nature of the genre under scrutiny and the practices of the scriptorium this possibility has to be borne in mind. What is remarkable, however, is that the scribe consistently filtered the morphological forms he encountered through a subject type constraint.

Conclusive evidence proves elusive, but the evidence provided by the distribution of NP/PRO constraint lends credence to the hypothesis that Aldred was using an exemplar in which there had been a change in hands or a variety of different sources from which he copied the variant forms as well as incorporating his own forms. The distribution of NP/PRO constraint also corroborates the hypothesis that Matthew stands as a single linguistic unit in contrast to the rest of the text and that John may also be considered distinctive.

4.2.5 Adjacency and word order effects

In addition to investigating the effect of subject type in the glosses, I wanted to examine whether an adjacency effect conditioned the selection of verbal morphology in plural pronominal environments as it did in northern Middle English (see section 3.1). This analysis relied on data taken from all four gospels and examined 694 plural pronoun subjects. In view of the parallelisms in behaviour between personal and demonstrative pronouns in Old English, plural demonstrative pronoun subjects of the type, *ðas wyrtruma ne habbað* "These/they have no root" (L.8:13), and *huæt ðas cueðas* "what these/they say" (Mt.21:16) were also included in the analysis. Imperative *gie* tokens were also included in the analysis, given that despite the association of the NSR with

the present indicative, the distribution of plural imperative morphology in Middle English also exhibited an adjacency effect (Laing & Lass 2007: *LAEME* 4.4.4.7). The Yorkshire texts found in *LAEME* show plural imperative forms categorically lose their suffix when immediately preceded or followed by a personal pronoun, while null plural imperatives mainly trigger *-s*. The following explanatory variables were considered: PERSON, ADJACENCY, WORD ORDER, POLARITY, STEM ENDING and MORPHOSYNTACTIC PRIMING. I will consider the variables PERSON, ADJACENCY and WORD ORDER in turn.

The explanatory variable PERSON was included in the analysis with the levels FIRST PERSON, SECOND PERSON and THIRD PERSON in order to ascertain whether a particular person environment favoured *-s*. Several older studies note the favoured use of *-s* endings with second-person plural subjects (Holmqvist 1922; Blakeley 1949/50; Stein 1986). As previously mentioned, however, in their disregard for the effect of subject type, all of these previous studies have considered the effect of person using data potentially skewed by the inclusion of different subject types in the third person plural context. In other words, while the data for the third person included both favouring subject types such as personal pronouns, as well as 'disfavouring' non-pronominal subjects, the first and second plural data were comprised solely of personal pronoun subjects, i.e. favouring subject types, that may have inflated the frequency of *-s*. In a nutshell, what previous accounts interpreted as the effect of person may in fact have been a subject type effect.

The code ADJACENCY took into account the proximity of the verb with regards to the pronominal subject. Non-adjacent contexts included verbs separated from their pronoun subjects by one or more intervening elements, as in *gie ne gelefeð* (Jn.10:26) and *gie alle wundriað* (Jn.7:21), as opposed to adjacent contexts of the type *gie geseas* (Mk.16:7). Non-adjacent contexts also included coordinated VPs such as *gie ongeattas hine 7 geseað hine ~ cognoscitis eum et uidistis* "ye know him and have seen him" (Jn.14:7) in which the second element was coded as non-adjacent. There is also a third and final non-adjacent context characteristic of the gloss that had to be considered. The glossator frequently provides alternative glosses for a single Latin term, separated by Latin *vel*, 'or' (abbreviated to ł in the manuscript), thus *gie doas* ł *wrycas ~ facitis* (Mk.7:13). In these cases, the verbal element not in immediate proximity to the pronoun subject was regarded as non-adjacent. The non-adjacent tokens included in the present study are set out in Appendix E.

Given the extensively documented diachronic importance of inversion in

conditioning verbal morphology, the potential effect of WORD ORDER was also taken into account. Plural verb forms in ante-pronominal position triggered reduced vocalic endings, as opposed to consonantal endings, in all Old English dialects, hence the occurrence of *ga ge* in contexts of subject-verb inversion as opposed to *ge gaað* (Campbell 1959:§730; see also section 5.1). The effect is also found in northern Middle English (Brunner 1970:§68) and in present-day varieties of northern English (Shorrock 1999; Pietsch 2005). Inverted contexts are found to be the most strongly favouring environments for verbal-*s* usage in Pietsch's (2005:168) survey of late twentieth-century Northern Irish, Scottish and northern British data taken from the *Northern Ireland Transcribed Corpus of Speech* (*NITCS*, Kirk 1991) and a sub-corpus of the *Freiburg Corpus of English Dialects* (*FRED,* Kortmann et al. 2000-2005). His analysis of unpublised material drawn from the notebooks of fieldworkers working on the *Survey of English Dialects* (*SED*, Orton et al,. ed. 1962-1971) further corroborates the effect of subject~verb inversion; questions and tag clauses are found to be a particularly favourable environment type for the triggering of verbal-*s*, hence *Where's my yorks at?* [*SED*: We4], *Has thi taties comed up yet?* [*SED*: Y7] or *They're real hard gossips, is them* [*SED*: Y2] (Pietsch 2005:166). Similarly, Smith et al's (2007) analysis of children's acquisition of variable forms in the Scottish dialect of Buckie finds considerably higher rates of verbal-*s* in interrogative constructions including both yes/no interrogatives and wh-interrogatives in comparison to declaratives.

The effect of inverted word order on the selection of verbal morphology is not confined to northern varieties, although the northern emphasis of the aforementioned studies may initially suggest otherwise; the phenomenon has simply been addressed more frequently for the northern varieties than for any other variety. The tendency is in fact a well-documented feature of all varieties of English dating back to Old English times (Visser 1970:§84: see example 15 of the present study). The widespread tendency in both historical and present-day varieties of English for existential *there* structures followed by a plural NP to occur with *is* and *was* has also been associated with the relative positioning of the verb with regards to the subject, hence existential *there* + V + NPpl constructions trigger plural *is*/*was* more readily than canonical NP + V word order. Hudson & Holmes' (1995) and Williamson & Hardman's (1997) Britain-wide surveys of young teenagers' use of non-standard dialect in speech and writing reveal that the use of *there is* and *there was* with a following plural is common across Britain in Merseyside, the South-West, London and Tyneside. Indeed, the widespread

nature of *there is*/*was* usage in plural environments has led Cheshire et al. (1993:70) to suggest that the tendency is best understood as "a stylistic feature of English, characteristic of colloquial, informal speech rather than a non-standard feature". Indeed such forms are even a feature of educated speech (Quirk and Greenbaum 1973:176; Chambers 2004:141) and as William & Hardman (1997:163) point out, they also occur in written speech.

Indeed, the effect of inversion extends beyond the realms of English. In Semitic languages such as Arabic and Hebrew agreement marking in certain contexts depends on the word order of the subject relative to the verb (Vennemann 2001:357-58; Klemola 2000:337). The predicate generally agrees with the subject in gender and number, however a verb preceding a plural subject may occur with a verb inflected in the singular. The subject~verb word order that characterised early stages of the Welsh language, in addition to canonical Welsh verb~subject word order, also triggered a similar morphological effect (Lewis & Pedersen 1961:§435; Benskin 2011:182-83). Essentially, in the present-indicative plural noun-phrase context a word-order constraint operated whereby NP_{pl} in verb~subject sequences triggered a zero ending, while NP_{pl} in subject~verb sequences triggered a consonantal suffix.

As a high degree of multicollinearity was detected between the initial codes for ADJACENCY and WORD ORDER these factor groups could not be tested simultaneously. A coding system was therefore devised that allowed for both the effect of adjacency and of word order to be evaluated in a single code.[30] Pronoun tokens were coded according to whether they were adjacent pronouns in S~V order, adjacent pronouns in V~S order or non-adjacent to the verb. This explanatory variable was labelled ADJACENCY/INVERSION.

4.2.5.1 Results for adjacency and word order effects

The logistic regression analysis selected MORPHOSYNTACTIC PRIMING and STEM ENDING both at the p = < .001 level as the most influential factors followed by ADJACENCY/INVERSION at the p = < .01 level (cf. Table 4, Appendix A). The results for ADJACENCY/INVERSION are summarised in Table 18. The results indicate that in addition

[30] Chi-square independence tests and Cramer's V calculations were carried out in order to test for multicollinearity between explanatory variables ADJACENCY, POLARITY and WORD ORDER (high Cramer V values indicate multicollinearity. The results were the following: ADJACENCY~WORD ORDER (V-Cramer: 1); ADJACENCY~POLARITY (V-Cramer: 0.07790392); WORD ORDER~POLARITY (V-Cramer 0.4937434). The slightly elevated V-Cramer value for WORD ORDER~POLARITY was not considered high enough to justify its elimination from the analysis.

to consistent phonological and morphosyntactic priming effects in the expected direction, there is also an adjacency effect, particularly in S~V contexts, whereby adjacent pronouns favour -*s* at 0.59, while non-adjacent pronoun environments disfavour -*s* at 0.39 and prefer -*ð*. While the adjacency effect is stronger in S~V rather than V~S contexts, there is no statistically significant difference in the effect of these contexts on the use of suffixal -*s* (p = 0.077, χ^2 3.120), i.e. inversion does not have a statistically significant effect on the use of one variant over another .

Table 18. Effects of adjacency and inversion on the probability of -*s* (as opposed to -*ð*) for plural pronominal environments in Matthew, Mark, Luke and John.

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
ADJACENCY/	adj prn S~V	253/396 (64%)	0.376	0.59
INVERSION	adj prn V~S	127/224 (57%)	0.055	0.51
(p = < .01)	non-adj. prn.	34/74 (46%)	-0. 431	0.39

Given the consistently strong morphosyntactic priming effect found in the glosses (section 4.4.1), it is perhaps all the more remarkable that adjacency emerges as a robust syntactic effect in determining the direction of variation. The effect of morphosyntactic priming, which would theoretically bias a speaker towards reusing a linguistic form, in this case an inflectional ending, actually has the opposite effect to the NSR constraint, which triggers differential inflections.[31] The tension between the two constraints would be felt most strongly in cases where the glossator provides alternative forms separated by 'vel' or in the case of contexts involving coordinated VPs of the type ***ge willnias*** *gesea enne doeg sunu monnes* ***7 ne geseað*** "Ye desire to see one of the days of the Son of man, and ye shall not see it" (L.17:22). In this particular example, adjacency would have the affect of triggering -*s* and non-adjacency -*ð,* whereas priming would bias the speaker towards reusing -*s*, and producing *ge willnias ... 7 ne geseas*. Despite the strong effect of morphosyntactic priming in the glosses, adjacency emerges as a robust factor in conditioning the occurrence of suffixal -*s*.

POLARITY and PERSON were two other factors that turned out not to have a

[31] I am grateful to Ans van Kemenade (p.c.) for pointing this out to me.

significant effect on the occurrence of the -*s* ending. The percentages of present-tense -*s* markings for factor groups that were not selected as significant are summarised in Table 19.

Table 19. Percentage of -*s* markings for explanatory variables not selected as significant

	-*s*/total	% -*s*
POLARITY		
affirmative	348/559	62%
negative	66/135	49%
PERSON		
first person	29/51	57%
second person	302/508	59%
third person	83/136	61%

As subject~verb inversion in OE is closely (although not exclusively) associated with negation, e.g. *ne habbas we* (Mk. 8:16), but so too *gie ne gelefeð* (Jn. 10.26), the cross tabulation of both variables in Table 20 provides further insight into any possible overlap between these variables and explores whether slightly higher rates of -*s* in S~V contexts also reflects a polarity effect.[32] The break down of the data in Table 20 suggests that affirmative contexts may have a slight favouring effect on the use of the innovative variant. The figures show that affirmative environments trigger verbs in -*s* consistently more frequently that negative verb phrases regardless of word order.

Table 20. Cross tabulation of the factors WORD ORDER and POLARITY. (Includes only adjacent pronoun contexts)

	Negative clauses -*s*/total (% -*s*)	Affirmative clauses -*s*/total (% -*s*)	Total -*s*/total (% -*s*)
subject~verb	5/12 (42%)	248/384 (65%)	253/396 (64%)
verb~subject	54/102 (53%)	73/122 (60%)	127/224 (57%)

With regards to the effect of PERSON, the results demonstrate that when the

[32] The data exclude non-adjacent tokens.

potential effect of SUBJECT TYPE is taken into account by restricting the analysis of PERSON to a single subject type there is no relationship such that the second person ranks above the first and third person (cf. Holmqvist 1922; Blakeley 1949/50; Stein 1986). The notably lower incidence of *-s* reported by previous studies is due to the inclusion of non-favouring subject types in the data for third-person plural context.

Having established that subject type and adjacency effects were operative in the key NSR plural environment in early northern dialect, a coding schema involving both SUBJECT TYPE and ADJACENCY was devised. The factor group SUBJECT TYPE comprised the following factors: adjacent pronouns, non-adjacent pronouns, heavy noun phrase subjects (including full NPs, and relative clause/NP + relative clause subjects) and zero third person subjects. SUBJECT TYPE was included in a multivariate analysis of N = 1147 alongside STEM ENDING, POLARITY and MORPHOSYNTACTIC PRIMING. The results of the the multivariate analysis, summarised in Table 21, indicate that MORPHOSYNTACTIC PRIMING, STEM ENDING and SUBJECT TYPE all emerge as robust factors at the p = < 0.001 level, followed by polarity at the p = < 0.01 level. Factors are organised in the order of significance.

Table 21. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) for plural environments in Matthew, Mark, Luke and John (*N* = 1147)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. *-s* suffix	425/600 (71%)	0.711	0.67
(p = < .001)	prec. *-ð* suffix	209/547 (38%)	-0.711	0.33
STEM	dental /d, ð/	166/218 (76%)	1.099	0.75
ENDING	affricate/ʧ,ʤ/	44/60 (73%)	0.803	0.69
(p = < .001)	consonant	298/572 (52%)	0.067	0.52
	vowel	77/183 (42%)	-0.474	0.38
	bilabial	36/74 (49%)	-0.515	0.37
	sibilant /s/	13/39 (33%)	-0.980	0.27
SUBJECT	adjacent prn.	380/620 (61%)	0.555	0.64
TYPE	heavy NP	159/322 (49%)	-0.149	0.47
(p = < .001)	non-adj. prn.	34/74 (46%)	-0.117	0.46
	‘zero’ 3pl.	61/131 (47%)	-0.288	0.43

POLARITY	affirmative	540/947 (57%)	0.23	0.56
(p = < .01)	negative	94/200 (47%)	-0.23	0.44

N = 1147
Nagelkerke R^2 = 0.242
Deviance = 1348.927
df = 11
Cross-validation estimate of accuracy = 0.684

As can be seen, the following pattern emerges: adjacent pronoun subjects favour -*s* at 0.64, while all other subject types prefer -*ð*. The pronominal~non-pronominal constraint hierarchy is strikingly similar to that found in northern Middle English and later northern varieties, and indicates that the syntactic NSR system operated in early northern dialect, but with different morphological endings.

4.2.6 Summary

While scholars have suspected that the trend for variation to be syntactically conditioned by a NP/PRO constraint has been present from the inception of plural verbal-*s* in the tenth century to the present (see Bailey et al. 1989:290; Poplack & Tagliamonte 2001:191), no study until now has actually proven the fact quantifiably. The results show that the subject effect at the crux of the NSR in northern Middle English was operative in late Old Northumbrian with alternative morphological material, and that agreement in this system was essentially governed by subject type and to a lesser extent by person and number.

4.3 Phonological conditioning factors

There is general consensus that phonotactic conditioning factors played an essential role in the replacement of -ð by -*s* in both in EModE and Northumbrian. The main points to be considered include the possible effect of phonological context as an influencing factor on -*s*/-ð variation, and more concretely that of STEM ENDING and FOLLOWING PHONOLOGICAL SEGMENT, in addition to the possible role played by the weakening or syncope of inflectional vowels on the proliferation of -*s*. I will start by considering the variables FOLLOWING PHONOLOGICAL SEGMENT and INFLECTIONAL VOWEL

before moving on to a detailed discussion of the effect of STEM ENDING.

4.3.1 Following phonological environment

A potentially relevant phonological factor in a speaker's choice of suffixal ending concerns the onset of the word that follows the verb form. Substantial evidence for the significance and relevance of following phonological environment comes from the extensive literature on /t, d/ deletion in present-day American English (Guy 1980, 1991; Santa Ana 1992) and on -*s* lenition in Spanish (Bybee 2000; File-Muriel & Brown 2010). The deletion of word-final /t, d/ is more likely when the dental segment is followed by a following consonantal segment than a vocalic segment (Neu 1980). In Spanish, following context is also relevant to *s*-realisation with vowels promoting *s*-weakening and following pause producing a strengthening effect (Poplack 1980; File-Muriel & Brown 2010). Of particular relevance to the occurrence of suffixal -*s* in Old Northumbrian is the parallel *horror aequi* effect on the presence of -*s* identified by Gries & Hilpert (2010) in EModE for both preceding and following phonological context. The authors find that a following -*s* onset after a present verb form inhibits the occurrence of the -*s* ending in EModE. The interdental variant is preferred if the onset of the following word starts with an alveolar fricative. Ross (1934:73) also suggests that in Old Northumbrian -*s* may have occurred more readily before [j] in the enclitic pronoun *gie.* This, he claims, would account for the (supposedly) higher rates of -*s* with the second-person plural pronoun subject, but he cites no supporting evidence for this assumption. The present analysis registers the potential effect of following phonological environment by including the variable FOLLOWING PHONOLOGICAL SEGMENT.

4.3.2 Inflectional vowel weakening and syncope

The second phonological issue that is of concern is the suggestion that the rise of the sibilant ending and syncope of the inflectional vowel went hand in hand. An attempt to explain the proliferation of -*s* in terms of morphophonemic preferences is provided by Nevalainen & Raumolin-Brunberg (2000b) who suggest that consonant clusters brought about by syncope of the inflectional vowel are facilitated by the availability of the -*s* ending. The authors show that the sharp rise in the use of the -*s* ending patent in London towards the end of the sixteenth century coincides with the loss of the vowel in the third-person singular present-tense suffix, resulting in syncopated -*s* suffixes of the

type *he desyers*, whereas the variant suffix with an inflectional vowel (*-eth*) continued to be associated with sibilant-final stems, as in *promiseth*.

In the case of Northumbrian, third-person singular (and second singular) syncopated forms of the type *hæfð,* as against *hæfeð,* are rare in Anglian dialects as previously mentioned (Campbell 1959:§733), and in fact not a single token of a syncopated third-person singular form was found in *Lindisfarne*. This is despite the fact that the reduction of unstressed final syllables occurred early in northern dialect and led to the loss of the vowel distinction that distinguished third singular and plural forms. This is evidenced by the fact that inflectional *-e-* often replaces *-a-* in plural forms (*hia spittes* Mk.10:34, *hia gedrifes* Mt.12:27) just as *-a-* occurs for *-e-* in singular forms (*he wyrcað* Jn. 5:20, *he syngias* Mt.19:9), so that *-es*/*eð* and *-as*/*að* occur indiscriminately in both plural and third singular environments. The interchangeability of *-a-* and *-e-* suggests both spellings were being used to represent the same sound (probably shwa).[33] Blakeley (1949/50:20) considers this vocalic levelling part of the general levelling process affecting the third-person singular and plural environments. If the indiscriminate use of inflectional *-a-* and *-e-* is a manifestation of the falling together of unstressed vowels in shwa, the inflectional vowels would have retained none of the original variants in vowel quality that might have favoured one suffixal form over the other. Nevertheless, given the role placed by inflectional vowel syncope in facilitating the proliferation of suffixal *-s* in EModE (Nevalainen & Raumolin-Brunberg 2000b), it seemed worth considering the possibility that inflectional vowels in late Old Northumbrian may have retained qualitative differences that would bear upon the speaker's choice of consonantal endings. The explanatory variable INFLECTIONAL VOWEL addressed this possibility by coding tokens according to whether their inflectional vowel was strong, i.e. /a/ or weak /e, æ, i/.[34]

4.3.3 Preceding phonological environment

Numerous studies focusing on the spread of suffixal *-s* in the third-person singular context in EModE indicate that consonant stem endings promoted the use of the *-s* ending, whereas vocalic stem endings tended to retain endings in *-ð*. Sibilant sounds such as /s/, /z/, /ʃ/, /ʒ/ and the sibilant affricates /ʧ/ and /ʤ/ have also been shown to be

[33] This orthographical confusion in unstressed syllables involving schaw continues to characterise Modern English as evidenced in widespread spelling errors such as **grammer*, **definately, *seperate* &c.

[34] *æ* often appears as a spelling variant of *e* in unstressed syllables. In *Lindisfarne i* also occurs after *i*, *ġ* as in *gesiið, fæstnagið* (Campbell 1959:§369, p.154 fn.3).

more resistant to the advance of the innovative ending (see Holmqvist 1922; Stein 1987; Kytö 1993; Ogura & Wang 1996; Nevalainen & Raumolin-Brunberg 2000b; Gries & Hilpert 2010). There has also been some suggestion that /t/ and /d/ favoured *-s* over other consonant types in EModE (Stein 1987; Kytö 1993:129-30), although the trend does not hold consistently (cf. Ogura & Wang 1996:124). For Old Northumbrian only one quantitative study exists, that of Blakeley (1949/59; see also Stein 1986 for discussion). The coding criteria adopted by Blakeley contrasts vocalic stems and stems ending in /t, d, ð/, /m/ and /s/ against all other stem endings. Stem-final dentals are found to favour the occurrence of *-s* endings in contrast to vocalic stems and stem-final /s/. Commonalities between the effect of stem ending on the proliferation of *-s* in ONrth and EModE highlight the strong phonotactic motivation behind the replacement process. Nevertheless, certain questions remain unexplained. Blakeley finds no satisfactory explanation for the disfavouring effect of stem-final *-m* found in the data "[…] the third case, *m*, is not clear, as there appears to be no reason why *m* in the stem should have the same kind of influence as *s*" (1949/50:20). Furthermore, although Blakeley's study takes into account the effect of the stem-final sibilant *-s* on suffixal variation, the effect of the stem-final sibilant affricates /ʧ/ and /ʤ/ has never been considered for Old Northumbrian. In an attempt to remedy this situation, the present analysis coded for stem-final affricates in order to test for further signs of a 'sibilant constraint' in early northern dialect. Given the lack of consensus on the chronological dating of the sound shifts involved in the development of the sibilant affricates /ʧ/ and /ʤ/ from palatalized velar stops in Old English, and the difficulty of pinpointing allomorphic variation between velar and palatal consonants in the verbal paradigm, it was not easy to find the most appropriate classification for stem-final <c, cc, cg, g>. Section 4.3.3.1 will consider this issue in detail.

4.3.3.1 Palatalisation and assibilation of velars in OE

In medial position, the environment which is of concern here, the development of the velar consonants */ɣ ~ g, k/ in the ancestor of Old English was as follows: */k/ developed a palatal allophone *[c] before */i(:)/ and */j/ (as in *sōkīþi > OE sēcþ '(s)he seeks') and also when geminated (*strækkjan > streċċan). The development of */ɣ ~ g/ was more complex in that it produced two initial outcomes *[j] and *[ɟ]. Medially, the fricative velar */ɣ/ palatalised to *[j] between front vowels (as in *buɣiþi > OE byġeþ '(s)he buys'), whereas geminated *gg and *g in the cluster *ng palatalised to *[ɟ] under

the influence of following *j (as in *sæggjan > OE seċġan ‘say’ and *mængjan > menġan). These developments typically affected *j*-stem nouns and *j*-present verbs (class I and III weak verbs). Thus, *sōkijanan ‘seek’ OE sēċan; *bugjanan ‘buy’ OE byċġan; *wakjanan ‘keep vigil’ OE wæċċan; *þankijanan ‘think’ OE þenċan (cf. *drengkan OE drincan); *brangjanan ‘bring’ OE brenġan (cf. *bringanan ‘bring’ OE bringan).

The palatal stops *[ɟ] and *[c] eventually developed into the postalveolar affricates [ʧ] [ʤ], though the exact chronology and the regional distribution of assibilation is highly controversial. Laker (2010:83) outlines the following derivation for the postalveolar affricates *[k] > * [cʲ] > *[tʲ] > [ʧ] and *[g] > * [ɟ] > *[ɟʲ] > [ʤ] whereby the palatal stops developed a glide that induced dentalisation followed by assibilation. Medially, the assibilation of palatal stops to [ʧ] and [ʤ] occurred before a vowel and a preceding mutated vowel, but not before consonants, where they retracted to velar stops again (Campbell 1959:§438). This would explain the apparent variation found in weak verbs, e.g. assibilated *þenċan*, *sēċan,* byċġan versus *þencþ*, *sēcþ, byġþ* without assibilation, in which the palatal would gradually have velarised again. From here the velar stop forms would have spread to the infinitive and plural forms analogically and/or by way of Scandinavian influence.

The Old English spelling conventions were underspecified when it came to distinguishing affricates from palatal and velar stops. Laker notes that the Anglo-Saxonists’ convention of using a superscript dot to mark these forms <ċ, ċċ, ġ, ċġ> “leaves open the possibility of the velar plosives being either palatalised or assibilated, which is convenient, since assibilation cannot be dated with any precision” (2010:83). Northumbrian runic evidence from the eighth-century Ruthwell and Bewcastle crosses indicates that palatalised velars were differentiated from unpalatalised velars, though they do not necessarily demonstrate assibilation (see Ball 1991:117-19; Page 2006:45-46). The main orthographical evidence for the ninth-century dating traditionally attributed to the emergence of assibilation lies in the appearance of cc, cg spellings for [tj] [dj] from the late ninth century, as in the case of OE *feċċan* ‘fetch’ (from **fetian*), *miċġern* ‘fat’ (**midġern*) or *orċeard* for *ortġeard* ‘orchard’ (Campbell 1959:§434, §483; Hogg 1992:270-271). The use of <cg, gg> appears to indicate an attempt to record a complex (affricate) articulation. It is generally assumed that the palatal stop + /j/ glide passed through a dentalisation stage and must have coalesced into an affricate at the same time (Campbell 1959:§434, §486; Hogg 1992:270).

The prevalence of velar stops found in northern Middle English, of the type

brig, rig, kirk for *bridge, ridge, church* has led scholars to question whether the assibilation of palatalized Germanic */g, k/ actually took place in Old Northumbrian (see Pak 1973 and references therein for further discussion of the contending views). Various scenarios have been proposed to explain the apparent lack of assibilation in northern dialect. One widely upheld view in the literature ascribes lack of assibilation in the north to Scandinavian influence (Luick 1935, 1964:§685, Anm.2; Campbell 1959:§438; Hogg 1992:274-275). The proposal rests on the observation that Scandinavian speakers did not have palatalised or assibilated velars in their phonemic inventory and therefore replaced these with velar stops. The crux of the argument is that the alveolar affricates, both voiceless and voiced, were widespread in Old Northumbrian until Scandinavian influence disturbed the pattern, thus accounting for the northern Middle English stop forms. A problem for this view is that a simplified north and south k- ʧ and g - ʤ isogloss cannot be established. Careful assessment of the data shows that non-assibilated forms occur in dialects outside of the main sphere of Scandinavian influence, just as palatalised forms also occur in Northern texts (Laker 2010; Pak 1973). A recent study by Laker (2010) also sets developments within the sociolinguistic history of population and language contact in the North and assesses the possible Brittonic influence on the arrestation of palatalisation. This position is also substantiated by the absence of palatalised or assiblilated velars in Brittonic and the possibly broader geographical scope of Brittonic influence.

Laker (2007:180-2, 2010:98) also argues that in some instances the lack of palatalisation may be due to native dialect developments. While Brittonic and/or Scandinavian influence remains a possibility, northern forms lacking palatalisation of /k/ in final position after /i(:)/, e.g. *swalīċ* ‘such’, *dīċ* ‘ditch’, *iċ* ‘I’ may be a development of OE phonology given that lack of assibilation is also found in Old Frisian in this position and runic evidence proves palatalisation, but not necessarily assibilation (Laker 2010:**). Luick (1935:274, cited in Laker 2010:**) also invokes native developments to explain the absence of assibilation, at least in medial and final position (he ascribes later reversions to velar articulation in initial position to Scandinavian influence). The alternative palatalised and unpalatalised forms found in *j*-nouns, e.g. *brig, rig, steek, eg, seg, weg, birk,* for *bridge, ridge, stitch, edge, sedge, wedge, birch* show reflexes with and without assibilation far beyond the Scandinavian sphere of influence. Luick argues that early loss of **j* would have brought the preceding palatalised velar into contact with either a front or back vowel depending on number

and case. Under the effect of a following back vowel, [ɟʲ] would have de-palatalised leading to nominal paradigms with both palatalised and unpalatalised velars. As discussed above, a similar language internal motivation may explain the allomorphic variation between palatalised/velar and affricate forms word-internally in the weak verbs. The syncope of the inflectional vowel in the second and third person singular environments would have brought the preceding palatalised velar into contact with a consonant and blocked assibilation. Consequently, the palatal stops would have retracted to velar stops (Campbell 1959:§438).

Nevertheless, despite the apparent soundness of this theory, orthographic evidence from *Lindisfarne* points to greater fluctuation between palatal stops and affricates than has previously been suggested. Hogg (1992:260, fn.3, with references to Bülbring 1902:§495, anm. 2 and Brunner 1965:§206) discusses the forms *bæcg* (3x), *bæcc* (2x), *gebrægcg* which could indicate assibilated forms, but suggests that <cg> appears to to be merely a variant form of <cc>. Dutton Kellum (1906:§74, §77) attributes the <cc> spelling to the "double writing of a simple consonant after a short vowel," which must indeed be the case in forms such as *onsæcces* (Jn.*3:4), *gebruccað* (Jn.6:54). But <cc> alternates with <cg> alongside <c> and <g> where affrication *is* expected, as the following plural forms of *j*-present verbs indicate, e.g. *bycges* f. 107rb 16 (Mk.6:36), *byges* f. 222vb 2 (Jn.6:5), *byccað* f. 55vb 18 (Mt.14:15), *ðencgað* f. 178rb 7 (L.14:31), *ðencas* f. 238va 14 (Jn.11:50). A further complicating factor for the purposes of this present study, is that in *Lindisfarne* <cg> forms also occur in the third person singular of *j*-present verbs, as in *bebycgeð* f. 195rb 16 (L.22:36), *ðencgað* f. 178rb 7 (L.14:31) and *forhycgað* f. 222rb 19 (Jn.5:45) as well as with strong verbs gebr*ægcgað* f. 255rb 14 (Jn.19:36), *gebrecceð* f. 71ra 12 (Mt. 21.44), *geðrincgas* f. 175 vb 7 (L.13:24). These forms suggest that affrication may not have been restricted to the first person singular, infinitive and plural present-indicative contexts as has generally believed (Campbell 1959:§438).

The lack of transparency in the glossator's orthographic system fails to clarify whether we are dealing with the indiscriminate use of <cg, cc>, scribal error or instances of unexpected affrication. A crucial dialectal difference between West Saxon and Anglian, however, would suggest that the latter may actually be a strong possibility. In view of the fact that second and third singular present-indicative forms are rarely syncopated in northern dialect (Campbell 1959:§733), the syncopation that results in the sequence palatal stop + consonant in these environments in West Saxon, e.g. *þencþ*,

byġst, does not occur in Old Northumbrian. Syncopated forms of the type just illustrated are not attested in *Lindisfarne*. In other words, the environment that prevents affrication in the weak verb paradigm in West Saxon does not occur in Old Northumbrian and suggests affrication may actually have been more extensive in Northern dialect than in the south.

In sum, the unreliability of orthographic markers, the difficulties of chronological dating and dialect variation makes determining fluctuation between palatal or velar stops and affricates in OE with any precision a nigh on impossible task. This clearly makes coding stem-final <c, cc, g, cg> highly complex, as there is no real way of knowing whether the segment was merely palatalised or had also undergone assibilation. The present study therefore erred on the conservative side and only coded plural *j*-present verbs where there exists a reasonable certainty that assibilation took place, as stem-final affricates (Lass & Anderson 1975:144-147). These include plural forms of the verbs *secgan, wyrcan, ðencan, ðyncan, secan, weccan, bycgan, brengan, lecgan, nēalæcan, hycgan, gebyrgan* and *tryccan.*

4.3.3.2 The effect of stem ending

Preliminary analyses of the data were carried out in which phonological context was coded in detail with each individual segment as a separate factor. The raw frequencies for stem ending across the individual gospels and in the data set (Mt./Mk./L./Jn.) are summarized in Table 22.

Table 22. Distribution of -*s* endings according to stem ending In Matthew, Luke, Mark and John.

Stem	Matthew -*s*/Total (%)	Mark -*s*/Total (%)	Luke -*s*/Total (%)	John -*s*/Total (%)	Mt.Mk.L.Jn. -*s*/Total (%)
b	21/24 (88%)	6/23 (26%)	2/19 (11%)	11/22 (50%)	40/88 (46%)
k, c	37/41 (90%)	10/15 (67%)	8/40 (20%)	20/63 (32%)	75/159 (47%)
d	114/123 (93%)	39/46 (85%)	33/74 (45%)	32/49 (65%)	218/292 (75%)
ð	56/62 (90%)	18/29 (62%)	25/46 (54%)	18/21 (86%)	117/158 (74%)
ʧ, ʤ	26/31 (84 %)	12/15 (80%)	11/21 (52%)	21/33 (64%)	70/100 (70%)
v	52/64 (81%)	15/32 (47%)	7/55 (13%)	37/103 (36%)	111/254 (44%)
g	30/34 (88%)	2/6 (33%)	10/19 (53%)	3/5 (60%)	45/64 (70%)
j	50/62 (81%)	12/21 (57%)	13/59 (22%)	15/39 (39%)	90/181 (50%)
l	64/92 (70%)	11/29 (38%)	13/70 (19%)	10/39 (26%)	98/230 (43%)
m	28/43 (65%)	9/31 (29%)	5/60 (8%)	29/76 (38%)	71/210 (34%)
n	45/58 (78%)	7/18 (39%)	10/61 (16%)	31/64 (48%	93/201 (46%)
p	9/12 (75%)	3/8 (38%)	2/14 (14%)	0/7 (0%)	14/41 (34%)
r	66/84 (79%)	8/29 (28%)	11/51 (22%)	10/31 (32%)	95/195 (49%)

s	27/37 (73%)	17/26 (35%)	5/43 (12%)	4/17 (24%)	45/123 (37%)
t	60/71 (85%)	21/35 (60%)	14/67 (21%)	17/35 (49%)	112/208 (54%)
vowel	97/154 (63%)	20/64 (31%)	13/122 (11%)	26/103 (25%)	156/443 (35%)
w	36/45 (80%)	12/21 (57%)	2/24 (1%)	4/16 (25%)	54/106 (51%)
Total	818/1037 (79%)	214/448 (48%)	184/845 (22%)	288/723 (40%)	1504/3053 (49%)

The highest percentages occur with the dental stem endings /ð/ and /d/ at 74% and 75% respectively. While Blakeley was right to account for the favouring effect of /ð/ and /d/ in terms of dissimilation, there is no evidence in the data to justify the inclusion of stem-final /t/ alongside /d, ð/ in a general code for dentals (cf. Blakeley 1949/59). Compare the modest overall occurrence of suffixal /t/ at 54% with the much higher figures that emerge for stems in /ð/ at 74% and /d/ at 75%. Not far behind /ð/ and /d/ are the affricates /ʧ, ʤ/ at 70%. The raw percentage for stems ending in the velar stop /g/ is also comparably high, but a close examination of the distribution of velar tokens across the gospels reveals that half the total number of tokens come from the near invariant Matthew data. When data from Matthew is excluded from the overall count, velar stems have a far more modest 50% rate of -*s* occurrence. The least favouring environments are stems ending in vowels, the bilabial segments /b, p, m/ and /s/. The similarity in behaviour between the segments /b, p, m/ suggests a phonotactically motivated 'bilabial constraint' which would explain the comparative rarity of *s*-endings in stem-final -*m* verbs noted by Blakeley (1949/50:20) and mentioned above.

The results of these finely discriminated analyses justified the coding of the data into the following levels: /ð, d/, /ʤ, ʧ/, /s/, /b, p, m/, vowel, other consonant. While the raw frequency for /s/ did not diverge notably from other consonants, stem-final /s/ was coded separately in order to test for the presence of a sibilant effect.

4.3.4 Results for phonological environment

I will begin this section by discussing those factors that were not selected as significant by the logistic regression analysis; these comprise FOLLOWING PHONOLOGICAL SEGMENT and INFLECTIONAL VOWEL.

Table 23. Percentage of -*s* markings for the distinct levels of the explanatory variables FOLLOWING PHONOLOGICAL SEGMENT and INFLECTIONAL VOWEL

	-*s*/total *N*	% -*s*

FOLLOWING SEGMENT		
glide /j, w/	235/444	53%
liquids /l, r/	2/15	13%
/s/	77/150	51%
/ð/	205/415	49%
vowel	409/864	47%
pause	107/238	45%
other consonant	469/927	51%
INFLECTIONAL VOWEL		
inflectional /a/	934/1810	(52%)
inflectional /e, æ, i/	571/1243	(46%)

As the percentages in Table 23 indicate, the presence of *-s* is equally distributed across most of the distinct levels of the explanatory variable FOLLOWING PHONOLOGICAL SEGMENT. This suggests the absence of a *horror aequi* effect (Gries & Hilpert 2010) for late Old Northumbrian that inhibits the occurrence of suffixal *-s* immediately preceding an *-s* onset, or the occurrence of suffixal -ð immediately preceding a ð- onset. The results indicate that suffixal *-s* occurs as frequently before an ð- onset (49%) as before an *s-* onset (51%), and there appears to be no attempt to avoid sequences of identical consecutive fricatives such as those found in the following phrases: *ðe fæder ðullico soecað ðaðe...* (Jn.4:23) and *gie geseas sua…* (Mk.16:7). Nor is there any indication that a /j/ onset phonetically motivated sound change from [θ] > /s/ (Ross 1934:73). Only the distribution of the *-s* ending before a liquid onset stands out as remarkable, in the sense that a following liquid appears to inhibit *-s*. Close examination of the data, however, reveals that eight out of the total fifteen instances involve third-person singular forms of the verb *habban.* According to the findings of the present study, third-person non-pronominal instances of the verb *habban* would not be expected to favour the innovative ending either from a lexical, syntactic or phonological point of view. Secondly, the effects of a mechanical glossing procedure may also play a role in the conservative choice of suffix, as fourteen of the tokens occur in John and six of the instances involve the rather frequently repeated phrase *hæfeð lif ece.*[35]

[35] The tokens discussed comprise *he hæfeð lif ece ~ habeat uitam aeternam* (Jn.3:15); *hæfeð lif ece ~ habeat uitam aeternam* (Jn.3:16); *seðe gelefeð in sunu hæfeð lif ece ~ qui credit in filium habet uitam ęternam* (Jn.3:36); *hæfeð lif ece ~ habet uitam ęternam* (Jn.5:24); *seðe gelefeð in mec hæfeð lif ece ~ qui credit in me habet uitam aeternam* (Jn.6:47); *seðe gebruccað min lichom 7 drincað min blod hæfeð lif ece ~ qui manducat meam carnem et bibit meum sanguinem habet uitam æternam* (Jn.6:54).

The only phonological factor found to have an effect on -*s*/-ð variation was STEM ENDING. The results for the effect of STEM ENDING summarized in Table 24 corroborate Blakeley's (1949/50) findings that dental stems are a highly favouring environment for the occurrence of suffixal -*s*, whereas suffixal -ð is retained for longer in verbs with vocalic stems, and stems ending in the sibilant /s/. The results also refine Blakeley's findings by revealing the disfavouring effect of stem-final bilabials /b, m, p/ on the occurrence of suffixal -*s*. This effectively explains the disfavouring effect of -*m* stems which Blakeley was at a lost to explain (Blakeley 1949/50:20). The results also provide data on the behaviour of the stem-final affricates /ʧ,ʤ/. Interestingly, there is no clear evidence of the EModE 'sibilant constraint'. At 0.38 the effect of the sibilant alveolar stem on present-tense marking is in the expected conservative direction, but stands in sharp juxtaposition to the behaviour of the sibilant affricate stem endings /ʧ,ʤ/ that are actually found to favour the new variant at 0.67.

Table 24. Stem ending effects on the probability of -*s* (as opposed to - ð) in plural and third person singular environments in Matthew, Mark, Luke and John (*N* = 3053).

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
STEM ENDING (p = < .001)	dental /d, ð/	335/450 (74%)	1.079	0.75
	affricate/ʧ,ʤ/	75/106 (71%)	0.709	0.67
	consonant	768/1593 (48%)	-0.055	0.49
	sibilant /s/	45/122 (37%)	-0.485	0.38
	bilabial	125/339 (37%)	-0.557	0.36
	vowel	156/443 (35%)	-0.691	0.33

As previously discussed, FOLLOWING PHONOLOGICAL SEGMENT was not selected as significant, which indicates that the presence of a fricative at the beginning of a following word had no conditioning effect, and further confirms the lack of a strong phonological *horror aequi* effect (Gries & Hilpert 2010) for Old Northumbrian. It may simply be that the sibilant constraint is not fully operational in Old Northumbrian, at least in the data under discussion. For EModE, Gries & Hilpert (2010:310) find that the sibilant constraint does not characterise the entire development from -*ð* to -*s*, and is only operative for a relatively short period during the first half of the seventeenth century. Phonotactically, however, the similarity in behaviour between affricate and dental stems (with factor weights of 0.67 and 0.75 respectively), and the divergence in

behaviour between /s/ and /ʧ,ʤ/ is a surprising result in need of explanation because it suggests a lack of assibilation in the affricate segments.

A basic premise of the coding criteria adopted in this study was that the stem-final palatalised velar consonants of Germanic *j*-present verbs had undergone assibilation by the ninth century. This, at least, is the view of many if not most scholars (Campbell 1959:§434, §483; Hogg 1992:270-271). An exception is Minkova (2003), cited in Laker (2010:**) who argues in favour of a later dating. While the appearance of c, cc, cg spellings for [tj] [dj] from the late ninth century indicate an attempt to record a complex (affricate) articulation, the innovative spelling conventions do not necessarily prove the presence of assibilation. Nor is it clear which supposed stage of the development these graphemes actually represented, [cʲ], [tʲ] or [ʧ], or in the case of the voiced variant, [ɟʲ] or [ʤ]? In the case of the development of /sk/ > /ʃ/, Ekwall (1963), cited in Laker (2010:**), has argued that it was unlikely that /sk/ had developed as far as /ʃ/ by the time of Scandinavian contact. Had this been the case, a more natural substitution of /ʃ/ for an Old Norse speaker would have been /s/. Consequently, Ekwall maintained that an intermediate stage of palatalisation, e.g. [sç] would have lent itself better to Scandinavian replacement by /sk/. Similarly, the proposal that Scandinavian speakers replaced palatalized or assibilated velars with velar stops (Campbell 1959:§438; Hogg 1992:276) would be better sustained had palatalized /k/ and /g/ retained their velar properties and therefore not assibilated by the time of Scandinavian contact (Laker 2010:93-95).

The similarities in behaviour between dental and affricate stems established by the present study, and the divergence in behaviour between affricate stems and stems in /s/, further corroborates the proposal that we are dealing with an intermediate stage of palatalisation in which assibilation has not yet occurred. The results of the analysis suggest the possible occurrence of a non-sibilant palatal affricate stem. That this may have been the development is borne out by the non-assibilated palatal affricate realisation of ON /g, k/ in certain Western and Central dialects of Modern Norwegian *leggja* ‘lay’ [leɟja], *ikke* ‘not’ [icçe] (Skjekkeland 1997:96-100).

It is generally agreed that the development of the palatal stops to assibilated affricates passed through a [tj] [dj] stage, though dentalisation is not a prerequisite given that both dental and palatal stops belong to the class of coronal consonants, and the development of coronal stop + *j* to an affricate is extremely common process (Hogg 1992:§7.33). That the same graphemes were used to represent affricates derived from

both [tj, dj] and [cʲ, ɟʲ] is not unexpected; palatalised [tʲ] and palatalised [kʲ] are phonetically ambiguous and difficult to distinguish (van der Hoek 2010:60) and the same can be assumed to be true of palatalised [dʲ] and [ɟʲ].[36] Either way, the patterning of these stem endings appears to shed some light on the chronological dating of the sound shifts involved in the development of the sibilants /ʧ/ and /ʤ/. In line with Ekwall (1963), the proposed intermediate stage of palatalisation, such that the affricates had not yet lost their stop feature and become spirants, would lend itself better to the argument that Scandinavian and Brittonic second-language learner error explains the apparent lack of assibilation in early northern dialect .

4.3.5 Summary

The results of the data analysis show that phonotactic considerations involving the effect of preceding phonological environment played a crucial role in determining variation between suffixal variants in late ONrth. The results are also valuable in terms of what they contribute to the ongoing debate concerning the exact chronology and regional distribution of assibilation in Old English.

In view of these results it might be interesting to re-evaluate Kroch et al.'s (2000) contention that irregular sound change triggered the proliferation of the aveolar variant. Given the sociolinguistic scenario of language-contact in the North and the linguistic complexity that [θ] in final position apparently posed for Scandinavian speakers (Kroch et al. 2000), second-language learner error no doubt compounded syncretism in *-s*. It cannot, however, be assumed that Scandinavian influence would necessarily have triggered the development, which may in fact have been a native dialect development. There is every likelihood that *-s* predates Scandinavian settlement and existed at least as a low-frequency variant in certain northern dialects.[37] The appearance of an *-s* ending on a second-person plural imperative form (*gebidæs þer saulæ* "pray for his soul") in the runic inscription on the pre-Viking Urswick Cross

[36] The same ambiguity has been reported for modern dialects. Van der Hoek (2010: 60) cites work by the dialectologist Peé (1936) who found that it was sometimes impossible to distinguish between palatalized /kʲ/ and palatalized /tʲ/ in the Dutch dialect of Louvain (Leuven) in Belgium.

[37] It is noteworthy that the marked anterior fricative /θ/ has been lost from the vast majority of Germanic languages. In High German, Dutch and Low German /θ/ became /t/ due to regular sound change (Keller 1961). In the Continental Scandinavian languages the sound was lost from the present-indicative paradigm due to the generalisation of the default marker *-r* across the board. Only Insular Scandinavian such as Icelandic retains the ON system *-a*, *-ar*, *-ar* (sg) *-um*, *-ith*, *-a* (pl). In non-standard contemporary varieties of English there is also a tendency for native speakers to replace the segment with [f] or [t] (Wells 1996: 96-97).

suggests that the *-s* ending was of early origin - note too the dental stem ending of *gebidæs* (Blakeley 1949/50:28) - although monuments and inscriptions are notoriously difficult to date and the dating of the Urswick Cross to mid to late ninth century has been contested (Bailey & Cramp 1988:148-150; Kroch et al. 2000).

Although no one would wish to claim a single witness as evidence of widespread early *-s* levelling, the fact remains that an early attestation of an *-s* ending exists that conforms to the phonotactic strictures outlined above which suggests the observed results were independent developments and little different from linguistic changes found in other Germanic languages. To the Northumbrian scenario of language variation and change, the Scandinavians would have brought their own linguistic preferences which perpetuated the spread of *-s*. In other words, even if the occurrence of *-s* in plural contexts was a native development, the demographic impact of massive Scandinavian settlement would have compounded its proliferation. It is not difficult to envision how in the language contact scenario that arose in the North the *-s* variant, rather than the typologically marked *-ð* (from a Scandinavian point if view), may have gained currency amongst adult speakers acquiring English and been passed onto successive generations, especially as in contact scenarios demographic factors involving proportions of different speakers are of vital importance in determining who accommodates who and therefore which forms are retained and which are lost (Trudgill 1998: 197).

4.4 Priming effects

4.4.1 Morphosyntactic priming

Following Gries & Hilpert (2010), who examine the effect of MORPHOSYNTACTIC PRIMING on the replacement of *-ð* by *-s* in EModE, morphosyntactic priming was also included as an explantory variable in the present study. Research has shown that there is an inclination for speakers to reuse a linguistic form they have just produced or heard (Pickering & Banigan 1998; Gries 2005: Szmrecsanyi 2006), to use Szmrecsanyi's terminology, 'persistence' occurs. More concretely, in the case of the *Lindisfarne* glossator, morphosyntactic priming would predict that the use of a verb form with an interdental suffix at the beginning of a sentence, would bias the use of the interdental variant with the next present-tense verb the glossator encountered. It seems reasonable to assume that morphosyntactic priming may have influenced the glossator's choice of suffix given the genre of the text and the manner in which glosses for Latin

counterparts in *Lindisfarne* often comprise several Old English alternatives. So at Mk. 4:41, the Latin *oboediunt ei* is provided with three alternative English glosses *herað ł edmodað him ł hersumiað* "obey him". The implication here, is that the *-ð* ending of *herað* may have acted as a prime for the glossator's choice of suffix for the following verb forms *edmodað* and *hersumiað*. Counter examples nevertheless are not difficult to find (*soeca**ð** ge 7 ge infinde**s** ł ge begeatta**s** cnysa**ð** ł cnylla**s** ge… quærite et inuenietis pulsate… "*seek, and ye shall find, knock …" Mt.7:7) but the prevailing impression is that a priming effect may have exerted a degree of influence upon the glossator's choice of suffix.

Mention need also be made of the fact that morphological priming competes with constraints and principles that would in fact predict the exact opposite to morphological 'persistance'. A rival empirical phenomenon according to Szmrecsanyi is that of *horror aequi,* a principle that would predict the "exact opposite of persistent of structure" (Szmrecsanyi 2006:39-40). Citing Rohdenburg (2003:236), Szmrecsanyi (2006:39) notes that there is a "widespread (and presumably universal) tendency to avoid the use of formally (near-) identical and (near-) adjacent (non-coordinate) grammatical elements or structure." Gries & Hilpert (2011:294) interpret the EModE sibilant constraint on the occurrence of present-tense markings in *-s* as a manifestation of a *horror aequi* effect that motivates speakers to avoid using consecutive auditorily similar rounds. Even more crucially perhaps, the NSR triggers differential morphological endings depending on syntactic environment rather than favouring a tendency in the speaker towards repetition, as we have already seen in the case of the adjacency constraint in coordinated VP contexts (see section 4.2.5).

The analysis of morphosyntactic priming in this present study is confined to a consideration of the most basic predictor of morphosyntactic priming such that when two successive choice contexts occur in discourse, the use of a given variant in the first context will increase the likelihood of that variant being reused in the subsequent context (Szmrecsanyi 2006:46). It was not the intention of the present study to measure the effect of other persistence-related intralinguistic factors on the effect of priming, such as textual distance whereby intervening elements between prime and target have been found to weaken surface parallelisms between two subsequent forms (Gries 2005; Szmrecsanyi 2006).

4.4.1.1 Results and analysis

The results of the multivariate analysis with regards to MORPHOSYNTACTIC PRIMING indicates a robust priming effect on the distribution of *-s* and *-ð* in the expected direction. The results for MORPHOSYNTACTIC PRIMING in the Matthew/Mark/Luke/John dataset are given below in Table 25. The presence of suffixal *-s* on a preceding verb form tends to bias the subsequent use of *-s* or vice versa, verb forms ending in *-ð* prime the subsequent use of suffixal *-ð*. As is also to be expected, the relative weighting of the effect of morphosyntactic priming with regards to other factors varies according to the overall rate of suffixal *-s*. In the Matthew/Mark/Luke/John dataset, which has an overall rate of 49% suffixal *-s* (*N* = 1504/3053), morphosyntactic priming emerges as the most influential explanatory variable. The lower overall rate of the innovative ending in Mark/Luke/John dataset (*N* = 686/2016:34%) however correlates with a drop in the relative weighting of the effect of morphosyntactic priming with regards to other factors (compare Tables 1-3 with Tables 5-7 in Appendix A). This suggests that it is the elevated incidence of *-s,* as the spread of the innovative form progresses to completion, that is partially responsible for the stronger effect of morphosyntactic priming with regards to other factors, rather than simply a tendency to reuse forms. Note, for instance, how other factors such as stem ending, lexical item and subject type remain stable relative to each other across analyses. This highlights the difficulties involved in separating the effect of morphosyntactic priming from a general increase in the the proliferation of *-s*. What appears to be governed by persistence may be partially explained by the effect of suffixal *-s* going to completion. Nevertheless, it is worth noting that the specific weightings for the levels of MORPHOSYNTACTIC PRIMING, i.e. the effect of a preceding verb form ending in an *-s* suffix, as opposed to the effect of a preceding verb form ending in an *-ð* suffix on the triggering of the innovative variant, remain remarkably constant across analyses at around .60 and .30 respectively.

Table 25. Morphosyntactic priming effects on the probability of *-s* (as opposed to *-ð*) in plural and third person singular environments in Matthew, Mark, Luke and John (*N* = 3053).

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. *-s* suffix	1000/1503 (67%)	0.746	0.68
(p = < .001)	prec. *-ð* suffix	504/1550 (33%)	-0.746	0.32

4.4.2 The priming effect of the Latin verbal inflection

When dealing with Old English data taken from word-for-word glosses of Latin manuscripts, it is essential to assess whether the linguistic phenomena observed could be due entirely or in part to the influence of the Latin original. Van Bergen's (2008) study of negative contraction in OE, e.g. *nis* (< *ne is* 'not is'), *nallað* (< *ne* w*allað* 'not want'), *næfde* (<*ne hæfde* 'not had'), shows that in the West Saxon gloss to the *Salisbury Psalter* and the Mercian gloss to the *Vespasian Psalter,* Latin influence generally explains the scribe's choice of negative construction. In cases where negation is incorporated into the Latin verb, e.g. *nolite*, negative contraction is used in the OE gloss, whereas uncontracted forms are confined to those instances in which Latin *non* is involved, e.g. *na god wyllende ~ non deus uolens* 'not God willing' (van Bergen 2008:307-08). On the basis of a detailed analysis of the interaction between the OE gloss and the Latin original, van Bergen attributes the observed pattern in the *Salisbury* and *Vespasian* Psalters to "the effect of Latin influence and/or copying from an exemplar" (van Bergen 2008:275). The study addresses the methodological shortcomings of previous studies on negative contraction in OE that have failed to take the possible influence exerted by the Latin original into account (Levin 1958; Hogg 2004). In light of van Bergen's reassessment of the data, Levin's hypothesis that uncontracted negative forms are more widespread in Anglian dialects than in West Saxon is found to hold, despite indications of Latin influence. On the other hand, Hogg's claim that the observed pattern of negation found in the *Salisbury Psalter* is evidence of the frequent use of uncontracted forms in at least one variety of West Saxon, is unsustainable in view of the aforementioned Latin influence.

The caveat exemplified by van Bergen's study is extremely relevant to a study of present-markings in *Lindisfarne*. Latin may have primed the glossator's choice of verbal ending in OE, given that Latin verb forms in the first- and second-person plural active end in *-s*, e.g. present-indicative *audímus*, *audítis*; future-indicative *audiémus*, *audiétis*; present-subjunctive *audiámus*, *audiátis* etc. It was crucial therefore to consider whether the incidence of *-s* endings among second-person plural and first-person plural subjects is partially (or wholly) attributable to Latin influence. In other words, are elevated rates of suffixal *-s* with *gie* and *we*, to use the words of van Bergen (2008:308), a "by-product of glossing practice" rather than a property of the dialect itself?

4.4.2.1 Results and analysis

With the aim of assessing the strength of Latin influence on the glossator's choice of suffix, tokens were coded according to whether the Latin verb form corresponding to the ONrth gloss had a suffix ending in *-s* or not. It should be borne in mind that in addition to Latin having present and future active forms ending in *-s*, first- and second-person passive verbal forms in Latin have *-mur* and *-mini* endings respectively, while the plural imperative ends *-ite*. Third plural present and future indicative and present subjunctive Latin verb forms end *-ant*, *-unt* and *-ent* respectively. As the issue of a Latin priming effect is only pertinent to the first- and second-person environments, the analysis was initially restricted to an assessment of the interaction between the Latin and ONrth verbal form glosses occurring with *we* and *gie* subjects. A cross-tabulation of ONrth present-tense markings in these environments according to the inflection of the Latin form being glossed is given in Tables 26 and 27. In addition to indicative *gie* (*N* = 395) and imperative *gie* (*N* = 113), the data in Table 27 include second-person plural indicative 'zero' tokens (*N* = 18) as these glosses involved Latin forms in *-s*. Collectively these subjects types resulted in a total token sample of *N* = 526 for the second-person plural environment.

Table 26. Present-tense markings with *we* when glossing Latin verb ending in *-mur* and *-s*

WE	ONrth *-ð* *N* (%)	ONrth *-s* *N* (%)	Total *N*
Latin *-mur*	0	2 (100%)	2
Latin *-s*	22 (45%)	27 (55%)	49

Table 27. Present-tense markings with *gie* when glossing Latin verb forms ending in *-imi, -ite* and *-s*

GIE	ONrth *-ð* *N* (%)	ONrth *-s* *N* (%)	Total *N*
Latin *-imi* / *-ite*	65 (49%)	68 (51%)	133
Latin *-s*	147 (37%)	246 (63%)	393

In the first-person plural environment, roughly equal rates of ONrth *-s* and *-ð* occur in glosses for Latin verb forms involving *-s*. However, the scarce occurrence of first-

person plural Latin forms ending in suffixes other than -*s* means there is no point of comparison, which leaves us with the rather more ample second-person plural dataset. In the second-person plural environment, the glossator shows no clear preference for either -*s* or -*ð* when the Latin verb ends in -*imi* or -*ite,* but when Latin -*s* forms are involved, there is a tendency for glosses in -*s* to outweigh those in -*ð,* a difference in behaviour that turns out to be statistically significant at the p = < 0.05 level (χ^2 5.431). There are indications therefore that Latin inflection exerts a small priming effect on the glossator's choice of second-person plural verb ending in *Lindisfarne*. Nonetheless, when rates of ONrth -*s* among first- and second-person plural glosses of Latin verb forms ending in -*s* are compared across the same subject type with rates of -*s* found in the third-person plural, i.e. when verbal inflection that could have been influenced by the Latin original is compared with verbal inflection where Latin could not have functioned as a prime, no statistically significant difference in behaviour is found (χ^2 0.058, p = 0.809). The distribution of -*s* and -*ð* is in fact practically identical as the figures in Table 28 illustrate. If anything, slightly higher rates of -*s* are found with third-person plural *hia*.

Table 28. Distribution of ONrth -*ð* and -*s* endings with *hia* and *we /gie*

	ONrth -*ð* *N* (%)	ONrth -*s* *N* (%)	Total *N*
hia	43 (37%)	73 (63%)	116
we/*gie*[38]	162 (38%)	261 (62%)	423

4.4.3 Summary

Priming effects are found to exert an influence on the selection of suffixal variants in the gloss. This is particularly true in the case of morphosyntactic priming which emerges as a robust factor in determining the glossator's choice of verbal morphology. There are also indications that a Latin priming effect triggers higher rates of -*s* in the second-person plural environment. Crucially, however, there is no statistically significant difference in behaviour with regards to the occurrence of -*s* between those environments in which Latin could potentially function as a prime, i.e. *we* and *gie* contexts and those in which it plays no role, i.e. *hia*. This demonstrates that the Latin priming effect found to operate in the second-person plural environment does not

[38] This code includes only personal pronoun indicative OE glosses of Latin verb forms ending in -*s*.

artificially inflate the overall higher incidence of -*s* found among personal pronoun subjects in ONrth.

4.5 Lexical conditioning and lexical frequency effects

Based on research on the later proliferation of -*s* in EModE, frequency related verb-specific trends would be expected to influence the pattern of diffusion of suffixal -*s* in Northumbrian. Several studies on the distribution of -*s* in EModE coincide in demonstrating the effect of lexical conditioning on the spread of the new variant; the high-frequency grammatical items *do* and *have* in particular are found to resist the adoption of the progressive variant with the forms *doth* and *hath* persisting well into the eighteenth century (Stein 1987; Kytö 1993; Ogura & Wang 1996; Gries & Hilpert 2010). The lack of an apparent phonological motivation for comparatively low incidences of -*s* in certain verb types in late Old Northumbrian has been commented on in the literature (see Ross 1933 *Modern Language Notes* xlviii, 519-21; cited by Blakeley 1949/50: 20) who talks of "'scribal preference' for *ð*, operative in one or more common verbs" in the gloss to the *Lindisfarne Gospels*. No study to date however has quantitatively examined whether lexical diffusion played a role in determining variation between -*ð* and -*s* in late Old Northumbrian.

The term 'lexical diffusion' was coined by Wang (1969) to describe a lexically, rather than phonetically, driven evolution of sound change. It counters the Neogrammarian argument that sound change involves the "phonetically motivated sound change of an entire sound class, affecting all words in which that sound occurs at the same time" (Labov 1994:440). In contrast, the lexical diffusion model predicts that, "a phonological rule gradually extends its scope of operation to a larger and larger portion of the lexicon, until all relevant items have been transformed by the process" (Chen & Wang 1975:256, quoted in Phillips (1984:320). So rather than sound change being lexically abrupt and affecting all words at the same rate, as the Neogrammarian perspective posits, some lexical items are affected by change more rapidly (or slowly) than others. In other words, it is the word rather than the phoneme which operates as the basic unit of change.

Despite reservations to the contrary (Labov 1994, 2006), it is rare to find linguistic variation that does not show the effects of specific verbs. Ever since Wang and her associates advocated lexical diffusion as a mechanism of change (Wang 1969, 1977; Wang & Cheng 1977), numerous studies have strengthened the case for lexical

diffusion by showing that phonetic conditioning alone is not responsible for how change spreads (Ogura & Wang 1996; Wang 1977; Phillips 1984, 2006; Krishnamurti 1998; Bybee 2002, 2007: Clark & Trousdale 2009; Clark, in press). Having said this, the widespread tendency of studying lexical conditioning in isolation, with no regard for phonetic conditioning, runs the risk of grossly overestimating the effect of lexical selection. Labov's (1994:444-451, 476-500) reexamination of Middle English dialect data used as evidence of lexical diffusion (e.g., Ogura's 1987 data on the diphthongization of ME ī and ū) highlights the danger of adopting such a monofactorial approach. Using rigorous mathematical analyses, Labov shows that although signs of lexical diffusion are found to condition the vowel shift advancement, at least in the case of ME ī words, phonetic conditioning rather than lexical diffusion is the basic and overriding mechanism of change. Labov concludes, "There is no evidence that lexical diffusion is the fundamental mechanism of sound change. Though some words may have their own history, each word does not have its own history" (1994:501). In more recent work on sound changes in progress across the North American continent, Labov finds no evidence of frequency effects and only minimal lexical conditioning, leading him to draw the general conclusion that "as the change progresses, it is still dominated by phonetic factors but within these constraints, the variation can show small lexical as well as social effects" (2006:511).

In an attempt to resolve the conundrum of under what circumstances lexical diffusion occurs, Labov (1994:542, 2006:509) proposes two types of sound change. Lexically implemented sound change ('lexical diffusion') is characteristic of the late stages of a sound change that reflects a high degree of social awareness. Phonetically implemented sound change, on the other hand, ('regular sound change') shows no grammatical or lexical conditioning and is not influenced by social awareness. Under Labov's analysis, lexical diffusion would explain cases such as the raising of short [æ] in Philadelphia, which affects the adjectives *mad, bad, glad* ending in /d/, but not *sad*. Here the change appears to have been arrested after having affected only part of the lexicon.

Recent research would suggest however that establishing a dichotomy between regular versus lexical diffusion tells only part of the story. Exponents of lexical diffusion suggest even regular sound change, i.e. sound change that eventually affects the whole lexicon, may be lexically implemented (Oliveira 1991; Krishnamurti 1998; Pierrehumbert 2002; Bybee 2002). A number of studies have found evidence of

reductive sound change that goes to completion, but exhibits gradual lexical diffusion, as in the case of the aspiration and deletion of onset and medial /s/ in Gondi (Krishnamurti 1998) and the unrounding and merger of ME /ö(:) and /e(:)/ (Phillips 1984), a study we shall return to shortly.

Numerous studies have also demonstrated that the word-specific effects of lexical diffusion usually go hand in hand with strong frequency effects (Hooper 1976; Phillips 1984, 2006; Bybee 2002, 2007). Word frequency is generally considered to form part of the the typical configuration of lexical diffusion and is in fact the means by which most studies test for lexical conditioning effects, although the absence of a frequency effect does not necessarily rule out the possibility of word-specific effects (Labov 1994:485). Research on the effect of frequency and the role it plays in shaping a speaker's linguistic system constitutes the crux of many descriptions of usage-based models of language change (Kemmer & Barlow 2000), including Exemplar Theory (Pierrehumbert 2002; Erker & Guy 2010).

Word frequency plays an important role in determining which lexical items change first, but so too does the nature of the actual linguistic change. Hooper (1976) was the first to observe that while phonetic change affects high-frequency items first, analogical levelling or regularisation spreads more readily to low-frequency words. The type of sound change affecting high-frequency words typically involves sound changes such as reductions, deletions or assimilations that have their source in the automation of production (Bybee 2002:268). Case studies include /t, d/ deletion in American English (Bybee 2000, 2002), [ð] deletion in Spanish (Bybee 2002) and schaw deletion in American English (Hooper 1976). High frequency items receive more exposure to phonetically motivated processes that facilitate production and therefore change more readily. In contrast, analogical levelling affects low-frequency items first. A frequently cited example of lexically-conditioned regularisation affecting low-frequency words is the tendency for infrequent verbs such as *creep~crept/creeped*, *weep~wept/weeped* to shift to the regular *-ed* paradigm in English, whereas frequent verbs of the type *sleep~slept, go~went* undergo are more resistant to regularisation (Bybee 2002:269). Similarly, Tottie (1991), discussed in Bybee (2006) and Clark (in press), shows that variation between the older 'negative incorporation' construction 'I know nothing about it' and the 'not negation' construction 'I don't know anything about it' is strongly conditioned by frequency with the older form of negation occurring mainly in high frequency contexts such as existential constructions. If words (or constructions) with

exceptional forms are used frequently, this helps strengthen the mental representation of these items making them more readily accessible and more resistant to analogical change. To use the terminology of the usage-based model, 'entrenchment' occurs whereby the mental representation of a word form is strengthened to the point that it is stored as a conventional grammatical unit (Langacker 1987:59-60). However, if the frequency of use of these items is low, the mental representation of these exceptional forms is weaker and less entrenched, making them more susceptible to processes of regularization. In the case of morphosyntactic change, high frequency counts have a 'Conserving Effect' making forms more resistant to change, in contrast to the 'Reducing Effect' that makes high-frequency tokens more susceptible to reductive phonetic change (Bybee 2007).

The diagnostic utility of each pattern of diffusion is exemplified by Bybee's discussion of Phillips' (1984) investigation into the unrounding and merger of ME /ö(:) with existing /e(:)/. This sound change, which occurred much earlier in Lincolnshire than in other parts of the country, is captured in progress in the early thirteenth-century manuscript the *Ormulum*. Phillips found that within the class of nouns and verbs, the innovative unrounded variant is favoured by low-frequency rather than high-frequency words. If this were a phonetically motivated reductive sound change we would expect the innovative form to spread more rapidly to high-frequency items. According to Bybee (2002:270; see also Hooper 1976) the observed pattern of diffusion is symptomatic of imperfect language learning: the front rounded vowel was correctly acquired by children in high-frequency verbs because in these cases the variant was sufficiently well-entrenched in experience that it was readily available, but with less familiar words speakers tended towards merger with the unrounded variant (Bybee 2002).

Having outlined the theory of lexical diffusion and the role played by lexical frequency in conditioning the direction of change, the remainder of this section is structured as follows. Firstly, section 4.5.1 discusses the methodological issues involved in testing for word-specific and frequency effects. Section 4.5.2 details the results of several multiple regression results which test for these effects in the late Old Northumbrian data and interprets these results in light of the generalisations that have emerged in the literature on lexical conditioning and the correlation between lexical frequency and linguistic change. I conclude by assessing to what extent the pattern of lexical diffusion found in the Northumbrian data can be used as a diagnostic for

identifying the cause and mechanism of the change under scrutiny.

4.5.1 Measuring token frequency

Deciding where to draw frequency counts for particular items in Old English was a major concern owing to the very genre-specific nature of the data under scrutiny. To what extent can word frequency in a translation from Latin of religious scripture be deemed as representative of word frequency in Late Northumbrian?

Early Modern English corpora such as the Early Modern British and American sections of the *Helsinki Corpus* (Rissanen et al. 1993) locate texts such as private letters, diaries and trial proceedings which have the highest probability of approximating the spoken language (see Ogura & Wang 1996 and Kytö 1996 for frequency research using the *Helsinki Corpus*). In a similar vein the *Parsed Corpus of Early English Correspondence* (*PCEEC*) (Nevalainen & Raumolin-Brunberg 1996; Nevalainen et al. 2006) was compiled for the study of social variables in the history of English (see Gries & Hilpert 2010 for a study on the shift from -ð to -*s* in EModE using the PCEEC). Large corpora such as the *Brown Corpus*, the *CELEX* lexical database or the *British National Corpus* provide researchers investigating frequency effects in present-day English with an excellent resource for frequency counts of particular lexical items and several studies in the literature have adopted this approach (see Hay 2001; Dinkin 2007; Abramowicz 2006). Others (e.g., Clark & Trousdale 2009: Clark in press) consider frequency of use to be a local phenomenon involving non-standard local lexical items and so measure the lexical frequency of a particular item against the frequency of other items in a locally based corpus. This approach remedies the fact that the frequency counts assigned to local non-standard lexical items in large databases would not accurately represent the frequency with which they are used by local speakers.

The largest database of Old English material available to researchers is the *Dictionary of Old English* (*DOE*) *Corpus,* which covers the vocabulary of the first six centuries of the English language (C.E. 600-1150) in poetry and prose. The *DOE* corpus draws on as wide a range of texts as possible but is obviously limited to what is available. The body of prose texts that survive are in the main liturgical in nature consisting of biblical translations, saints' lives and sermons. There are also legal texts in the form of laws, charters, land records and wills, as well as medical texts, prognostics

and charms. In other words, the corpus includes formal, highly specialised texts. The *DOE* Corpus undoubtedly offers the most representative coverage of language written in the Old English period, but it does not necessarily approximate the spoken language. If anything, when set against the text types that survive in Old English, the gospels, with their narrative sequences, conversational style and frequent direct speech, arguably reflect actual speech more so than any other surviving text type from the Old English period.

A further disadvantage of using frequency values from the *DOE* corpus for this particular study is that the bulk of the material comprising the corpus is inevitably written in the West Saxon dialect because most of our surviving witnesses for the period are of West Saxon provenance. This alludes to concerns raised by Clark & Trousdale's (2009: **) and discussed above, that frequency values assigned to dialectal items in a larger corpus are not an accurate representation of the frequency with which they are used locally. The strong dialectal bias of the data under scrutiny in the present study meant the use of local lexical items, including Scandinavian loans, had to be borne in mind. The lexical frequency counts for this study were therefore taken from the *Lindisfarne* itself (corpus size: Part of Helsinki, check). The lexical items and their corresponding total number of tokens are listed in Appendix A.

A second major consideration was whether to categorise lexical frequency into discrete categories such as 'high frequency' and 'low frequency' or adopt a continuous analysis of lexical frequency. Certain problems arise with imposing discrete categories upon continuous data (see Bybee 2007). If lexical frequency is divided into 'high' and 'low' frequency groups then a cut-off point has to be decided, but how? And according to what criteria? If two categories with roughly the same number of tokens are created then you run the risk of having just a few high-frequency lexical types in one category and a disproportionately high amount of lexical types in the low frequency group. If on the other hand the cut-off point is motivated by the relative frequency of different lexical items, the number of tokens in the high frequency category will vastly outnumber those in the low frequency group (see Bybee 2000, 2007 and Clark in press, Clark & Trousdale 2009 for discussion). In order to avoid such arbitrarinesses, the present study followed the growing tendency in recent research to treat frequency as a gradient phenomenon and modelled the variant logarithmically (see Hay 2001; Clark & Trousdale 2009; Clark, in press).

A particular problem in the data taken from *Lindisfarne* was the great number of

lexical items with very low token counts (see Appendix B). There are 313 different lexical items in the data, 159 of these have ≤ 3 tokens while 253 have ≤ 12 tokens. With the aim of making the tokens in the dataset more manageable, low-frequency verbs (≤ 12) were grouped together. Rather than arbitrarily grouping low-frequency items together, a method of cluster analysis known as *k*-means clustering was used to identify items that patterned similarly with regards to the explanatory variables GRAMMATICAL PERSON, MORPHOSYNTACTIC PRIMING and STEM ENDING.[39] *K*-means clustering categorises tokens into *k* clusters by associating each observation with the nearest mean in such a way that the squared distance from the cluster are measured. This created eight groups of low-frequency items (see Appendix C).

In order to avoid overestimating the effect of lexical selection and token frequency as mechanisms for change, lexical item and log lexical frequency were not studied in isolation, although this monofactorial approach is common practice in the literature on frequency research (Clark, in press). Recent studies, which have attempted to readdress the failings of the monofactorial approach adopted in older research, suggest lexical frequency tends to be the least influential factor impacting upon change (Clark in press; Clark & Trousdale 2009). By including the explanatory variables LEXICAL ITEM and LOG LEXICAL FREQUENCY in a multivariate analysis alongside other predictor variables, the present study set out to determine the relative weighting of verb-specific trends and frequency as a mechanism of change with regard to other factors.

As mentioned at the outset of this chapter, multicollinearity was detected between the explanatory variables LEXICAL ITEM and LOG LEXICAL FREQUENCY and between LEXICAL ITEM and STEM ENDING which meant they could not be simultaneously included in a regression model, so separate and independent multiple regression analyses were carried out. STEM ENDING and was tested alongside GRAMMATICAL PERSON, MORPHOSYNTACTIC PRIMING, POLARITY, FOLLOWING PHONOLOGICAL SEGMENT and INFLECTIONAL VOWEL. A further analysis also included LOG LEXICAL FREQUENCY. The third analysis involved LEXICAL ITEM in addition to GRAMMATICAL PERSON, MORPHOSYNTACTIC

[39] The verb *findan* (*N* = 13) with categorical use of the *-s* ending was also included in the clustering. Factors with a categorical effect, i.e. no variation, are problematic for a logistic regression analysis, and while Rbrul unlike Goldvarb can handle categorial effects, the parameters reported are not always reliable. From a linguistic perspective it also makes sense to exclude invariant contexts from an analysis on variation (Guy 1988; Johnson 2009b). The present study therefore followed standard practice and recoded factors exhibiting categorical effects alongside other non-categorical factors from the same factor group.

4.5.2 Results

4.5.2.1 Word specific effects

A detailed comparison of the results for stem ending and lexical item obtained from separate and independent analyses confirm that while variation is dominated by phonetic conditioning, word specific effects also impact significantly upon the presence of *-s*. The results for the effect of STEM ENDING discussed in section 4.3.4 are repeated here for convenience in Table 29. The results for all levels of the explanatory variable LEXICAL ITEM are detailed in Table 30.

Table 29. Stem ending effects on the probability of *-s* (as opposed to -ð) in plural and third person singular environments in Matthew, Mark, Luke and John (*N* = 3053)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
STEM ENDING (p = < .001)	dental /d, ð/	335/450 (74%)	1.079	0.75
	affricate/ʧ,ʤ/	75/106 (71%)	0.709	0.67
	consonant	768/1593 (48%)	-0.055	0.49
	sibilant /s/	45/122 (37%)	-0.485	0.38
	bilabial	125/339 (37%)	-0.557	0.36
	vowel	156/443 (35%)	-0.691	0.33

The distribution of the *-s* ending across lexical item illustrated in Table 30 broadly reflects the phonologically conditioned distribution outlined in Table 29 and discussed above. High factor weight items comprise mainly lexical items with dental and affricate stems including the low frequency dental-stem-final lexical items in cluster 7 (see Appendix C). These tokens group together towards the top of the ordering, while lexical items with vocalic and bilabial stems and stems in /s/ all have low factor weights under 0.50.

Table 30. Rbrul analysis of the probability of *-s* (as opposed to -ð) according to lexical item in the Old Northumbrian interlinear glosses to the *Lindisfarne Gospels* (*N* = 3053).

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*

LEXICAL ITEM (p = < .001)	*worðian*	19/22 (86%)	2.136	0.89
	weccan[b]	12/15 (80%)	1.516	0.82
	stondan	17/21 (81%)	1.453	0.81
	gangan	26/33 (79%)	1.313	0.79
	sendan	48/62 (77%)	1.231	0.77
	cluster7	67/85 (79%)	1.193	0.77
	sprecan	13/20 (65%)	1.155	0.76
	haldan	31/42 (74%)	1.091	0.75
	wyrcan	46/65 (71%)	0.957	0.72
	cweðan	95/129 (74%)	0.901	0.71
	(ge)biddan	27/33 (82%)	0.900	0.71
	samnian	10/14 (71%)	0.787	0.69
	giefan	9/13 (69%)	0.769	0.68
	ongietan	10/14 (71%)	0.710	0.67
	etan	14/22 (64%)	0.644	0.66
	(ge)feallan	9/15 (60%)	0.631	0.65
	sittan	9/13 (69%)	0.599	0.65
	cigan	13/24 (54%)	0.493	0.62
	cluster 1	174/99 (75%)	0.449	0.61
	gearwian	9/15 (60%)	0.395	0.60
	settan	11/23 (48%)	0.297	0.57
	cluster8	28/66 (42%)	0.234	0.56
	oncnawan	13/18 (72%)	0.224	0.56
	faran	11/22 (50%)	0.178	0.55
	lædan	14/26 (54%)	0.099	0.53
	secgan	16/35 (46%)	0.082	0.52
	cluster5	201/408 (49%)	0.011	0.50
	cluster6	7/31 (23%)	-0.060	0.49
	wunian	17/32 (53%)	-0.069	0.48
	eowan	10/19 (53%)	-0.079	0.48
	sawan	8/16 (50%)	-0.089	0.48
	fylgan	8/18 (44%)	-0.093	0.48
	gerisan[a]	4/13 (31%)	-0.094	0.48
	brengan	9/17 (53%)	-0.118	0.47
	cluster 3	8/27 (30%)	-0.158	0.46
	geheran	34/71 (48%)	-0.185	0.45
	gan	40/83 (48%)	-0.201	0.45
	secan	24/48 (50%)	-0.267	0.43
	trymman	11/25 (44%)	-0.293	0.43
	lifian	5/15 (33%)	-0.321	0.42
	gelefan	32/68 (47%)	-0.359	0.41
	habban	71/173 (41%)	-0.493	0.38
	(ge)selan	28/75 (37%)	-0.496	0.38
	lufian	12/30 (40%)	-0.501	0.38
	cuman	45/123 (37%)	-0.503	0.38
	onfon	29/67 (43%)	-0.519	0.37
	losan	10/32 (31%)	-0.525	0.37
	cluster2	17/29 (59%)	-0.551	0.37
	witan	10/18 (56%)	-0.589	0.36
	læran	8/28 (29%)	-0.620	0.35
	ofslean	8/20 (40%)	-0.627	0.35
	cluster 4	53/142 (37%)	-0.646	0.34
	drincan	6/17 (35%)	-0.694	0.33

onginnan	8/26 (31%)	-0.717	0.33
ahebban	6/16 (38%)	-0.721	0.33
leoran	5/16 (31%)	-0.748	0.32
arisan	11/38 (29%)	-1.036	0.26
don	31/108 (29%)	-1.219	0.23
geseon	32/114 (28%)	-1.251	0.22
niman	7/30 (23%)	-1.325	0.21
giwian	7/21 (33%)	-1.331	0.21
willan	28/79 (35%)	-1.413	0.20
gemitan	3/14 (21%)	-1.539	0.18

As previously mentioned, the results for stem ending indicate that verbs with dental and affricate stems are a highly favouring environments for the occurrence of suffixal -*s*, while stems with bilabial and vocalic stems and in /s/ disfavour -*s* and prefer -*ð*. All other consonant stem ending have a neutral effect on the selection of verbal morphology. Nevertheless, the results reveal differences in the distribution of suffixal -*s* across similar phonetic environments which suggest certain lexical items favour -*s* above or below what their phonological environment would predict. Among the dental and affricate stem-final verbs, *lædan* at 0.53 behaves far more conservatively than *stondan, sendan, haldan* and *(ge)biddan*, which all have factor weights around 0.8 and 0.7, as does *sēcan* with respect to the other stem-final affricates *weccan* and *wyrcan.* Similarly, stem final /t/ verbs such as *ongietan*, *etan*, *sittan, witan* and *gemitan* are sharply differentiated in behaviour with factor weights ranging from 0.67 to 0.18. So too, are lexical items with stems in -*n,* which range from *samnian* at 0.69 to *wunian* and *onginnan* at 0.48 and 0.33 respectively. Similarly differential behaviour is also noted in the distribution of -*s* in consonantal stem-final verbs with /k/-stem-final *drincan* (at 0.33) exhibiting a very conservative effect in comparison with *sprecan* (at 0.76). Note too how at 0.79 *gangan* favours the -*s* ending way above the neutral effect of most consonant-final stems on -*s* usage (see Table 29). The analysis also registers the strong inhibitive effect of *willan* at 0.20 (compare *selan* at 0.38 and *gefeallan* at 0.65). A comparison of *willan* and *selan* shows these verbs trigger similarly low rates of suffixal -*s*, at 35% and 37% respectively. On closer inspection, only 7 of the 75 *selan* tokens involve the 'favouring' subject types *we*, *gie*, *hia*, while 66 *willan* tokens, from a total of 79, involve *we*, *gie*, *hia* subjects. On this basis we would expect *willan* to trigger higher rates of -*s* and yet this is not the case, thus confirming the extremely conservative effect exerted by this particular lexical item. Similarly, the relatively

modest overall rate of -*s* (56%) registered by *witan* is suprising bearing in mind that 11 of its 18 tokens also involve the personal pronoun subjects *we*, *gie* and *hia.* Both *willan* and *witan* belong to the class of anamolous and preterite present verbs, which may initially seem to explain their resistance to change, but so too does *gān,* which is advanced in acquiring the innovative form.

Van Bergen's (2008) survey of negative constructions in OE finds that *willan* and *witan* show elevated rates of contracted negative structures in comparison with *habban* and *beon*, e.g. *gie nutton ~ scimus (*Jn.4:22) and *nallas gie gelefa ~ nolite credere* (Jn.10:37). This tendency to favour contracted negative forms, as opposed to uncontracted negative constructions, predominates particularly in the case of *willan,* which van Bergan attributes to *willan* frequently glossing one particular construction - negative commands in the form of imperative *nolite* (plural) and *noli* (singular) plus an infinitive; "the recurrent pattern may have led to less variation in the gloss used" (van Bergen 2008:285). The mechanical aspect of the glossing process may be at least partly responsible for the attested differences between verbs and may also explain the elevated incidence of suffixal -*ð* with *willan*, whereas in the case of *witan* there is more variation in what the lexical item glosses (e.g. *wutað gie* occurs as a gloss for *sciatis, cognoscitis, nostis*). Nevertheless, the unusual behaviour of *willan* can be discerned elsewhere; *willan* triggers reduced forms, i.e. vocalic endings, more so than any other lexical item (see chapter 5), a trait it appears to share with other stative verbs of mental perception and attitude among which *witan* is to be classed. All this suggests that the semantic class of the lexical item may also be at work in determining the morphology behaviour of verbs.

With regards to *habban* and *dōn,* the object of so much attention in studies looking into the effect of lexical conditioning on -*s*/-ð variation in EModE, firstly it should be noted that in the Northumbrian data under scrutiny these items are lexical, rather than grammatical as in EModE. Differentiating phonological and lexical conditioning is complicated in the data under scrutiny by the fact that stem-final /b/ only has two lexical representatives *habban* and *hebban.* In general, however, plural *habban* at 0.38 patterns similarly to other bilabial stems in /b, m, p/ such as *niman, ahebban, cuman*, *trymman* which have factor weights hovering around .30 and .40 and show no statistically significant difference in behaviour (e.g. *trymman*/*niman* χ^2 2.645, p = 0.103). Low-frequency *p*-stems like *wepan*, *slepan, clipian* etc. grouped in clusters 2 and 4 also have factor weights around the 0.30 mark. All this suggests the dominance

of phonetic conditioning in explaining the conservative distribution of -*s* among these verbs types. In the case of the vocalic stems, however, some verbs exhibit an advanced rate of -*s* usage. The verbs *gān* and *onfōn* favour -*s* endings significantly more so than other verbs with vocalic stems such as *gesēon* and *dōn,* which behave similarly (χ^2 0.011, p = 0.916). A selection of pairwise chi-square evaluation of lexical items according to phonetic environment is summarized in Table 31. They include significant differences found at the p = < 0.01 and p = < 0.05 levels, as well as a couple of comparisons discussed above just short of the .05 level of significance.

Table 31. Pairwise chi-square evaluation of lexical items according to phonetic environment

gān/*dōn*	χ^2 7.633	p = < 0.01
gān/*gesēon*	χ^2 8.386	p = < 0.01
onfōn/*dōn*	χ^2 3.901	p = < 0.05
onfōn/*gesēon*	χ^2 4.371	p = < 0.05
gemitan/*etan*	χ^2 5.881	p = < 0.05
gemitan/*sittan*	χ^2 5.938	p = < 0.05
gemitan/*ongietan*	χ^2 6.749	p = < 0.05
lædan/*(ge)biddan*	χ^2 5.367	p = < 0.05
lædan/*sendan*	χ^2 4.890	p = < 0.05
lædan/*stondan*	χ^2 3.810	p = < 0.05
sēcan/*wyrcan*	χ^2 4.7621	p = < 0.05
læran / *geheran*	χ^2 3.067	p = 0.079
willan / *(ge)feallan*	$\chi^2$3.185	p = 0.074
drincan / *sprecan*	$\chi^2$3.245	p = 0.071

4.5.2.2 Frequency effects

In addition to word-specific effects, the proliferation of the -*s* ending in late Old Northumbrian reveals frequency effects that diverge in unexpected ways from what previous research on lexical frequency might predict. The results of the logistic regression analysis in Table 2 in Appendix A show that log lexical frequency is significant at the p = < 0.05 level. The multivariate analysis returned a negative regression coefficient for the continuous variable of -0.177. This suggests a negative correlation between the occurrence of suffixal -*s* and frequency, i.e. as frequency

increases, the frequency of -*s* decreases. Careful analysis revealed, however, that while low-frequency items *collectively* favour -*s* in the Northumbrian data, and high-frequency items *collectively* disfavour -*s*, there is in fact no linear monotonic relationship between frequency and the occurrence of -*s* whereby the rate of -*s* decreases steadily as frequency increases. The non-monotonic frequency effect on -*s* in Old Northumbrian usage is illustrated graphically in Figure 5.

Figure 5. Occurrence of -s by lexical frequency in the *Lindisfarne* glosses

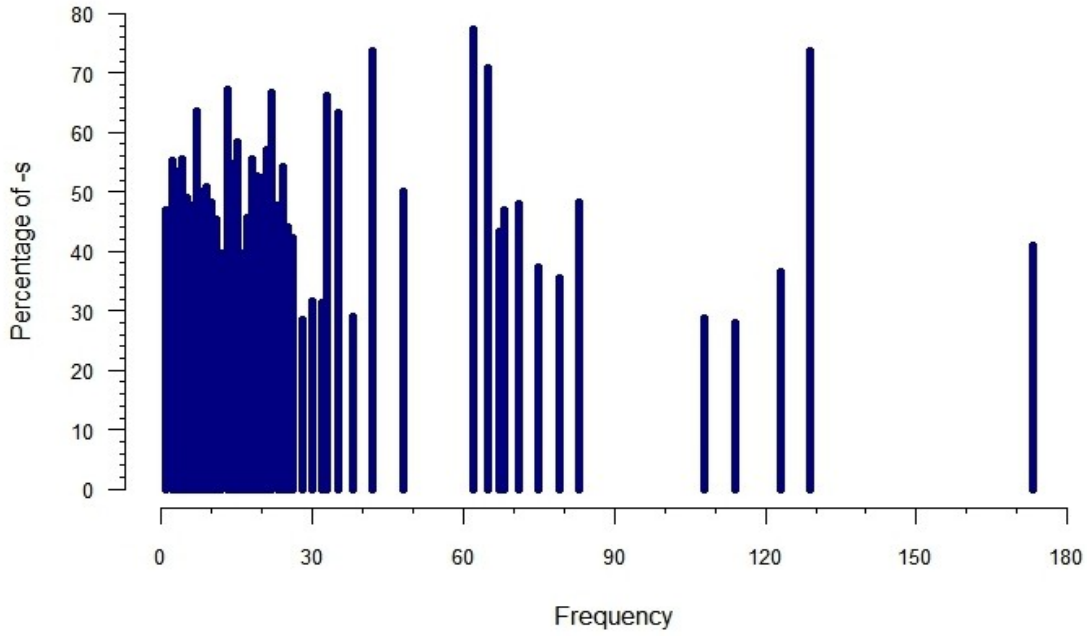
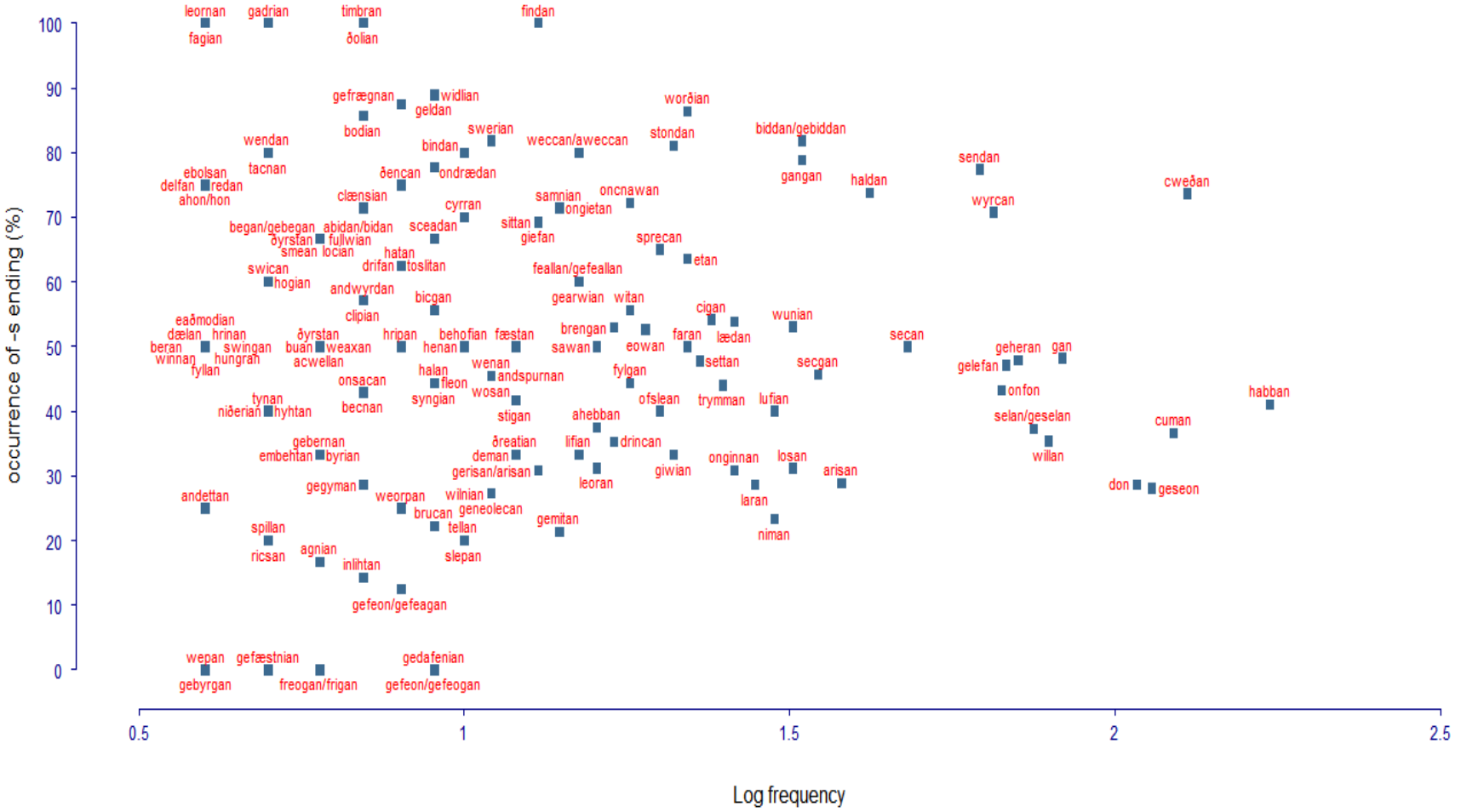


Figure 6. Token frequency according to lexical item in the gloss to the *Lindisfarne Gospels*



The scatterplot in Figure 6 plots the rates of suffixal -*s* against lexical frequency for each lexical item. The apparently much greater variability in suffixal -*s* usage among low-frequency items than at high lexical frequencies appears to indicate that lexical frequency effects may be interacting with other constraints. This apparent effect was explored by analysing frequency as a discrete variable.

For the discrete analysis, the imposition of arbitrary divisions upon the data was avoided by using *k*-means clustering (cf. section 4.5.1). Five categories emerged: 'low frequency' (up to 21 instances), 'low-mid frequency' (22 to 48 tokens), 'mid-frequency' (49 to 82 instances), 'high-mid frequency' (83 to 129 instances) and 'high frequency' (130 to 173 instances). As the 'high frequency' group comprised only the verb 'habban', it was decided to use the 48 token mark established by the clustering procedure as a cut-off point for forming two groups. The 'high-mid' and 'high' frequency items were collapsed into one 'high frequency' group (49 to 173 instances, *N* = 1217) and the 'low' and 'mid-low' frequency items into a single 'low frequency' group (1 to 48 instances, *N* = 1836).

The Wald statistics summarised in Tables 32 and 33 effectively illustrate the correlation between subject type and frequency found in the language of the late Old Northumbrian gloss.

Table 32. Wald statistics for variables selected as significant in suffixal -*s* usage (as opposed to -*ð*) in Old Northumbrian among low-frequency lexical items (*N* = 1836)

Variable	Wald	df	p-value
Priming	208.86	2	< 2.2e-16
Stem Ending	94.585	6	< 2.2e-16
Subject Type	116.67	12	< 2.2e-16

Table 33. Wald statistics for variables selected as significant in suffixal -*s* usage (as opposed to -*ð*) in late Old Northumbrian among high-frequency lexical items (*N* = 1217)

Variable	Wald	df	p-value
Priming	137.33	2	< 2.2e-16
Stem Ending	102.25	5	< 2.2e-16
Subject Type	24.902	12	0.01530

Subject types were found to show less differentiation in -*s* occurrence at high lexical frequencies than among low frequency lexical items, to the extent that in the multivariate analysis using Rbrul, the type-of-subject constraint only emerged as a statistically significant factor at low frequencies, as the results in Tables 34 and 35 illustrate. While stem ending and morphosyntactic priming emerge as robust factors in determining the occurrence of the -*s* ending regardless of frequency, the effect of subject type is not found to have a statistically significant effect among high-frequency lexical items (Table 34). Note, however, the robust NP/PRO effect that governs low-frequency verbs whereby pronominal subjects favour -*s* at 0.63 while non-pronominal subjects inhibit the occurrence of -*s* at 0.37 (Table 35).

Table 34. Multivariate analysis of the contribution of factors selected as significant to the probability of -*s* (as opposed to -*ð*) in plural and third person singular environments in Matthew, Mark, Luke and John with high frequency lexical items (*N* = 1217)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. -*s* suffix	378/601(63%)	0.724	0.67
(p = < .001)	prec. -*ð* suffix	181/616(29%)	-0.724	0.33
STEM	affricate/ʧ,ʤ/	24/28 (86%)	1.551	0.83
ENDING	dental /d, ð/	143/191 (75%)	0.795	0.69
(p = < .001)	consonant	178/422 (42%)	-0.634	0.35
	bilabial	82/204 (40%)	-0.749	0.32
	vowel/ sibilant /s/	132/372 (36%)	-0.964	0.28

N = 1217
Nagelkerke R^2 = 0.242
Deviance = 1436.102
df = 6
Cross-validation estimate of accuracy = 0.675

Table 35. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third person singular environments in Matthew, Mark, Luke and John with low frequency lexical items (*N* = 1836)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. *-s* suffix	622/902(69%)	0.753	0.68
(p = < .001)	prec. *-ð* suffix	323/934 (35%)	-0.753	0.32
STEM	dental /d, ð/	192/259 (74%)	1.157	0.76
ENDING	affricate/ʧ,ʤ/	51/78 (65%)	0.627	0.65
(p = < .001)	consonant	590/1171 (50%)	0.121	0.53
	sibilant /s/	45/122 (37%)	-0.413	0.40
	vowel	24/71 (34%)	-0.710	0.33
	bilabial	43/135 (32%)	-0.781	0.31
SUBJECT	pronoun[c]	274/393 (70%)	0.513	0.63
TYPE	other	671/1443 (47%)	-0.513	0.37
(p = < .001)				

N = 1836
Nagelkerke R^2 = 0.252
Deviance = 2158.817
df = 8
Cross-validation estimate of accuracy = 0.684

[c] This factor includes the personal pronouns *gie*, *we*, *hia* and demonstrative pronouns.

Table 36 summarises the distribution of suffixal *-s* according to subject type and discrete lexical frequency. Note how the vast majority of subject types have higher rates of *-s* among lower frequency verbs than high-frequency verbs, although the differentiation is only significant among second person plural *gie* pronoun and zero subjects, and (unexpectedly) plural relative pronoun subjects.

Table 36. Distribution of suffixal *-s* in the gloss according to subject type and lexical frequency

	High Frequency	Low Frequency		
	N %	N %	χ2	p
indefinite prn	21/39 (54%)	21/45 (47%)	0.431	0.511
zero 3pl	29/63 (46%)	32/68 (47%)	0.014	0.906
demonstrative	7/13 (54%)	16/25 (64%)	0.369	0.543
we	14/28 (50%)	15/23 (65%)	1.192	0.274
gie	122/257 (47%)	192/269 (71%)	31.200	p = 0.000
they	22/40 (55%)	51/76 (67%)	1.646	0.199
zero 3sg	38/123 (31%)	115/337 (34%)	0.424	0.515
NP(pl)	32/70 (46%)	64/126 (51%)	0.465	0-495
NP(sg)	67/154 (44%)	118/292 (40%)	0.398	0.528
relative (pl)	23/58 (40%)	43/74 (58%)	4.429	p = < 0.05
relative (sg)	96/201 (48%)	126/248 (51%)	0.412	0.521
he	13/24 (54%)	21/43 (49%)	0.175	0.675
zero imp.pl.	75/147 (51%)	131/210 (62%)	4.573	p = < 0.05
Total	559/1217 (46%)	945/1836 (52%)	8.980	p = < 0.01

The chi-square pairwise comparison of favouring subject types (*gie, we, hia*) and inhibiting subject types (full plural NPs and plural zero subjects) in Table 37 reveals that while strong subject effects are operative at low lexical frequencies, these effects do not condition variation among high frequency verbs.

Table 37. Pairwise chi-square evaluation of subject type according to lexical frequency

	PRO (*gie, we, hia*)	NP pl / zero 3rd pl		
	N %	N %	χ2	p
High frequency	158/325 (49%)	61/133 (46%)	0.286	0.592
Low frequency	258/368 (70%)	96/195 (49%)	23.802	p = 0.000

A pairwise chi-square evaluation of the distribution of suffixal *-s* with *hia* and full third-person plural NP subjects yields the same results (see Table 38). Third person plural pronouns and full NPs are not significantly differentiated in suffixal *-s* occurrence at high frequencies, but among low frequencies, pronoun subjects have significantly higher rates of *-s* than full NPs. Consequently, it may be surmised that the effect of the NP/PRO constraint only appears among low frequency lexical items.

Table 38. Pairwise chi-square evaluation of NP/PRO constraint in the third-person plural environment according to lexical frequency

	NP(pl)	PRO (*hia*)		
	N %	N %	χ2	p
High frequency	32/70 (46%)	22/40 (55%)	0.878	0.348
Low frequency	64/127 (50%)	51/76 (67%)	5.407	< 0.05

Unlike subject type, the conditioning effect of stem ending is found to hold at both high and low lexical frequencies. Rates of suffixal *-s* do not appear to be significantly differentiated according to lexical frequency across the different stem endings, except in the case of consonantal stem endings which have significantly higher rates of suffixal *-s* among low frequency verbs (see Table 39). The results for stem ending should, however, be treated with a certain degree of caution. The poorly represented nature of stem endings among high frequency lexical items, which comprise *cuman, cweðan, don, gan, geheran, gelefan, geseon, habban, onfon, (ge)selan, sendan, willan* and *wyrcan* (*N* = 1217), means that while the majority of stem ending types are reasonably well represented, there are no high-frequency lexical items with stem-final /s/ and *wyrcan* is the only stem-final affricate, making the figures for affricate stem and stem-final /s/ uninformative.

Table 39. Distribution of suffixal *-s* according to stem ending and lexical frequency

	High frequency	Low frequency		
	N %	N %	χ2	p
affricate	24/28 (86%)	51/78 (65%)	3.998	< 0.05
/b, m, p/	82/204 (40%)	43/135 (32%)	2.430	0.119
consonant	178/422 (42%)	590/1171 (50%)	8.363	< 0.01
dental	143/191 (75%)	192/259 (74%)	0.031	0.859
/s/	- - (0%)	45/122 (37%)	-	
vowel	132/372 (36%)	24/71 (34%)	0.074	0.785

The interraction detected between frequency and subject type in the late Old Northumbrian data is in line with the findings of Erker & Guy (2010) for Spanish

pronoun use. Their research reveals that the constraints which condition the overt expression or omission of subject pronouns in Spanish, such as morphological regularity, semantic content, grammatical person etc., only appear among high-discourse frequency lexical items. Erker & Guy (2010) discuss the effect of frequency on the grammatical phenomenon under scrutiny within the framework of Exemplar Theory and the role played by frequency in defining a speaker's linguistic system (Pierrehumbert 2001, 2002). The authors hypothesise that conditioning factors are mediated by individual lexical items of a certain frequency threshold whereby a speaker needs to encounter a lexical item at some minimal frequency in order to register specific information about the constraints that condition items. In the case of the Northumbrian data, the threshold for frequency effects operates only on the Type-of-Subject constraint and affects low frequency rather than high frequency lexical items. This raises the question of why the frequency effect is reversed in the Northumbrian data.

As discussed above, processes of analogical levelling have been shown to spread from low frequency to high frequency items. High lexical frequencies, on the other hand, are generally expected to favour phonetically-motivated changes, particularly reductive sound changes. As Bybee, (2002:270) highlights, "Each pattern of diffusion is associated with a particular source and mechanism for change, which allows us to use the direction of diffusion as a diagnostic for the cause of change." The results of the data analysis outlined in section 4.5.2.2 highlight the strong conditioning effect of phonological environment on the use of suffixal *-s* regardless of frequency, but phonotactic considerations alone cannot explain the proliferation of *-s* at the expense of -ð. The differential frequency relations between pronominal and non-pronominal subjects cannot be overlooked. If the process were purely phonetic, subject type would not be expected to play a role in explaining the distribution of *-s*. The NP/PRO constraint operative in tenth-century northern dialect constitutes the typical configuration of many regularization processes reported in the literature (see chapter 3).

All this suggests that the proliferation of *-s* constituted a process of regularisation in which a phonotactically more suitable form was generalised across the paradigm (cf. Stein 1986:648). This does not necessarily rule out the possibility that the change was initially motivated by phonotactic considerations that may have been compounded by the non-native interference patterns of Norse speakers (see section 2.6.1), but in that case, *-s* usage must have been simultaneously analyzed as a process

of regularization. If this analysis is correct, the results of the present study are in keeping with the usage-based generalisations made in the literature on the frequency-driven direction of change whereby frequent verbs undergo levelling less readily then low frequency verbs in processes of analogical levelling (Phillips 1984; Bybee 2002, 2007). In the Northumbrian data, the process of regularisation affects low-frequency verbs first, while high-frequency items are found to be more resistant to morphological levelling *and* by extension, to the constraints that condition processes of regularisation, in this case the Type-of-Subject constraint. As previously mentioned, Hooper (1976) and Bybee (2002) suggest that the changes affecting low-frequency words may be indicative of imperfect language learning. In the case of Old Northumbrian, the sociolinguistic situation of language contact in the North during the late Old English period would undoubtedly have compounded this tendency. In a linguistic scenario where suffixal *-s* alternated with *-ð,* speakers would correctly acquire the *-ð* ending in high-frequency items such as *gað* 'go' and *doað* 'do' because in these cases the variant would be well-entrenched in experience and easily available. However, with less familiar words like *ymbceorfan* 'circumcise' or *wyrtrūman* 'uproot' speakers would have tended towards using the levelled form.

It may reasonably be argued that a similar frequency-related mechanism lies behind the significantly higher rates of suffixal *-s* at low lexical frequencies among second-person plural subjects, in particular *gie*. The results in Table 36 suggest frequency-related mechanism may also have played a role. In the late Old Northumbrian dialect recorded in *Lindisfarne*, *-s* and *-ð* were co-variants in the plural and third person singular, but not in the second-person singular where the ending was *-s*. In other words, the second-person singular was the only environment in which *-ð* could not occur as a co-variant of *-s*. In effect, there was an asymetrical situation compared with the third person that would have been problematic for language learners, hence *ðu gaas/*gaað ~ gie gaas/gaað* versus *he gaas/gaað ~ hia gaas/gaað.* That *-ð* did at times encroach into the second-person singular, is borne out by instances of second-person singular forms in *-ð* in *Lindisfarne*, e.g. *habbeð* (L.12:19); (L.18:22) *wyrcað* (Jn.7:3); *gelefeð* (Jn.1:50), &c. These instances of 'false analogy' (Blakeley (1949/50:20, fn.4) suggest that there was a tendency for speakers to use *-s* and *-ð* invariantly in both second singular and plural contexts. By consistently using the *-s* ending as a default in contexts where reference was being made to (an) addressee(s) regardless of number, false analogy in the second singular was effectively kept to a

minimun. This default regularisation mechanism would be more frequently applied to lower frequency words that were less entrenched in memory, while -*ð* would be used more abundantly with familiar, readily accessible lexical items in high-discourse combinations such as *gie gaað, cymað gie.*

The effect of stem ending does not interact with frequency except in the case of consonant-final verb forms where a tendency for low-frequency lexical items with consonantal-stems to favour -*s* is observed. Stem-final consonants stand apart from other stem endings for other reasons too, for unlike affricate and dental stems that have a distinctly favouring effect on the occurrence of -*s* and bilabial, vocalic and /s/ stems that strongly disfavour -*s*, consonant stems have a neutral effect on the distribution of -*s* (see Table 39). It would appear that where the effect of phonetic conditioning is robust, frequency has no effect, yet where no overriding phonotactic preference for a certain suffixal form exists, speakers tend towards using the generalised default ending among less familar words. Low discourse frequency items are once again found to conform to the patterns of regularization more readily.

4.5.3 Summary

This section set out to evaluate the effect of lexical conditioning and token frequency on variation between the present-indicative endings -*s* and -*ð* in late Old Northumbrian. The analysis shows that as the spread of -*s* advances, its distribution is dominated by phonetic and morphosyntactic conditioning but also shows word-specific effects. Certain lexical items are found to favour the innovative form above and below what phonological environment would predict. A frequency effect is also found in the data that diverges in unexpected ways from what previous research on token frequency would predict. Rather than exhibiting a monotonic frequency effect whereby the rate of -*s* decreases or increases steadily as frequency increases, frequency is shown to interact with subject-type. The effect of subject-type is weaker among high-frequency verbs to the point that the robust NP/PRO constraint found to operate at low-frequency levels is not statistically significant among high-frequency lexical items. When viewed in light of the frequency effects that have been proposed as general principles in explaining the source and mechanism of change (Hooper 1976; Bybee 2002; 2007), the robust presence of a NP/PRO constraint, in other words the typical configuration of a regularization process, at low-frequency levels suggests that the proliferation of -*s* conforms to the prediction that analogical change affects low-frequency words first.

4.6 Discussion and conclusions

The picture that emerges from the data analyses in this chapter illustrates the highly complex and multifactorial nature of the change in progress under discussion. Syntactic, phonological and lexical conditioning converge to determine variation between the inherited interdental fricative and the innovative alveolar fricative suffix. More concretely, the results indicate that the syntactic configuration at the crux of the NSR was already a feature of late Old Northumbrian and suggest a much earlier dating for the emergence of the NSR pattern than has generally been assumed. Adjacent plural pronouns promote *-s* endings, in contrast to full NP subjects, NP + relative, zero and non-adjacent pronoun subjects, which pattern similarly and favour *-ð*. This is precisely the distribution that characterises present-tense markings in northern Middle English, Middle Scots and later varieties of northern dialect, including twentieth-century varieties.

Any suggestion that an *-s* versus *-e/Ø* alternation is fundamental to the NSR does not hold in light of the morphological variation exhibited by the constraint in Middle English. The core *-s* versus *-Ø* pattern typical of late Middle English northern dialects has obscured the fact that NSR-like patterns even in Middle English were not restricted to alternating *-s/Ø* suffixes as we have seen. Not only did different consonantal endings alternate with *-e/Ø*, but alternating consonantal suffixes were also prevalent. The different endings are simply different surface realisations of the same system, and the mechanisms of that system, though far from categorical, were nevertheless operative in the glosses. Poplack & Tagliamonte (2001:202) speak of the "persistent and pervasive presence" of *-s* throughout the history of English in the present-tense paradigm. While this is true in a sense, fixation with the *-s* form is nevertheless misleading. The results of this study show that it is the constraint hierarchy itself, regardless of surface morphological realisation that is persistent and pervasive and can be traced back to some of the earliest attested processes of levelling and variation in the English language.

What is more, when the subject effects (and to a lesser degree the adjacency effects) found in late Old Northumbrian are set within a within a broader framework of diachronic variation, comprising not only varieties of Middle and Early Modern English, but also non-standard varieties of PdE, striking parallelisms emerge. Despite

problems of comparability, studies examining concord patterns in PdE indicate that subject effects underlie variation in non-standard varieties of English overseas, including African American Vernacular English and non-standard British varieties outside the 'traditional' North (cf. chapter 3). Indeed, the same effects are found to condition the levelling of suffixal-*r* in the present-indicative paradigm of Early Modern Swedish (Larsson 1988). All of this suggests that the term Northern Subject Rule may in fact be a misnomer for a syntactic constraint whose effects are prevalent far beyond northern boundaries. The temporal and geographical scope of the constraints found at the crux of the rule and their prevalence in varieties isolated from northern contact challenges the view that the aforementioned NSR-like patterns must necessarily be the result of diffusion. Northern input may explain some of the varieties in question, but not all. An alternative scenario points to independent language-internal family universal trends, and a predisposition within all varieties of English for morphological variation and processes of levelling, where they occur, to be conditioned by competing agreement systems, one based on person and number and the other on subject type and adjacency.

The subject effects found both categorically and variably throughout the history of English should be viewed as manifestations of the same grammatical phenomenon whereby there is tendency for subject type to compete with person~number agreement for the function of morphological material in linguistic scenarios where the person-number distinction of the inherited system is undergoing neutralisation via processes of levelling and reduction. In chapter 5, I will discuss how morphological variation brought about by a processes of reduction adheres to the same grammatical strictures.

5. Reduced verbal morphology in late Old Northumbrian

Previous discussions of reduced morphology in Old Northumbrian have sought to find a system of reduced morphology comparable to that of West Saxon and have inevitably found northern dialect wanting. Little consideration has been paid however to the rule-governed idiosyncrasies of the Northumbrian system itself and to what light they shed on later developments such as the Northern Subject Rule. This chapter provides a detailed discussion of reduced inflection in the *Lindisfarne* gloss. It considers to what extent the nature and distribution of these forms in the gloss are indicative of the incipient development of the NSR pattern in late Old Northumbrian and assesses to what extent inflectional morphology already present in the northern dialects constituted the historical source for the occurrence of *-e*/Ø (and *-n*) in the present indicative in Middle English. To this end, I posit that, not only present-subjunctive morphology, but also preterite-present and preterite-indicative verbal morphology played an important role in perpetuating the levelling of reduced forms and *-n* into the present indicative. The chapter concludes by assessing what factors may have motivated the development of reduced verbal forms in pronominal environments.

5.1 Reduced inflection in Old English dialects

The Northern Subject Rule, as it manifests itself in northern Middle English, is undocumented in Old English. In the northern Middle English present-indicative paradigm, adjacent plural personal pronouns triggered verb forms ending in *-e* (later zero by regular sound change), while all other subject types occurred with verb forms in *-s*. This at least was the main pattern in the core northern region (see section 3.1). Reduced plural endings with pronominal subjects were, nevertheless, not unknown in Old English and are well attested for both early and late West Saxon. As writings like the *West Saxon Gospels* show, a reduced inflectional pattern whereby verbs in the present and preterite indicative, the imperative, and the present and preterite subjunctive lost their consonantal suffix when immediately followed by a first- or second-person plural pronoun subject, is widely documented in the West Saxon writings (see Sweet 1953:§56; Campbell 1959:§730).

Illustrative examples from the *West Saxon Gospels* (Cambridge, Corpus Christi College, MS. 140, Skeat 1871-87), include the present indicative and imperative forms

hwæt do we 'What shall we do?' (WSCp.Jn.Skeat1871,11:47) and *ne wene ge* 'Do not think' (WSCp.Jn.Skeat1871, 5:45). Evidence of this reduced inflectional system in the Anglian dialects is rather more sporadic, although as Benskin (2011:159) observes, this may well be "an accident of the kinds of texts which happen to survive from different parts of England, rather than a property of the Anglian dialects."

The observation refers to the fact that extant northern textual evidence from the period is far from abundant and that which remains limited in nature. As mentioned above, the only substantial Northumbrian texts passed down to us are the tenth-century interlinear glosses to the Latin manuscripts of the *Lindisfarne Gospels* and the *Durham Ritual* and the Northumbrian part of the *Rushworth Gospels* gloss (*Rushworth²*), also written in the late tenth-century and heavily reliant on the *Lindisfarne* gloss. For linguistic analysis word-for-word glosses are not the most adequate source of evidence, not only because of the possible linguistic influence exerted by the Latin original, but also because of the possible influence exerted on the language by the demands of the glossing process itself. This may in itself explain the lower frequency of reduced forms as Benskin (2011:170) notes:

> an obvious explanation for the dearth of examples with vocalic endings is that they would defeat a glossator's purpose. […] if a Latin indicative is to be rendered as an Old Northumbrian indicative, the glossator has to use the explicit consonantal form: the northern subject rule is incompatible with the demands of intelligent glossing.

The marginal occurrence of reduced forms with pronominal subjects in *Lindisfarne* may point to a feature already widespread in speech; however, the glossator's own language, which slips in only occasionally, is subjugated to the demands of atomistic glossing. As mentioned above, in the continuous prose translation of the gospels written in the West Saxon dialect, the *West Saxon Gospels*, reduced endings occur with *we* and *ge* in contexts of subject-verb inversion both in the early and late texts (Cambridge, Corpus Christi College, MS. 140 and Oxford, Bodl. Hatton, MS. 38, Skeat 1871-87): *hwær bicge we hlafas* (Jn.6:5); *hwæt do we* (Jn.6:28); *ne ongyte ge* (Mk.7:18); *næbbe we náne hlafas* (Mk.8:16). The Northumbrian counterparts at the same point in the text in the *Lindisfarne Gospels* generally have full consonantal suffixes: *huona byges ue hlafo* (Jn.6:5); *huæd wyrcas ue* (Jn.6:28); *ne oncneawesgie* (Mk.7:18); *hlafo ne habbas we* (Mk.8:16). Given how differently the verbal morphology patterns, it is perhaps no

wonder that syncopated short forms with post-verbal pronouns have been assumed in the literature to be largely restricted to the southern dialects (Sweet 1953:§56; Stein 1986:645), or to have reached the North at a later stage (Pietsch 2005:177). Yet a comparative study of different West Saxon text types provides evidence to show that while these syncopated short forms are widespread in West Saxon prose, they fail to occur in West Saxon glosses. Verbs in the same contexts in the late West Saxon gloss to the *Salisbury Psalter* have full consonantal endings: *na ondrædað we* (45.3); *hu lange demað ȝe unrihtwisnesse* (81.2); *on gode don we mæin* (59.14); *fæȝniȝen we* (117.24). This suggests that the observed difference between the West Saxon and Northumbrian gospels may in fact be more a case of the impact of different text types than of dialect differences.[40]

The effect the genre of the gloss appears to have on the selection of linguistic structure raises questions concerning the intended aim of the glossing practice. It would normally be assumed that a gloss with an educational purpose would attempt to convey the complexities of the Latin grammar system including number, gender, tense and mood, in as far as that were possible in the target language, but the aims of the glossator may vary and so too the glossing method employed. As I mentioned in chapter 2, the Old English gloss to the *Durham Ritual*, supposedly also the work of Aldred, makes little attempt to transmit the grammatical specifics of the Latin original, although the gloss is a word-for-word translation; instead uninflected forms are regularly used. Keefer (2007:93-96) views Aldred's rife use of truncated forms in the *Durham Ritual* as diagnostic of the intended relationship between the Latin text and the Old English gloss. The gloss in this case was never intended to have an educational purpose as the *Durham Ritual*, a service book, would not have been considered teaching material and the rudimentary sense-gloss provided by Aldred was therefore intended as little more than "a prompt to meditation", as a sense-gloss through which the reader would filter his understanding of the Latin (Keefer 2007:95). Contrastively, the reduced forms may be indicative of an innovative system in which a high degree of morphological simplification is already prevalent. Only a comprehensive study of the language of the *Durham Ritual* would establish to what extent truncated forms in the gloss are root forms provided as aids for translation or are indicative of real morphological simplification. However, there is reason to believe that the latter was a real possibility.

[40] The lack of reduced forms in the *Salisbury Psalter* may, of course, simply reflect dialectal variation within West Saxon itself or differences between early and late West Saxon (Sweet 1871:xxxv), although the language is "basically late West Saxon" (Sisam & Sisam 1959:§59).

Setting aside fully abbreviated forms, Benskin's (2011:169, fn.27) close examination of present-tense marking in the *Durham Ritual* reveals reduced verbal forms occur at a rate of 21% (*N* = 24/115). Illustrative examples include *ve agefe ~ exhibemus*, *gie gedoe ~ facitis* and *hia giclænsigo ~ castigant,* all of which gloss Latin indicative plurals, and are in line with the type of reduced verbal forms found in *Lindisfarne* as we shall see. It may tentatively be suggested that the greater prevalence of these forms in the *Durham Ritual* where Aldred appears less concerned to meet the demands of atomistic glossing indicates the ubiquity of rule-governed morphological simplification in speech.

The prevailing impression with certain glosses in *Lindisfarne* is a sense of conflict between the requirements of the glossing practice, i.e. the need to indicate the grammatical features of the Latin lemmata the gloss translates, and the tendency towards morphological change that characterises the English language during this period. In other words, between the demands of a particular written genre and the spoken language. For instance at f. 235vb 20 (Lindis.Jn.Skeat1871, 10:37) the glossator initially renders *nolite credere mihi* as *nalle gie gelefa me* "believe me not" but inserts the superscript letters -*as* after the verb form as an afterthought, thus *nalle*^{as} *gie gelefa me,* despite the widespread use of *nalle gie* as a gloss for *nolite* on other occasions (see section 5.2.2). Similarly, the presence of fully inflected preterite forms of the type *ne gebrohtongie ~ non adduxistis* f. ** (Jn.7:45) and *gesegon we ~ vidimus* f. ** (Mt.2:2), not only occur alongside reduced forms such as *ne leornade gie ~ legistis* f. ** (Mk.2:25) and *ne ongeto gie ~ cognouistis* f. ** (Jn.8:55), but are frequently subject to the intervention of a correcting hand that deletes final -*n* in pronominal environments by the insertion of dots above and/or below the letter. Instances comprise *geherdon ge ~ audistis,* which is altered to *geherde ge* at f. 35ra 23 (Mt. 5:20); *ne gemændon ge* becomes *gemænde* in the double gloss *heafegdege ł negemænde ge ~ planxistis* at f. 47vb 17 (Mt.11:17); *næfdon gie* is altered to *næfdo gie* at f. 234ra 5 (Jn.9:41) and *ne etton hia* to *ne etto hia* at f. 108va10 (Mk.7:4). We may infer from this tendency towards systematic expunction in these environments that the development of reduced forms were far beyond the incipient stage suggested by their paucity in the gloss and were already a widespread feature of the spoken language (p.c. Michael Benskin).

Turning now to the origin of the reduced verbal form and the NSR. Murray (1873:212) and, more recently, Pietsch (2005) and Benskin (2011) have looked to the

paradigmatic levelling of Old English reduced inflection as a possible origin of the Northern Subject Rule. So, Murray (1873:212):

> [B]efore the date of the earliest Northern writings of the 13th century, the [verb] form without the -*s* had been extended to all cases in which the verb was accompanied by its proper noun, whether before or after it, leaving the full form in -*s* to be used with other nominatives only.

In a similar vein, Pietsch (2005:177) views the emergence of the NSR as a two stage process commencing with "the weakening and subsequent neutralization of a set of previously distinct but phonologically similar affixes (*-eð/-að-iað-is* > *-s*)" followed by "the innovation of affixless, so-called syncopated forms, at first only in a certain restricted set of syntactic environments adjacent to pronouns. This development was apparently headed by the southern dialects and only began to reach the north at some time during late Old English."

As the 'West Saxon' plural concord system stands it bears only a passing resemblance to the NSR. It shares the principle of a reduced suffix in the same syntactic position, but this reduced suffix cannot be said to alternate with a consonantal suffix in the same way *-e* and a consonantal ending alternate in a NSR system. The alternation in West Saxon is between a reduced suffix in antepronominal position, as in *ne redde ge* (Mt.12:3) and a full suffix in postpronominal position: *ge geheoraþ* (Mt.13:14). In a NSR system, adjacent pronoun subjects occur with reduced forms regardless of whether the pronoun subject is pre- or post-verbal. The alternation, strictly speaking, in such a system is between adjacent plural personal pronouns versus all other subject types. While West Saxon concord goes some way to satisfying the adjacency constraint of the NSR, it is restricted to first- and second-person environments of pronominal postposition. Consequently, the type-of-subject effect at the crux of the NSR with its distinction between nominal and pronominal subjects is not attested since full NP subjects only occur (self-evidently) in third-person contexts.

Explaining the origin of the Old English reduced inflectional system and its restriction to first and second person environments of pronominal postposition is the focus of much of the older literature (Sweet 1871; Murray 1873; Luick 1922; Horn 1921, 1923 and Brunner 1965), and more recently Benskin (2011).

Sweet invokes morphological interchange with reduced subjunctive forms as the

historical source of the reduced ending with adjacent pronoun subjects; a view endorsed by Brunner & Sievers (1965:§360). In his introduction to King Alfred's West Saxon version of the *Cura Pastoralis,* Sweet (1871: Part II, xxxv) noted the frequent dropping of final *-n* in the infinitive, the weak adjective, and the subjunctive, particularly in the Hatton manuscript and posited that the reduced ending in the indicative was a transfer from the subjunctive via the imperative:

> Such forms as *ne forbinden ge* (105.7) are interesting as affording an explanation of the well-known difference of ending which depends on the relative position of the verb and its personal pronoun. The frequent dropping of the final *n* has been noticed above (p. xxxii), we need not therefore be surprised at one MS. having *ne bregde ge*, while the other retains the final *n* (173.10, compare also 189.23). It seems not improbable that these curtailed forms may have gradually extended their range, first appearing in imperatives without the negation, and afterwards in all cases of pronominal postposition.

In a recent reconsideration of the matter Benskin (2011) explores several historical sources for the reduced ending in Old English including the subjunctive and the possibility of it being a survival from the prehistoric language, but his main argument posits a phonotactic motivation. With reference to Luick (1922), Benskin outlines a perspective which invokes a phonetic principle, namely, consonant cluster simplification, as the driving force behind the reduced inflection pattern and its restriction to the first and second persons in terms of phonotactics. According to this hypothesis, the loss of final unstressed *-n*/*-ð* was conditioned by the initial glide of the following unstressed subject pronoun *we*, *ȝe*. Hence, the consonant clusters [nw], [nj], [θw] and [θj] arising in sequences of the type *binden we* or *gað gie* were simplified by the loss of final *-n*/*-ð* with the outcome *binde we*, *ga ȝe*. The outcome is unexpected in that phonetic principle would predict the loss of *w* and *ȝ*, and yet these are the consonants that are preserved, because "the sequences *-we*, and *-ȝe* correspond (self-evidently) to the free forms of the pronouns" (Benskin 2011:162). The consonant clusters arising when *hie* followed *-n*, *-ð,* on the other hand, were simplified by the loss of h, giving forms such as *bindenie* and *bindeðie* (Luick 1922, cited in Benskin 2011:162), but in written language, regardless of pronunciation, the subject pronoun *hie*/*hia* remained detached and explicit in line with the patterns of the other subject

pronouns *we* and *gie,* leading Benskin to conclude that "*******binde hie* was not written because that never was the pronunciation." For Benskin the issue hinges on "the lack of an eligible junctural consonant in *hie*" (2011:161, fn. 11). The initial consonant in *hia* derives from Germanic χ which at some point in the ancestor of Old English weakened to [h] and could no longer initiate an unstressed syllable making the sequence {VERB-e *hie*} unsustainable. Such an account would ultimately explain the restriction of the Old English reduced inflectional pattern to first and second-person plural pronouns. A precondition for the spread of reduced forms to the third-person plural would have been the replacement of the old inherited *h*-pronouns by pronouns with initial ð (*þai, þei*), which did not occur in the North until the early Middle English period and was not completed in the south even by late Middle English times. "Here, then, is the reason for the one seeming difference between the northern subject rule and the 'West Saxon' concord: it is an accident of phonology, and has nothing to do with grammatical system" (Benskin 2011:163).

Evidence from Old Frisian (Hoekstra 2001; Bremmer 2009:§155, fn.3, discussed by Benskin 2011:163, fn.15), shows reductions of the same kind. In Old Frisian the plural indicative suffix in verb~subject order was -*a* instead of -*ath* with the first and second person pronouns *wi* and *gi,* e.g., *aldus skilu wī...halda* 'thus we must preserve' and *fā jī up* 'raise (PL) up your hands' (Bremmer 2009:§155, fn.3). The *h*-pronoun of the third-person plural retained -*ath*, thus directly paralleling Old English developments. Hoekstra's (2001) explanation for the origin of these reduced forms as contextual change in environments of cliticisation, rather than a product of mechanical sound change, essentially endorses Benskin's view. However, there is also evidence in Old Frisian discussed by Hoekstra and cited by Benskin, which suggests that the workings of consonant cluster reduction as outlined above for the sequences [nw], [nj], [θw] and [θj] sometimes took a different, more phonetically predictable course. The full Old Frisian second-person plural subject pronoun form *gi* or *ji* is sometimes replaced by the reduced form *i,* which either replaces the verbal inflection and is fused with the verb, e.g. *ther brek'ī on thera liudfrethe* 'with it you (PL) broke the people's peace' (taken from Bremmer 2009:§155, fn.3), or occurs after the reduced suffix as an independent word in the sequence -*a i*. These attestations also suggest pronominal subjects in immediate proximity to the verb have been reanalyzed as verb inflections; a point we shall return to in due course. Benskin's claim that the reduced form is a logogram used by the writer with the intention of saving parchment, ink and time and in

the knowledge that an oral rendering would "reactivate etymological [j] as a glide consonant" (2011:163, fn.15) is uneasily sustainable in view of the scholar's earlier statement (2011:161, fn. 13) that Middle English scribal renderings of the unstressed third-person singular and plural nominative *h*-pronouns as *a* implies loss of initial *h* in speech. Either orthographic distinctions reflect pronunciation or they do not. We will return to the discussion of whether phonetic principle rather than grammatical system explains the history of reduced inflection in Old English in section 5.5.

In contrast with the relatively extensive literature that has focused on late Northumbrian present-tense verbal morphology involving suffixal -*s* and -ð, studies on reduced verbal morphology in Old English northern dialect are extremely thin on the ground. Few studies, bar the odd exception, have considered the distribution of reduced verbal morphology in late Old Northumbrian. For the *Lindisfarne* glosses there exist the inventory-style morphological studies of Lea (1894) for the Gospel of Mark, Füchsel (1901) for the Gospel of St John, and Dutton Kellum (1906) for the Gospel of St Luke. While highly informative, these studies fail, however, to provide much insight into the dynamics of the text. Furthermore, as mentioned above, the standard edition by Skeat (1871-87), upon which these studies rely, is marred by inaccuracies and editing conventions that arguably obscure phonological and morphological change.[41] More recently, de Haas's (2008) quantitative study of the frequency and distribution of reduced forms with plural pronoun subjects in the *Lindisfarne* gloss discussed in section 3.1.1 concludes that, even though reduced forms do occasionally occur, the regular present-indicative ending with plural pronominal subjects is -*s* or -ð. The occurrence of reduced endings, though marginal (7.6%, N = 43/564), *is* nonetheless indicative of pronoun subjects triggering reduced forms in the gloss and merits more detailed consideration for the insight their study might afford into the origin of the Northern Subject Rule. It would seem unwise to dismiss low frequencies of this nature as inconsequential without detailed contextual analysis of the distribution of the forms involved. Recent research would certainly suggest that Northumbrian evidence for syncopated forms is better than has been supposed and may lay open the possibility of an early origin for the Northern Subject Rule. For the Durham Ritual, Benskin's reassessment of Lindelöf's (1890) figures, briefly mentioned above, reveals a not insignificant 24 cases of reduced verbal forms with preceding plural pronoun subjects

[41] See Fernández Cuesta (2009) for detailed discussion. See also Blakeley (1949/50:15-16) with references to unpublished work by Ross & Chadwick; Lass (2004) and Benskin (2011:168, fn.25).

glossing Latin indicative forms, compared to 91 cases with consonantal suffixes (Benskin 2011:169, fn.27). Reduced indicative plurals in the Durham Ritual gloss also occur categorically before immediately following subject pronouns (Benskin 2011:169). The following section looks in detail at reduced present-tense inflection in the *Lindisfarne* gloss.

5.2 Reduced present tense inflection in the Lindisfarne gloss

Unlike the Northern Subject Rule which conditions the morphology of verbs co-occurring with all plural pronoun subjects, but only in the present indicative and imperative, the reduced morphological pattern characteristic of southern texts applies to all moods in both the present and preterite, but is restricted to first- and second-person plural pronouns in post-verbal position. Despite the traditional association of this pattern with West Saxon, these so-called syncopated forms are far from absent in the northern writings; however, their distribution diverges from the southern pattern in a way that may be significant for the emergence of the Northern Subject Rule.

5.2.1 Present-indicative interrogative forms

Close examination of the glosses reveals instances of reduced forms with pronominal subjects that parallel the reduced inflectional pattern found in southern texts. These forms are used regularly to gloss Latin hortative subjunctives, as exemplified in (22), but they are also found in interrogative indicative constructions, as the examples in (23) illustrate. The corresponding sentences in early West Saxon, taken from the *West Saxon Gospels* (Cambridge, Corpus Christi College, MS. 140, Skeat 1871-87), are provided where relevant.

(22) a. Li. *7 cuoeð to him **gæ we** ł wutum geonga in ða neesto lond 7 ða ceastre*

L. *et ait illis **eamus** in proximos uicos et ciuitates*

f. 97rb 2 (Lindis.Mk.Skeat1871, 1:38)

Ws *þa cwæð he **fare we** on gehende tunas 7 ceastra*

“Let's go to the nearest lands and cities”

b. Li. *7 **wyrca we** ðrea husa ðe an 7 mosi an 7 heliæ an*

L. *et **faciamus** tria tabernacula tibi unum et mosi unum et heliae unum*

f. 112va 5 (Lindis.Mk.Skeat1871, 9:5)
"Let us make three tabernacles; one for thee and one for Moses and one for Elias."

c. Li. ***geonga ue*** *to him*
L. ***eamus*** *ad eum*
f. 236vb 23 (Lindis.Jn.Skeat1871, 11:15)
"Let us go to him."

(23) a. Li. *drihten to huæm* ***woe ge geonge*** *ł uordo lifes ece ðu hæfis*
L. *domine ad quem* ***ibimus*** *uerba uitae aeterne habes*
f. 226ra 10 (Lindis.Jn.Skeat1871, 6:68)
Ws *drihten to hwam* ***ga we*** *þu hæfst eces lifes word*
"Lord, to whom shall we go? Thou hast the words of eternal life."

b. Li. *huæt* ***walla ue*** *eatta vel huæt* ***we drince***
L. *quid* ***manducabimus*** *aut quid* ***bibemus***
f. *** (Lindis.Mt.Skeat1871, 6:31)
Ws *hwæt ete we oððe hwæt drince we*
"What shall we eat or what shall we drink?"

c. Li. *7 cuoedon huæd* ***ue doe***
L. *et dicebant quid* ***facimus***
f. 238va 1 (Lindis.Jn.Skeat1871, 11:47)
Ws *7 cwædun hwæt* ***do we***
"And they said, what shall we do?"

d. Li. [*Pilatus*] *uutedlice efter sona geonduarde cuoeð him huæd forðon* ***wallige*** *þaet ic doe cynige iudeana*
L. *Pilatus autem iterum respondens ait illis quid ergo* ***uultis*** *faciam regi iudaeorum*
f. 127rb 11 (Lindis.Mk.Skeat1871, 15:12)
"Pilate answered and said again unto them, what will ye therefore that I should do with the King of the Jews?"
Ws *þa cwæð pilatus,* ***wylle ge*** *þaet ic eow forgyfe iudea cyning*
(Lindis.Mk.Skeat1871, 15:9)

"Then Pilate answered, will ye that I release unto you the King of the Jews?"

e. Li. *to hwæm **we** gelic leta **welle** ric godes*
L. *cui adsimilabimus regnum dei*
f. 102va 22 (Lindis.Mk.Skeat1871, 4:30)
Ws *for hwam **geanlicie we** heofena rice*
"To what shall we liken God's kingdom?"

Subject-verb inversion seems to favour the triggering of reduced indicative forms in interrogative structures, and instances found in *Lindisfarne,* such as *gæ we* in (22a) and *wallige* in (23d), directly parallel the forms used in the *West Saxon Gospels*. Nevertheless, the occurrence of *woe ge geonge, ue drince* and *ue doe* in (23a-c) illustrate that reduced forms were not restricted to ante-pronominal position in the North, unlike in West Saxon. In addition to the reduced interrogative forms illustrated in (23), consonantal forms also occur with pronoun subjects in interrogative structures in the glosses, as in *huona byges ue hlafo ~ unde ememus panes* 'Whence shall we buy bread?' f. 222vb 2 (Jn.6:5); *huæd wyrcas ue ~ quid faciemus* 'What shall we do?' f. 224ra 4 (Jn.6:28); *no we selleð ~ non dabimus* 'Shall we not give?' f. 119va 17 (Mk.12:14). This suggests that reduced forms and fully-inflected forms alternated as variants in this environment. Consider the almost identical interrogative structures in (24a) and (24b), taken from Mark, where *uultis* is glossed as *wallað gie* at f. 127ra 23 (Mk.15:9) and just a few lines later at f. 127rb 11 (Mk.15:12) as *wallige.* The manner in which consonantal and reduced endings alternate in this context is also exemplified by (24c) and (24d), where *ne oncnauas gie* and *ne oncneu ge* both gloss the Latin present-indicative negative form *non intellegitis*.

(24) a. Li. ***wallað gie** ł gif gie wælle ic forgefo ł forleto iuh cynig iudeana*
L. ***uultis** dimittam uobis regem iudaeorum*
f. 127ra 23 (Lindis.Mk.Skeat1871, 15:9)
"Will ye that I release unto you the King of the Jews?"

b. Li. *huæd forðon **wallige** þæt ic doe*
L. *quid ergo **uultis** faciam*
f. 127rb 11 (Lindis.Mk.Skeat1871, 15:12)

"What will ye then that I shall do?"

c. Li. ***ne oncnauas gie*** *forðon eghuelc þæt in muð inngaas in womb gaas ł færes*

L. ***non intellegitis*** *quia omne quod in os intrat in uentrem uadit*

f. 57vb 8-11 (Lindis.Mt.Skeat1871, 15:17)

"Do ye not yet understand that whatsoever enters the mouth enters the belly?"

d. Li. *forhon* ***ne on cneuge*** *forðon ne of hlafe sægdig iuh*

L. *quare* ***non intellegitis*** *quia non de pane dixi uobis*

f. 59va 23 (Lindis.Mt.Skeat1871, 16:11)

"How do ye not understand that I spoke to you not of bread?"

5.2.2 Imperative forms

In the imperative, reduced forms in *Lindisfarne* are generally restricted to glosses of the negative Latin imperative *nolite* as exemplified in (25), although from here they could plausibly have extended their range.

(25) a. Li. ***nælle gie*** *gedoema æfter onsione ł ah soðfæst dom gedoemað*

L. ***nolite*** *iudicare secundum faciem sed iustum iudicium iudicate*

f. 227rb 18 (Lindis.Jn.Skeat1871, 7:24)

Ws ***ne deme ge*** *be ansyne ac demað rihtne dom*

"Judge not according to the appearance, but judge righteous judgment."

b. Li. ***nallegie*** *woenæ þætte ic forhycgende ł sie mið ðone fæder*

L. ***nolite*** *putare quia ego accusaturus sim uos apud patrem*

f. 222rb 16 (Lindis.Jn.Skeat1871, 5:45)

Ws ***ne wene ge*** *þæt ic eow wrege to fæder*

"Do not think that I will accuse you to the father."

c. Li. ***nælle gie*** *fore ðence huæt gie spreca*

L. ***nolite*** *praecogitare quid loquamini*

f. 121vb 22 (Lindis.Mk.Skeat1871, 13:11)

"Think ye not beforehand what ye will say."

Elsewhere, the gloss of the same negative command occurs with an indicative consonantal suffix as in *nallað gie* at f. 221va 1 (Jn. 5:28) and *nallas gie* at f. 222ra 20 (Jn. 5:40) and f. 114ra 22 (Mk. 9:39). The use of both the reduced form *nalle ge* and the fully-inflected forms *nallas/nallað* implies that both were correct variants in the language of the glossator. Close examination of the original manuscript suggests that the glossator himself may have given indications that this was the case. Consultation of the MS at f. 235vb 20 reveals that the glossator originally wrote *nalle*; however, the final < e > of this form appears with dotting above and below, and the suffix < as> is added above in superscript. Skeat interprets this as a correction and renders the form as *nallas,* as illustrated in (26):

(26) Li. *Gif ic ne wyrco woerca fadores mines* ***nalle**^{as}* ***gie*** *gelefa me*
L. *Si non facio opera patris mei* ***nolite*** *credere mihi*
f. 235vb 20 (Lindis.Jn.Skeat1871, 10:37)
"If I do not the works of my father, believe me not."

Yet Skeat's editorial practice here is questionable, given that on other occasions the glossator makes no attempt to 'correct' the reduced form *nalle* by adding a consonantal ending. Ross, Stanley & Brown (1960:19) note that alterations made to forms in the MS by dotting, under- or over-lining, erasure, and so on, do not necessarily remove erroneous forms, but is simply a short-hand way of indicating variant forms: "the alteration is merely from one (correct) variant form to another."

That this must have been the case is borne out by the fact that, although *-s*/*-ð* endings occur as co-variants in the gloss as part of a change in progress whereby the inherited *-ð* forms are gradually replaced by *-s* forms in the North, there are numerous instances in the MS where < s > is added as an alternative suffix to < ð >, or vice versa, sometimes with dotting above and/or below the original suffix. Instances include: *gefeað*^{s} f. 216vb 1 where an <s> appears written above the <*ð*> with no dotting; *hia geoehtas*^{ð} f. 246vb 20 with a superscripted <*ð*> written above the <*s*> and no dotting; *ondredes*^{ð} f. 245rb 18 with dotting above the < s > and a superscripted <*ð*>; *ettes*^{ð} f. 107rb 17 where <s> has a dot above it and a superscripted <*ð*> and *ne geseað*^{s} f. 233vb 17. To take *ne geseað*^{s} at f. 233vb 17 as an example: the glossator originally wrote the

verb form as *geseað,* but despite the appearance of a superscripted <s> and dotting both above and below the <ð>, the alternative suffixes are undoubtedly variants, given that, in addition to the reasons outlined above, the altered verb form is immediately followed by *geseað* in the text: *þætte ðaðe ne geseað/s hia geseæ ł 7 ðaðe geseað blindo biðon ~ ut qui non uident uideant et qui uident cæci fiant* 'that they who see not, might see, and they that see might be made blind' (Jn. 9:39). Indeed, *geseað* occurs 15 times in John compared to *geseas,* which occurs just twice: *geseað* Jn.1: 15, 1:39, 4:29, 4:35, 6:19, 7:3, 8:51, 9:21, 9:39, 12:19, 12:40, 14:7, 16:16 (2x), 19:37 as against *geseas* Jn. 16:10, 14:19.

In view of the fact that the -*s* ending is used as an alternative to -*ð* in the glosses, the glossator must have intended these additions to indicate variant forms. Double suffixal glosses should be understood within the broader practice of double glossing which is commonplace in the gloss. The glossator frequently provides alternative glosses for a single Latin term, separated by Latin *vel*, 'or' (abbreviated to ł in the manuscript). These alternative forms include not only alternative lexical items, like *berað ł bringeð ~ adferte,* f. 258rb 1 (Jn.21:10), but also alternative morphological forms of the same verb such as *geseað gie ł gie geseas* f. 192va 8 (L.21:20). Given such scribal practice, double suffixal glosses of the type which occurs at f. 245rb 18, where *ondredes* has dotting above the < s > and a superscripted < ð >, appear to be a short-handed way of indicating variant forms. Following the same line of argument, the occurrence of both *nalle* and *nallað/nallas* in the glosses suggests that the same aim may have motivated scribal practice at f. 235vb 20, example (26). If this is the case, Skeat's editorial practice seriously obscures variation in the glosses and possible indications of change in progress. Whatever the glossator's motivation, the attestation of *nalle* implies that reduced forms and consonantal endings alternated in this pronominal context. Indeed such reduced forms may reflect a ubiquitous feature of speech; we simply do not know to what extent the language of the gloss reflected spoken language.

Although other lexical items in the imperative occur with suffixal -ð or -*s* in the gloss, as in *geseas gie ~ videte* (Mk.13: 5) or *soecað ge ~ quærite* (Mt.7:7), there are a couple of instances, illustrated in (27), which suggest reduced verbal morphology may not have been limited to negative forms of *willan.*

(27) a. Li. *cwoeð* ***ne lufa gie*** *ðonne fæder oðde moder ofer hine*

L. *dicens **nec amari** patrem aut matrem super se*
f. *** (Lindis.Mt.Skeat1871, *18:15)
"He said your father and mother are not to be loved more than him."

b. Li. *ah ðas spræcc ł iuh þætte miððy cymes tid hiora uosaðgie eft gemyndgo ł **gemyna gie** ðon' þætte ic cuoeð iuh*
L. *sed haec locutus sum uobis ut cum uenerit hora eorum reminiscamini quia ego dixi uobis*
f. 247va 2-6 (Lindis.Jn.Skeat1871, 16:4)
"But these things I have told you, that when the time comes, be it remembered / ye may remember / remember then because I told you"

The excerpt in (27a), taken from the capitula in the preface material to the Gospel of Matthew, refers to Mt.10:37: *seðe lufias fader 7 moder forðer ðon mec ne is meh wyrðe ~ qui amat patrem et matrem plus quam me non est me dignus* 'he that loves his father and mother more than me is not worthy of me.' Given the lack of a direct Old English counterpart for the Latin present-passive infinitive form *amari,* the syntax of this sentence would be more naturally rendered by an imperative in English and suggests *ne lufa gie* was intended as such by the glossator. The same might also reasonably be argued for *gemyna gie* in (27b). Skeat inserts an *-n* ending and renders the form *gemynan*, although it is unclear whether he interprets the form as an infinitive or as a plural present subjunctive. Either way, the insertion of *-n* seems erroneous bearing in mind that final *-n* had been lost in these contexts in late Old Northumbrian. The plural present subjunctive suffix in *Lindisfarne* is *-a*/*e* (Ross, Stanley & Brown 1956-1960:39; Campbell 1959:§767) but generally occurs in SproV constructions, rather than VSpro, which is more commonplace among imperative constructions. It may also be the case that the scribe confused the present active subjunctive Latin form *reminiscāminī* with the present active imperative form *remīnīsciminī*.

The verb *gemunan* 'remember' appears not to be a preterite-present verb in Anglian and has pres. indic. forms across the board (Campbell 1959:§767). Furthermore, the umlauted forms typically found (only) in the subjunctive in West Saxon (Hogg & Fulk: 303-304) had generally been extended to all forms of this verb in the North (Campbell 1959:§767). So at f. 246vb 14-15 (Jn.15:20), just a few folios before, the unambiguous plural imperative form *gemynas gie ~ mementote* occurs (28):

(28) a. Li. *gemynas gie uordes mines ðone ł þæt ic cuoeð iuh*
L. *mementote sermonis mei quem ego dixi uobis*
f. 246vb 14-15 (Lindis.Jn.Skeat1871, 15:20)
*"*Remember the words that I have told you."

Given the similarity in meaning between the utterances at Jn.15:20 and Jn.16:4, *gemyna gie* at f. 247va 2-6 may plausibly have been intended as an imperative form.

An explanation for the dearth of reduced imperative forms with verbs other than *willan*, at least in negative contexts, may be the fact that out of a total of forty eight negative imperatives found in the Latin gospels, forty seven involve the negative imperative form *nolite* which is always rendered using a contracted negative form of the verb *willan* followed by an infinitive in the glosses. The only exception is *neque sectemini,* which is glossed *ne gefylges* (L.17:23) and possibly the aforementioned *ne lufa gie ~ nec amari* (Mt.*18:15). The forms *nallað/nallas/nalle gie* used as glosses for *nolite* appear to be characteristic of glossarial language; an attempt by the glossator to render the Latin negative imperative form *nolite* as formally and atomistically as possible. In the continuous West Saxon prose translation of the four Gospels, the *West Saxon Gospels* (Cambridge, Corpus Christi College, Skeat 1871-87), negative imperatives follow a more 'natural' *ne* + V + Spro structure, as in *ne wyrce ge* (Jn.2:16) or *ne deme ge* (Jn.7:24), compared with the literal counterparts found in *Lindisfarne, nallaðgie g*[*e*]*wyrce ~ nolite facere* and *nælle gie gedoema ~ nolite iudicare* respectively. The recurrent structural pattern in the gloss may explain the lack of reduced imperative forms other than those involving *willan*.

5.2.3 Present indicative forms

The remaining tokens of reduced forms in the gospels all gloss Latin indicatives and occur in functionally indicative statements. These instances are given in (29):

(29) a. Li. *se hælend uutedlice cuoeð him þæt calic ec ðon ðone ic drinco* ***gie drinca***
L. *iesus autem ait eis calicem quidem quem ego bibo* ***bibetis***
f. 116va 20 (Lindis.Mk.Skeat1871, 10:39)
"Jesus said to them, ye shall indeed drink from the cup that I drink of."

b. Li. *suæ ðon' iuih* ***giebidde***

L. *sic ergo uos **orabitis***
f. 37rb 20 (Lindis.Mt.Skeat1871, 6:9)
“Therefore after this manner pray ye.”

c. Li. *sua huæt gie gebiddas ł biddende ge giuað gelefes ge þætte **gie onfoe** 7 becymeð iuh*
L. *quaecumque orantes petitis credite quia **accipietis** et ueniet uobis*
f. 118rb 21-22 (Lindis.Mk.Skeat1871, 11:24)
“Whatever ye desire when ye pray, believe that ye will receive them, and it will come to you.’”

d. Li. *Sua huæt **gie welle** þæt hea gedoe iuh ða menn 7 gee doeð ł wyrcas him*
L. *quaecunque **uultis** ut faciant uobis homines et uos facite eis*
ff. 39rb 22 – 39va 1 (Lindis.Mt.Skeat1871, 7:12)
“Whatsoever ye wish that they men should do to you, do ye so to them.”

e. Li. *7 suæ **gie wælle** þæt hia doað[42] ł gedoe iuh menn 7 gie doað him gelic*
L. *et pro ut **uultis** ut faciant uobis homines et uos facite illis similiter*
f. 154va 16-19 (Lindis.L.Skeat1871, 6:31)
“And as ye want that men should do to you, do ye likewise to them.”

f. Li. *oððæt cyme mið ðy **gie cuoeðo***
L. *donec ueniat cum **dicetis***
f. 176va 1-2 (Lindis.L.Skeat1871, 13:35)
“The day comes when ye shall say...”

g. Li. *7 from ðing stow sie gefulwuad **ne etto hia***
L. *et a foro nisi baptizentur **non comedunt***
f. 108va10 (Lindis.Mk.Skeat1871, 7:4)
“And from the marketplace, if they have not washed, they do not eat.”

h. Li. *7 foerdon onfundon fola gebunden ær ł befora ðon dor uta æt woegena geletum 7 **unbinde hia** hine*

[42] *hia doað* has a line running over it which Ross, Stanley & Brown (1960:**) interpret as deletion.

L. *et abeuntes inuenerunt pullum ligatum ante ianuam foris un biuio et* ***soluunt*** *eum*
f. 117va 2 (Lindis.Mk.Skeat1871, 11:4)
"And they went away, and found the colt tied by the door outside where two roads meet, and they untie him."

i. Li. *7 fæder min lufað hine 7 to ðæm ł ue cym' 7 hamas ł mið hine* ***wyrcæ ue***
L. *et pater meus diliget eum et ad eum* ***ueniemus*** *et mansiones apud eum* ***faciemus***
f. 245ra 17-19 (Lindis.Jn.Skeat1871, 14:23)
"And my father will love him and we will come unto him and make our abode with him."

j. Li. *ge onduardon ða biscobas* ***nabbo ue*** *cyning buta ðone caser*
L. *responderunt pontifices* ***non habemus*** *regem nisi caesarem*
f. 254ra 5 (Lindis.Jn.Skeat1871, 19:15)
Ws *him andswaredon þa bisceopas 7 cwædon* ***næbbe we*** *nanne cyning buton kasere*
"The bishops answered, we have no king but Caesar."

k. Li. cuedon *þaet* ***nallo we*** *ðiosne þaet gerixage ofer usic*
L. *dicentes* ***nolumus*** *hunc regnare super nos*
f. 187ra 20-22 (Lindis.L.Skeat1871, 19:14)
Ws *we nelleð þaet þes ofer us rixie*
"Saying that we want not that this man reigns over us."

l. Li. *from hernise gie geheras 7* ***ne oncnæuge*** *ł ne cuðon ge 7 gesegende ge sciolon gesea ł ge geseas 7 negeseað ł* ne sciolon gesea
L. *auditu audietis et* ***non intelligitis*** *et uidentes uidebitis et non uidebitis*
f. 52rb 5-8 (Lindis.Mt.Skeat1871, 13:14)
"by hearing, ye shall hear and not understand and seeing ye shall see and not perceive."

Here, the use of reduced forms once again differs significantly from the southern system and points to independent developments in the northern dialects. Reduced forms are not restricted to verbs in ante-pronominal position co-occurring with first- and

second-person plural pronoun subjects, but they also occur in post-pronominal contexts as exemplified in (29a-f) and with a following third-person plural personal pronoun as illustrated in (29g) and (29h).

In past studies, these reduced forms have generally been dismissed as subjunctive forms. Füchsel (1901:61), quoted in Benskin (2011:169), notes that *wyrcæ* in example (29i) is probably subjunctive; yet, in addition to glossing a Latin present indicative and occurring in a functionally indicative context, *wyrcæ* forms part of a conjoined verb phrase in which the abbreviated verb *we cym′* glosses the Latin indicative *ueniemus* and is clearly indicative. Another reduced form, which is not easily explained away as a subjunctive, is *nabbo* in (29j), used to gloss the Latin present indicative *habemus.* The usual reduced plural present-subjunctive form in John is *hæbbe;* also just a few lines later in the text the glossator renders the same Latin present-indicative form as *habbas,* as expected. This is illustrated in (30). Similarly in Matthew, *nabbas we* at f. 56ra 1 (Mt. 14:17) glosses *non habemus* at the same point in the narrative, further indicating that the glossator would not have considered this a subjunctive context.

(30) Li. *ondsuearudon him iudeas* ***ue*** *ae* ***habbas***
L. *responderunt ei iudaei nos legem habemus*
f. 253rb 21 (Lindis.Jn.Skeat1871, 19:7)
Ws *Ða iudeas him andswaredon 7 cwædon;* ***we habbað*** *æ*
"The Jews answered him, we have a law."

Nor can the *Rushworth*^{2} glossator's divergence from his exemplar and use of the gloss *ne habbon we cynig* at Jn. 19:15 be taken as proof that the *Lindisfarne* glossator intended a subjunctive. Brunner (1965), discussed in Benskin (2011:160), cites *habbon we* and *nallon ge* from the Old Northumbrian gloss to the Rushworth Gospels as forms telling in favour of morphological interchange with the subjunctive, as these are functionally indicative, but have subjunctive endings. The *-on* ending here is difficult to interpret, bearing in mind that, as in *Lindisfarne*, the regular plural present-subjunctive form in *Rushworth*^{2} is *hæbbe* and final *-n* in the present subjunctive has been lost. A plausible explanation is that the occurrence of *nabbo ue* in *Lindisfarne* and *ne habbon we* in *Rushworth*^{2} might be indicative of the encroachment of preterite-present and preterite verbal morphology (both *-e/Ø* and *-n*) into the pronominal present-indicative

environment. Once suffixes in *-n* occurred in these contexts in the present indicative, they would naturally alternate with *-e/Ø* as they did in the preterite-present (and preterite indicative). Sections 5.3.2 and 5.3.3 explore how this might be the case. Another potential instance of the influence of preterite-present verbal morphology is (29k); the inverted form *nallo we* occurs as *nallan we* in *Rushworth*[2]. In the *Lindisfarne* text *nallo we* glosses the Latin indicative form *nolumus* and has an indicative counterpart (*we nelleð*) in the West Saxon translation; all of which suggests the context is functionally indicative and would have been interpreted as such by the glossator.

Formally, *gie cueðo* (29f, repeated here as 31a) may be subjunctive, but in addition to glossing the Latin future indicative form *dicetis*, the excerpts in (31b) and (31d) illustrate the occurrence of explicit indicative forms in parallel structures involving *miððy* in the gloss, which suggests *gie cueðo* is also functionally indicative.

(31) a. Li. *oððæt cyme mið ðy* ***gie cuoeðo***
L. *donec ueniat cum* ***dicetis***
f. 176va 1-2 (Lindis.L.Skeat1871, 13:35)
"The day comes when ye shall say..."

b. Li. *mið ðy ðonne* ***geseaðgie ł giegeseas****...hierusalem*
L. *cum autem* ***uideritis****...hierusalem*
f. 192va 8-10 (Lindis.L.Skeat1871, 21:20)
"when ye shall see Jerusalem"

c. Li. *mið ðy* ***cymes*** *tid hiora*
L. *cum* ***uenerit*** *hora eorum*
f. 247va 4-5 (Lindis.Jn.Skeat1871, 16:4)
"when the hour comes"

d. Li. *eadge arogie mið ðy yfle* ***hiage cuoeðas*** *iuh 7 mið ðy* ***oehtas*** *iuih 7* ***cuoeðas*** *eghwelc yfel wið iuih*
L. *Beati estis cum maledixerint uobis et cum persecuti uos fuerint et dixerint omne malum aduersum uos*
f. 34va 5-10 (Lindis.Mt.Skeat1871, 5:11)
*"*Blessed are ye, when men shall revile you, and persecute you, and shall say all manner of evil against you"

The instances of reduced third-person plural forms with post-verbal pronominal subjects in *Lindisfarne* warrant special discussion. Lea (1894:140) notes *unbinde hia* (29h) as "abnormal" and due most probably to analogy with first- and second-person forms, and yet a reduced form followed by *hia* occurs twice in Mark as illustrated in (29g) and (29h). This is a proportionally high frequency bearing in mind that the Gospels by their very nature do not favour third-person plural contexts. Disagreements between *Lindisfarne* and *Rushworth*^{2} can also be informative. Here the *Rushworth*^{2} glossator, rather than faithfully copying the exemplar, uses a preterite-indicative form (*unbundun*) to gloss the original Latin present indicative, as does the translator of the *West Saxon Gospels*. The assumption that the *Lindisfarne* glossator is at fault or intended a preterite is, however, unwarranted: *unbinde* with a present stem vowel is clearly not a preterite form. This is further borne out by comparing the preterite forms *geband* ~ *alligauit* at f. 55rb 3 (Mt.14:3) and *unbundongie* ~ *soluitis* at f. 188ra 6 (L.19:31) with the undoubtedly present-indicative form *gie unbindes* ~ *solueritis* at f. 63vb 1 (Mt.18:18). An alternative explanation is that the abrupt change of tense in the original Latin text from past to present is more naturally rendered using English preterite forms throughout the clause. This is the course chosen by the scribes in the *West Saxon Gospels* and in *Rushworth*^{2} while the *Lindisfarne* glossator simply adheres more faithfully to the Latin original.

The second token of this nature is *ne etto hia* in (29g), used to gloss the Latin present indicative *non comedunt*. Skeat's edition records this form as *ne etton hia* (Mk.7:4), but a close analysis of the original manuscript at f. 108va 10 reveals that <n> has been expuncted to *etto*. No such alteration is made at f. 108va 4-7, where *etton* occurs with a full noun-phrase subject: [*pharisaei*] *fordon 7 alle iudei buta oftor geðuogon hondo ne etton ~ pharisaei enim et omnes iudaei nisi crebro lauerent manus non manducant* "For the Pharisees and all the Jews, unless (they) wash their hands often, eat not." Lea's failure to record the reduced form was most certainly due to her sole reliance on Skeat for her data. Theoretically, the Latin present-indicative form *non comedunt* requires an Old English present indicative as its counterpart, but the possibility that this may be a preterite-indicative form cannot be discarded. Vocalic endings occur regularly in inverted preterite-indicative contexts followed by *we* and *gie* and it is not uncommon for preterite forms to gloss present-indicative Latin forms (see section 5.3.3.2 for detailed discussion). There may also be the question of preterite-present verbal morphology encroaching upon strong/weak verbal morphology. Either

way, the occurrence of a reduced form with an adjacent third-person plural pronoun subject marks a significant departure from the West-Saxon concord pattern.

One last word should be said on the notable tendency of the verb *willan* to trigger reduced forms in both the imperative and indicative more so than any other lexical item. Although there is evidence in the gloss of the early grammaticalisation of *willan,* as examples (23b and 23e, here repeated as 32a and 32b) indicate, for the most part, the verb is used lexically to denote volition, as illustrated by examples (24a), (29d) and (29k), here repeated as (32c), (32d) and (32e).

(32) a. Li. *huæt **walla ue** eatta vel huæt þe **we drince***
L. *quid **manducabimus** aut quid **bibemus***
f. 38va 21-23 (Lindis.Mt.Skeat1871, 6:31)
Ws *hwæt ete we oððe hwæt drince we*
*"*What shall we eat or what shall we drink?"

b. Li. *to hwæm **we** gelic leta **welle** ric godes*
L. *cui **adsimilabimus** regnum dei*
f. 102va 22 (Lindis.Mk.Skeat1871, 4:30)
Ws *for hwam **geanlicie we** heofena rice*
"To what shall we liken God's kingdom?"

c. Li. ***wallað gie** ł gif gie wælle ic forgefe ł forleto iuh cynig iudeana*
L. ***uultis** dimittam uobis regem iudaeorum*
f. 127ra 23 (Lindis.Mk.Skeat1871, 15:9)
"Will ye that I release unto you the King of the Jews?"

d. Li. *Sua huæt **gie welle** þaet hea gedoe iuh ða menn 7 gee doeð ł wyrcas him*
L. *quaecunque **uultis** ut faciant uobis homines et uos facite eis*
ff. 39rb 22 - 39va 2 (Lindis.Mt.Skeat1871, 7:12)
"Whatsoever ye wish that they men should do to you, do ye so to them."

e. Li. cuedon *þaet **nallo we** ðiosne þaet gerixage ofer usic*
L. *dicentes **nolumus** hunc regnare super nos*
f. 187ra 20-22 (Lindis.L.Skeat1871, 19:14)

Ws *we nelleð þaet þes ofer us rixie*

"Saying that we want not that this man reigns over us."

Reduced forms of *willan* are strongly over-represented in the data which suggests that lexical diffusion may have played an instrumental role in the spread of vocalic endings, with the reduced inflectional pattern diffusing gradually across the lexicon (Wang 1969; Ogura & Wang 1994). The exceptional behaviour of *willan* has been noted elsewhere (section 4.5). We shall return to the issue of the effect of lexical conditioning on the proliferation of reduced verbal forms in section 5.3.3.2.

5.2.4 Summary

To reiterate, this section has carried out a detailed analysis of reduced present-tense inflection in the *Lindisfarne* gloss. Although there is no denying that instances of reduced indicative forms in the glosses constitute a mere handful of tokens, those that do occur do not do so randomly. At times they exist in contexts, which parallel the West-Saxon reduced inflection pattern, but unlike the West-Saxon system, northern reduced forms do not co-occur solely with first- and second-person plural pronoun subjects in contexts of subject-verb inversion. Instead, they occur in all plural environments, either immediately following or preceding a pronominal subject; as an extremely low variant form, true, but in perfect conformity with the Northern Subject Rule.

5.3 The historical source of present-indicative *-e/Ø*

In addition to the Old English reduced inflection system, there exist other potential historical sources for northern Middle English present-indicative *-e/Ø* forms. Here, I advance the hypothesis that in addition to present-subjunctive morphology, which has long been held as a historical source for *-e/Ø*, preterite-present and preterite-indicative verbal morphology also played an important role in perpetuating the levelling of reduced forms, and *-n,* into the present indicative.

5.3.1 Subjunctive verbal morphology in the Lindisfarne glosses

In northern dialect, reduced plural endings in the present also arose in the subjunctive in both ante- and post-pronominal position as part of the generalized lenition of final-*n* in late Northumbrian, which later spread to other dialects. The early loss of final-*n* in

plural subjunctive forms has led to the suggestion that syncopated forms occurred first in the subjunctive and spread analogically to the indicative (Sweet 1871: xxxv; Brunner & Sievers 1965:§360; de Haas & van Kemenade 2009). The tendency for subjunctive forms to occur in subordinate clauses with anaphoric pronominal subjects may have reinforced the association between pronominal subjects and reduced forms. De Haas & van Kemenade suggest the following development:

> The co-occurrence of *-ø* and *-s* endings probably posed a problem for language learners as long as it was in free variation. Language learners (in first-language as well as second language) acquisition may have reinterpreted *-ø* as a verbal ending specifically co-occurring with pronominal subjects, possibly aided by the distributional link between *-ø* forms and pronominal subjects in the subjunctive and/or inverted indicative contexts.

A contextual analysis of the correspondences between the Latin and late Northumbrian forms affords an interesting insight into the interaction between subjunctive and indicative verbal morphology in the glosses. The manner in which Latin subjunctives are frequently glossed using indicative forms in the Old Northumbrian gloss is exemplified in (33):

(33) a. Li. *7 swiðe bebead him þætte* ***hia ne æwades ł mersades*** *hine*
L. *et uehementer comminabatur eis* ***ne manifestarent*** *illum*
f. 100ra 4-5 (Lindis.Mk.Skeat1871, 3:12)
*"*And he strictly charged them that they should not make him known."

b. Li. *þætte gesegon* ***geseað*** *7 ne* ***geseað*** *7 ða herend* ***geherað*** *7 ne* ***oncnaweð****...*
L. *ut uidentes* ***uideant*** *et non* ***uideant*** *et audientes* ***audiant*** *et non* ***intellegant****...*
f. 101va 19-22 (Lindis.Mk.Skeat1871, 4:12)
*"*That seeing, they may see and not perceive; and hearing they may hear, and not understand."

More importantly for the development of the Northern Subject Rule, the glossator occasionally employs both indicative and subjunctive forms to gloss a Latin

subjunctive, so that vocalic subjunctive forms and consonantal indicative forms are used in identical contexts. An instance of such morphological interchange is illustrated in (34a) where a reduced subjunctive form *inngae* occurs alongside the indicative -ð forms *ingæeð* and *infæreð* in (34b) and (34c) as glosses for the Latin subjunctive form *intraueritis*. The use of *-e* and *-s* as alternatives suggests that both variants were acceptable in formally subjunctive contexts. This hypothesis is further substantiated by double glosses involving both subjunctive and indicative forms of the type illustrated in (34d).

(34) a. Li. *7 in suahuelcum hus* ***gie inn gae***
L. *et in quamcumque domum* ***intraueritis***
f. 162rb 3-4 (Lindis.L.Skeat1871, 9:4)
"in whatever house ye enter"

b. Li. *on sua huelcne hus* ***gie in gæeð***
L. *in quamcumque domum* ***intraueritis***
f. 165vb 14-15 (Lindis.L.Skeat1871, 10:5)
"in whatever house ye enter"

c. Li. *7 in suæ huæle ceastra* ***gie in færeð***
L. *et in quamcumque ciuitatem* ***intraueritis***
f. 166ra 5-6 (Lindis.L.Skeat1871, 10:8)
"in whatever town ye enter"

d. Li. *sua huelc iuer* ***hæbbe ł hæfeð*** *friond*
L. *quis uestrum* ***habebit*** *amicum*
f. 168ra 20-21 (Lindis.L.Skeat1871, 11:5)
"which of you shall have a friend?"

5.3.1.1 Conditional clauses

In general *gif* does not trigger the subjunctive in the gloss, hence *gif gie wunias on mec* 'If ye abide in me' f. 246ra 6 (Jn.15:7); *gif gie gelufas mec* 'If ye love me' f. 244va 15 (Jn.14:15) and *gif gie gewyrcas* 'If ye do' f. 246rb 23 (Jn.15:14). This is the case even when the Latin has a subjunctive, as in *gif gie habbas geleafo ~ si habueritis fidem* 'If ye have faith' f. 62ra 8 (Mt.17:20) or *gif gie gelufas mec ~ si diligeretis me* 'If ye loved

me' f. 245rb 22 (Jn.14:28) &c. However, occasionally reduced forms also appear in this context. This is illustrated in (35a), where both a present subjunctive and indicative form of *habban* occur as glosses. In (35b) two identical *gif*-clause contexts are glossed using both a reduced form and a fully-inflected form. The Latin verbs *scitis* and *feceritis* are indicative in both clauses, yet the glossator uses what appears to be a reduced subjunctive form *witæ* in the first clause and an indicative form *wyrcas* in the second *gif*-clause. Bearing in mind, however, that the favoured mood in *gif*-clauses is the indicative and that reduced forms do occur in indicative contexts in the glosses, it could be argued that *witæ* is not only functionally, but also morphologically, a reduced indicative form.

(35) a. Li. *gif* ***gie habbas ł hæbbe*** *leafo…*
L. *si* ***habueritis*** *fidem…*
f. 69va 3 (Lindis.Mt.Skeat1871, 21:21)
"If ye have faith..."

b. Li. *gif* ***gie*** *ðas* ***witæ*** *eadgo gie biðon gif* ***gie wyrcas*** *ða*
L. *si haec* ***scitis*** *beati eritis si* ***feceritis*** *ea*
f. 242vb 1-2 **(**Lindis.Jn.Skeat1871, 13:17)
"If ye know these things, happy are ye, if ye do them."

There are few instances of the subordinating conjunction *ðy læs* in the glosses but the variable use of the subjunctive and indicative in this context can also be discerned, as the excerpts in (36) demonstrate.

(36) a. Li. *ðy læs* ***gesellæ*** *ðec ðe wiðerbraca ł ðe fiond to dome 7 ðe doema* ***gesellæs*** *ðeh ðæm ðegne*
L. *ne forte* ***tradat*** *te aduersarius iudici et iudex* ***tradat*** *te ministro et in carcerem mittaris*
f. 35va 4-7 (Lindis.Mt.Skeat1871, 5:25)
"lest at any time the adversary deliver thee to the judge, and the judge deliver thee to the officer"

b. Li. *ðy læs egum* ***hia geseað*** *7 earum* ***herað*** *7 mið heartæ* ***hia oncnaues***
L. *ne quando oculis* ***uideant*** *et auribus* ***audiant*** *et corde* ***intellegant***

f. 52rb 14-17 (Lindis.Mt.Skeat1871, 13:15)
"lest at any time they should see with their eyes, and hear with their ears, and should understand with their heart."

Regardless of the mood of the verb in the Latin original and the difficulties of interpretation this might have posed for the scribe, the co-occurrence of reduced forms and indicative -*s*/-ð forms in the same grammatical contexts suggests both forms were acceptable in the speech of the glossator.

5.3.1.2 Purpose clauses

The glossator's use of the subjunctive in purpose clauses of the type 'that ye might / may...' which gloss the Latin conjunction *ut*, also shows variation. Generally, subjunctive forms occur, such as *þætte hia hæbbe gefea min ~ ut habeant gaudium meum* "that they might have my joy" f. 249vb 22 (Jn.17:13) and *þætte gie ongette 7 gie gelefa ~ ut cognoscatis et credatis* "that ye may know and believe" f. 236ra 2–3 (Jn.10:38), but so do indicative forms of the type *þætte ongeattað ðec ~ ut cognoscant te* "that they might know thee" f. 249rb 14 (Jn.17:3) and *þætte wutedlice wutað gie ~ ut autem sciatis* "but that ye may know" f. 98ra 17 *(*Mk.2:10). A clear example of Lindisfarne's notorious array of verbal morphology are the glosses *þætte...gie gelefes* f. 245va 6 (Jn.14:29), *þætte gie gelefað* f. 255rb 13 (Jn.19:35) and *þætte...gie gelefa* f. 236ra 2-3 (Jn.10.38), all found in John for the Latin present-subjunctive form *ut credatis*. The glossator also switches back and forth between indicative -*s*/-*ð* and vocalic subjunctive endings within the same clause, as illustrated by the examples in (37a-b), or uses both indicative and subjunctive forms as alternatives, as in (37c):

(37) a. Li. *þætte **gie eta 7 drincga**...7 **gie sittað** ofer heh sedlo*
L. *ut **edatis et bibatis**...et **sedeatis** super thronos*
f. 195ra 1-4 (Lindis.L.Skeat1871, 22:30)
*"*that ye may eat and drink … and sit on thrones."

b. Li. *Ic cuom þætte lif **hia hæbbe** 7 monig fallice ł **habbas***
L. *ego ueni ut uitam **habeant** et abundantius **habeant***
f. 69va 3 (Lindis.Jn.Skeat1871, 10:10)
*"*I have come so that they might have life and have it more abundantly."

c. Li. *þæt **heageseað** ł **gesege** iurra goda werca 7 **wuldriað** fader*
L. *ut **uideant** uestra bona opera et **glorificent** patrem*
f. 34vb 13-15 (Lindis.Mt.Skeat1871, 5:16)
*"*that they may see your good works, and glorify your Father."

5.3.1.3 Temporal clauses

The excerpts in (38) involve the temporal subordinator *wið* which generally occurs with subjunctive forms, as illustrated by (38a) and (38b). Telling, however, are two similar occurrences at Mt.16:28 and Mt.23:39 illustrated in (38c) and (38d). On both occasions the scribe initially glosses the Latin subjunctive forms *wið hia geseas* and *wið hia cuoeðas* respectively but then alters these renderings to *wið hia gesea* and *wið hia cuoeða.* This state of flux is noted on other occasions, so at (Jn.7.37) *seðe ðyrsteð cyme to me 7 dringa ~ qui sitit ueniat ad me et bibat* 'He that thirsts, let him come to me and drink', the original rendering of *bibat* as *dringað* is altered to *dringa* and yet no alteration is made to a near identical gloss in the capitula material at (Jn.*5:6) *seðe ðyrstes cyme to me 7 dringað ~ qui sitit ueniat ad me et bibat.*

(38) a. Li. *sint sume oðera of her stondendum ða ðe ne suppas hia[43] deað **wið hia gesea/s** sunu monnes cymmende in ric his*
L. *sunt quidam de hic stantibus qui non gustabunt mortem donec uideant filium hominis uenientem in regno suo*
f. 60vb 15-22 (Lindis.Mt.Skeat1871, 16:28)
"There be some standing here, which shall not taste of death, till they see the Son of man coming in his kingdom."

b. Li. *nænigumenn gie cueðe ðone gesihða **wið** sunu monnes from deadum **arise***
L. *nemini dixeritis uisionem donec filius hominis a mortuis **resurgat***
f. 61rb 21-24 (Lindis.Mt.Skeat1871, 17:9)
"Tell the vision to no man, until the Son of man be risen again from the dead."

[43] *hia* is underlined in the text

d. Li. *ne mec geseað gie nu hena wið **gie cuoeða/s** se gebledsad seðe cwom in noma drihtnes*

L. *non me uidebitis a modo donec **dicatis** benedictus qui uenit in nomine domini*

f. 75va 9-12 (Lindis.Mt.Skeat1871, 23:39)

*"*Ye shall not see me henceforth, till ye shall say, Blessed is he that cometh in the name of the Lord."

5.3.1.4 Summary

With the foregoing discussion I hope to have exemplified how the co-occurrence of indicative -s/-ð endings and reduced subjunctive endings in identical contexts must have been conducive to the encroachment of reduced plural subjunctive morphology into indicative pronominal environments, especially as a salient feature of the subjunctive in the glosses is its tendency to occur more frequently with pronominal subjects than with nominal subjects.[44] This is to be expected given that subjunctive forms generally occur in subordinate clauses where anaphoric material is common. The distributional link between reduced plural subjunctive forms and pronoun subjects could very plausibly have led to language learners reinterpreting *-e/Ø* "as a verbal ending specifically co-occurring with pronominal subjects" as de Haas & van Kemenade (2009) suggest. Crucially, the tendency for reduced present subjunctives to occur with *we*, *gie* and *hia* in post-pronominal position, i.e. subject~verb contexts, rather than in ante-pronominal position, may have influenced the incipient use of reduced forms in the same syntactic environments in present-indicative contexts.[45] The occurrence of pronoun subjects with reduced present subjunctives in post-position, especially *hia*, as in *gecerre hia* f. 52rb 18 (Mt.13:15) 'they should convert', *ne losiga hia* f. 58vb 6 (Mt.15:32) 'less they faint' and *gehere hia* f. 182ra 14 (L.16:29) 'Let them hear' might also have provided a model for the parallel use of indicative reduced forms of the type *unbinde hia* f. 117va 2 (Mk.11:4) 'they unbind it' and *ne etto hia* f. 108va10 (Mk.7:4) 'they eat not'. Additionally, the extensive use of explicitly indicative forms in traditionally subjunctive environments coupled with the use of reduced forms in

[44] De Haas & van Kemenade (2009) also observe that the subjunctive occurs significantly more often with pronominal subjects than with nominal subjects in northern and North Midland Middle English texts.

[45] De Haas (2008:123) records 148 instances of reduced present subjunctive forms in Li., 116 of which occur in SV contexts as against VS (x15) and SXV (x17).

indicative contexts would have caused speakers to reinterpret reduced forms in these contexts as functionally indicative. Reduced plural subjunctive forms spread via these mood variable environments into the indicative. Usage in *Lindisfarne* points to a system already heavily reliant on analytical devices, rather than on an inflectional subjunctive, and anticipates the loss of formal distinction between the present indicative and subjunctive found in pronominal contexts in northern Middle English, along the lines of *þay pretende* and *if þay pretende* (cf. McIntosh 1989:119). Indeed, there are already indications in *Lindisfarne* that this was the case in the preterite in late Old Northumbrian as subjunctive and indicative preterite forms in pronominal contexts are often indistinguishable, hence *ne gelefde gie ~ credidistis* 'ye believed not' (Mt.21:32) and *þaet gie gelefde ~ crederetis* 'that ye might believe' (Mt.21:32). In section 5.3.3 we will consider this phenomenon in detail.

5.3.2 Preterite-present verbal morphology

Past studies have either paid scarce attention to reduced preterite-present verbal morphology as a source for the reduced ending or dismissed its importance altogether (cf. de Haas 2008:123-4; Benskin 2011:169, fn.30). Unlike the plural present subjunctive, which shows almost categorical loss of final-*n*, the process of lenition is less advanced in preterite-present verbs and appears to be conditioned by the position of the pronoun subject. In a data set of 112 preterite-present verb tokens, taken from all four gospels, there is a strong tendency for verb-forms in ante-pronominal position to lose final-*n* (78%), thus, *magoge* f. 116va 12 (Mk. 10:38) and *ne uutogie ł necunnoge* f. 120ra 20 (Mk.12:24). The retention of -*n* is extremely high (91%) when the subject pronoun precedes the verb, as in *ue uuton* f. 215rb 5 (Jn.3:2) and *gie magon* f. 123va 1 (Mk.14:7). There is also a near-categorical tendency for full NP subjects and zero subjects to retain fully-inflected forms, as in, *ah ne magon suno* [*nubtiarum*]...*fæsta ~ num quid possunt filii nubtiarum...ieiunare* 'Can it be that the children of the bridechamber fast?' f. 98vb 3 (Mk. 2:19) and *uuton stefn his ~ sciunt uocem eius* '(they) know his voice' f. 234rb 3 (Jn. 10:4). These results are summarised in Table 40. The tokens involved in the quantitative analysis are set out in Appendix F.

Table 40. Preterite-present plural verb endings according to subject type in the *Lindisfarne* gloss.

Subject Type	-*n*	-*o*	Total *N*

SproV	48 (91%)	5 (9%)	53
VSpro	5 (12%)	31 (78%)	40
Other	18 (95%)	1 (5%)	19

Reduced forms in contexts of subject-verb inversion all occur with first- and second-person plural pronominal subjects, which indicates that preterite-present indicative verbal morphology in the Gospels conforms to the reduced inflectional pattern typical of West Saxon. There are no instances of reduced preterite-present forms occurring with the personal pronoun *hia*. It should be noted, however, that third-person plural pronominal contexts in the preterite-present indicative do not occur in John, and the one instance found in Mark, *hia magon...fuglas heofnas* at f. 102vb 12 (Mk. 4:32), has a post-pronominal verb and hence a full consonantal inflection, as expected. Not uncommonly in the gloss, it also has a second 'double' subject consisting of the full NP subject *fuglas heofnas*. In Luke, only one token occurs, but it also has a double subject consisting of both a full NP and a personal pronoun, which may explain the fully-inflected form: *snyttro ðæm ne magon hia wið stonda ~ sapientiam eui non poterint resistere* 'your adversaries shall not be able to resist' f. 192rb 15-16 (L.21:15). There are just two instances of *hia* with preterite-present verbs in Matthew: *ne magon hie* f. 46ra 23 (Mt.10.28) and *hia ne sciolon* f. 52ra 21 (Mt.13.13). As with the present subjunctive of weak/strong verbs, reduced preterite forms are attested with *hia* in the subjunctive, as in *þætte hie mago ł mæhton gehæne ł hine ~ ut possent accusare eum* 'that they might have accused him' f. 229ra 13 (Jn. 8:6). Occurrences such as *gie sciolo losiga ~ peribitis* f. 174va 11 (L.13:3) and *gie ne mago cume ~ uos non potestis uenire* f. 227vb 22 (Jn.7:34) also indicate that reduced forms were not wholly restricted to VSpro contexts.

The comparative infrequency of reduced endings among the preterite-present verbs compared with that of present subjunctives has been cited as an impediment against preterite-present verbs constituting a source for reduced endings in the NSR (de Haas 2011:183). While the loss of *-n* was evidently far more advanced in the present subjunctive, the preterite-present verbs possessed other distributional features that would in all likelihood have militated in favour of this verb class being an additional source for the spread of suffixal vocalic morphology into the present indicative in adjacent pronominal environments.

A salient trait of the preterite-presents in the North is that it is not uncommon to

find that the normal endings of the present indicative -*s*/*ð* have been extended to this verb class (Campbell 1959: §767). In *Lindisfarne* present indicative forms such as *wutas gie* and *wutað gie* frequently occur, as well as *gemynas, beðorfeð.*[46] Indeed reformation is so advanced in the case of *geman* that it "appears not to be a preterite-present in Anglian" (Campbell 1959: §767). The result is that -*s*/*ð* endings, of the type *wutas gie* and *wutað gie,* occur in free distribution in pronominal environments with reduced preterite-present forms like *wutto gie.* The best-attested example of this development in *Lindisfarne* is that of *witan* 'know'. There are 29 occurrences of *witan* in second plural VSpro contexts: 11 instances involve reduced forms of the type *wutto gie*, while 17 tokens have -*s*/*ð* endings such as *wuttas gie* / *wuttað gie* (6 of these occur with plural imperative *gie*, whereas 11 occur with present indicative *gie*)[47] Note that crucially, fully-inflected -*n* forms like *wuton gie* do not generally occur in VSpro contexts as the data in Table 40 illustrates. In view of this, reduced forms in post-posited pronominal contexts may have been reanalysed by speakers as alternatives to fully-inflected present-indicative -*s*/*ð* forms. From here, it would only remain for reduced forms to pass to SproV environments and to other weak/strong verbs. That this development was already under way in Old Northumbrian is witnessed in *gif gie ðas witæ ~ si haec scitis* (Jn. 13:17) 'If ye know these things' and the numerous examples discussed in section 5.2.

In addition to *witan* 'know', another preterite-present verb that may have facilitated the spread of reduced preterite-present morphology (and -*n*) into the present indicative is (*ge*)*cunnan,* especially given its semantic and formal similarity with the class II weak verb (*ge*)*cunnian* and the tendency for *cunnan* to occur with both strong present-indicative verbal morphology as illustrated in (39), and reduced endings (*ne cunnoge* f. 120ra 20, Mk.12:24).

(39) Li. *7 cueð to him* ***ne cunnige*** *bispell ðas 7 huu alle bispello* ***gie gecunnas*** ł *gie cunnagie magon.*

[46] Instances in the gospels of preterite-present verbs with strong/weak present-indicative verbal morphology are *wutað*/ *wutas* f. 246vb 2 (Jn. 15:18), f. 98ra 17 (Mk. 2:10), f. 122vb 6 (Mk.13:29), f. 116vb 7 (Mk. 10:42), f. 122vb 3 (Mk.13:28), f. 39rb 16 (Mt.7:11), f. 59rb 9 (Mt.16:3), f. 77rb 7 (Mt.24:32), f. 77rb 11 (Mt.24:33), f. 77vb 1 (Mt.24.43), f. 80va19 (Mt.26:2), f. 192va 11 (L.21:20), f. 166ra 23 (L.10:11), f. 168va 14 (L.11:13), f. 173rb 3 (L.12:39), f. 174ra 23 (L.12:56), f. 193ra 20 (L.21:30), f. 193ra 24 (L.21:31); *beðorfeð* f. 178vb 23 (L.15:7) and *gemynas* f. 246vb 14 (Jn.15:20), f. 248va 5 (Jn.16:21), f. 59va 13 (Mt.16:9); *cunnas* f. 101vb 5 Mk.4:13; *cunnað* f. 174rb 2 L.12:56. This tendency also extends to preterite forms, thus *mæhtes* (Mt.12:14).

[47] There is also an instance of *gemyna gie* (Jn.16:4) versus *gemynas gie* (Jn.15:20) as discussed in section 5.2.2.

L. *et ait illis* ***nescitis*** *parabolam hanc et quomodo omnes parabolas* ***cognoscetis***

f. 101vb 1-5 (Lindis.Mk.Skeat1871, 4:13)

"And he said unto them, Know ye not this parable? and how then will ye know all parables?"

A further striking characteristic of preterite present verbs, which must have compounded morphological interchange in plural pronominal environments, is their tendency to co-occur with pronominal subjects: only 19 cases of preterite-present verbs in the gloss have non-pronoun subjects, while the other 92 instances have personal pronoun subjects. In the case of *witan*, 17 out of the 18 occurrences attested in *Lindisfarne* involve a *gie* subject.

Overall, it can reasonably be argued that present-preterite verbs were instrumental in transferring reduced verbal morphology (and *-n*) into the present-indicative in ONrth. Nor should this come as a surprise bearing in the mind that the preterite-present (and subjunctive) paradigms have long been held to be the source of the characteristic present-indicative Midland ending *-n* in Middle English (Brunner 1970:§68; Mossé 1952:76). That preterite-present verbs were indeed a source for reduced forms in the present indicative also appears to be borne out by the fact that many of the reduced present-indicative verb forms discussed in section 5.2 involve *-o* endings which typically characterise reduced preterite-present and reduced preterite-indicative forms, in addition to *-e*, as opposed to the *-a*/*-e* (*-iga*/*-ige*) endings of the present subjunctive (cf. Ross 1960:39-42).

5.3.3 Preterite verbal morphology

5.3.3.1 Preterite subjunctive verbal morphology

The lack of formal distinction between the indicative and subjunctive mood in the present extends even more notably to the preterite. The preterite subjunctive and indicative are more often than not indistinguishable from each other, as the majority of instances in the preterite subjunctive show preterite-indicative *-on* endings rather than West-Saxon subjunctive *-en*. Examples include *ofer foerdon ~ transirent* (Mk.11:20) and *geðuogon ~ lauerent* (Mk.7:3), but there are also counter examples whereby indicative forms occur with subjunctive *-en* endings such as *cuoeden ~ dixerunt*

(Mk.11:6) and *cuomen ~ venerunt* (Mk.6:29), which suggests that *-on*, *-un* and *-en* had fallen together as [-ən]. The levelling of preterite-indicative and subjunctive morphology effectively neutralizes the contrast between the subjunctive and the indicative mood in the past. Consider the examples in (40) where formally preterite-indicative forms alternate with reduced subjunctives. Given these forms gloss Latin subjunctive forms and occur in a *þæt… ~ ut…* purpose clause, the scribe probably intended these forms as subjunctives. Recall, however, that explicitly indicative forms occur in *þæt…~ ut…* clauses in the present (see section 5.3.1.2), which suggests reduced preterite forms of the type exemplified in (40) may plausibly have been interpreted as indicative forms by speakers.

(40) a. Li. *7 geðæhtungæ dedon þæt* ***hia*** *ðone hælend mið inwite* ***genome ł hia gehealdon*** *7* ***ofsloge***

L. *et consilium fecerunt ut iesum dolo* ***tenerent*** *et occiderent*

f. 80vb 5-6 (Lindis.Mt.Skeat1871, 26:4)

"And consulted that they might take Jesus by subtlety, and kill him."

b. Li. *7 ondsuere onfeing in suefnum þæt* ***hia eft necerdon ł ne cerrde*** *to herode…*

L. *et responso accepto in sompnis* ***ne redirent*** *ad herodem*

ff. 30va 24 – 30vb 2 (Lindis.Mt.Skeat1871, 2:12)

"And being warned of God in a dream that they should not return to Herod…"

Reduced indicative and subjunctive endings are a frequent occurrence in the gloss resulting in a further loss of formal distinction between the preterite subjunctive and indicative in pronominal contexts where reduced verbal forms occur. Compare, for instance, the formally indistinguishable preterite subjunctive and indicative forms in (41) where *ongette* glosses the pluperfect subjunctive Latin form *cognouissetis* in (41a) and *ongete* and *ongetto* occur as glosses for the perfect indicative Latin forms *intellexistis* and *cognouistis* in (41b) and (41c). Similarly, *gelefde* glosses both the perfect active Latin form *credidistis* in (42a) and (42b) and the imperfect subjunctive Latin form *credеretis* in (42a). These developments parallel the occurrence of indicative *-s/ð* endings in subjunctive contexts in the present and further highlight the recessive nature of the subjunctive in late Old Northumbrian.

(41) a. Li. *gif* ***gie ongette*** *mec 7 fader min soðlice ł uutedlice* ***gie ongette***

L. *si* ***cognouissetis*** *me et patrem meum utique* ***cognouissetis***

f. 244ra 19-21 (Lindis.Jn.Skeat1871, 14:7)

"If ye had known me, ye should have known my Father also."

b. Li. *on cneawgie ł* ***ongetege*** *ðas alle*

L. ***intellexistis*** *haec omnia*

f. 54va 22 (Lindis.Mt.Skeat1871, 13:51)

"Have ye understood all these things?"

c. Li. *suæ longe tid ł mið iuh am ic 7* ***ne ongetto gie*** *mec la philippus*

L. *tanto tempore uobiscum sum et* ***non cognouistis*** *me philippe*

f. 244rb 3-6 (Lindis.Jn.Skeat1871, 14:9)

"I have been with you so long time, & yet ye do not known me, Philip?"

(42) a. Li. *cuom forðon toiuh inweg soðfæstnise 7* ***ne gelefdegie*** *him bærsynnig soðlice 7 portcuoeno gelefdon him gie uutedlice gesegon ne hreonise hæfdigie æfter ðon þæt* ***gie gelefde*** *him*

L. *uenit enim ad uos iohannes in uia iustitiae et* ***non credidistis*** *ei publicani autem et meretrices crediderunt ei uos autem uidentes nec paenitentiam habuistis postea ut* ***crederetis*** *ei*

f. 70rb 6-16 (Lindis.Mt.Skeat1871, 21:32)

"For John came unto you in the way of righteousness, and ye believed him not: but the publicans and the harlots believed him: and ye, when ye had seen it, repented not afterward, that ye might believe him."

b. Li. *forhuon ðonne* ***negelefdege*** *him*

L. *quare ergo* ***non credidisti*** *illi*

f. 69vb 15-16 (Lindis.Mt.Skeat1871, 21:25)

"Why did ye not then believe him?"

5.3.3.2 Preterite indicative verbal morphology

Numerous descriptive analyses have documented preterite morphology in the glosses

and drawn attention to the occurrence of reduced preterite forms in the plural in addition to fully-inflected forms in *-n* (Lea 1894; Füchsel 1901; Dutton Kellum 1906) and to their role as a source for reduced endings in the present indicative (Isaac 2003:57). An important contribution is Berndt's (1956) survey of Old Northumbrian, in which he notes that final *-n* in Old Northumbrian is not lost at an equal rate across paradigms, but exhibits notable categorial differentiation such that the following scale may be distinguished: infinitive > present subjunctive > preterite subjunctive > preterite indicative (Berndt 1956:225-303). While the infinitive shows categorical *n*-loss in the northern texts followed by the present subjunctive, endings in *-n* are still widely preserved in the preterite indicative.

No analysis exists, however, that has considered the distribution of plural preterite morphology according to subject type or examined by what mechanisms reduced preterite morphology may have been transferred into the present indicative and why its transfer would have been syntactically constrained. In order to ascertain whether a reduced versus fully-inflected pattern existed in the preterite plural that may also have served as a model for the transfer of reduced verbal morphology into pronominal contexts in the present, a quantitative study was carried out. Every instance of a preterite verb form was gathered from the four gospels (*N*=1893). These tokens are provided in Appendix G. Given the lack of consistent morphological differentiation between the preterite indicative and subjunctive in *Lindisfarne* and the impossibility of differentiating mood, the analysis included both indicative and subjunctive preterite tokens. The tokens were coded according to subject type: non-pronominal (full noun phrase, relative pronoun, zero subject, indefinite pronoun, clause subject) versus pronominal (the personal pronouns *we*, *gie* and *hia*). In the case of *we*, *gie* and *hia* these were also coded according to whether they occurred in immediate adjacency to the verb in subject~verb or verb~subject contexts, or were separated from their accompanying verb by intervening elements. The results of the analysis are set out below in Table 41.

Table 41. Indicative and subjunctive preterite endings according to subject type and word order in the *Lindisfarne* gloss (SV = subject~verb; VS = verb~subject; X = non-adjacent pronoun)

Subject	Word order	vocalic ending	*-n* ending	Total *N*
we	SV	0	46	46
	VS	6	1	7
	X	0	6	6

	Total	6 (10%)	53 (90%)	59
hia	SV	8	113	121
	VS	0	4	4
	X	4	32	36
	Total	12 (7%)	149 (93%)	161
gie	SV	15	49	64
	VS	40	10	50
	X	1	16	17
	Total	56 (43%)	75 (57%)	131
Non-pron.		2 (0.1%)	1540 (99.9%)	1542
Total		75 (4%)	1817 (96%)	1893

Table 41 shows that *-n* is the normal ending in the preterite with reduced endings comprising only 4% of the total preterite occurrences. This corroborates the categorical differentiation noticed by Berndt (1956:225-303) whereby the loss of final *-n* in the indicative and subjunctive preterite is far less advanced than in the infinitive and present subjunctive. With regards to the effect of subject type on variation between *-e* and *-n,* a negligible percentage of reduced forms occur with non-pronominal subjects.[48] There is a clear tendency on the other hand for personal pronoun subjects to favour reduced forms, *gie* in particular, but also *we* and *hia*. A chi-square pair-wise comparison of pronominal and non-pronominal subjects in Li. reveals a highly significant difference in behaviour at the p = < 0.001 level (χ^2 364.286). Non-adjacency also statistically favours *-n* compared with adjacent pronoun environments at the p = < 0.01 level. Despite the high overall incidence of *-n* endings with *we* and *hia,* 90% and 93% respectively, compared with a comparatively low 57% with *gie,* even if the statistical analysis is restricted to a comparison of *we*/*hia* against non-pronominal subject types (i.e. excluding the favouring 2pl. environment) there is still a statistically significant difference in behaviour between subject types (p = < 0.00 level, χ2 111.007*)*.

The following hierarchy appears to govern the occurrence of vocalic endings *gie* (43%) > *we* (10%) > *hia* (7%). Close analysis of the *s*/*ð* Mt./Mk./L.Jn. data (*N* = 3053) suggests the likelihood of a pronoun occurring in a verb~subject sequence also adheres to the same hierarchy, with *gie* at the forefront (*N* = 211/508: 42%) followed by

[48] These comprise *gehulpo* and *genomo*, both glosses to third-person plural imperfect subjunctive Latin forms: *þætte gecuomon 7 gehulpo hia ~ ut uenirent et adiuuarent eos* 'that they should come and help' f. 151ra 21 (L.5:7) and *þætte genomo hine ~ ut caperent eum* 'that they might have captured him' f. 190ra 18 (L.20:20).

we (*N* = 7/51: 14%) and *hia* (*N* = 8/116: 6.9%). The hierarchy is replicated in the case of pronominal preterite verb~subject contexts (*gie* N = 50/131: 38%, *we* 7/59: 11%, *hia* 4/161:2%). This may partially account for the high incidence of reduced endings with *gie* and the comparatively low figures for *hia* (and *we*), given that inversion is a favouring environment for the triggering of reduced forms. It also corroborates Berndt's (1956:52) argument that reduced verbal forms failed to occur with *hia* because the third-person pronoun rarely occurred in verb-subject contexts.

The "stand-offish" behaviour of the third person, such that the *hia* shows a notable conservativeness as against the other person categories, is discussed by Stein (1986:645-46) who cites Benveniste's (1966:225-236) observation on the exceptional behaviour of the third person in a wide range of languages. Of relevance too, is the case of Old Frisian. The retention in Old Frisian of the present-indicative suffix -*ath* before *hia* as opposed to the dropping of the suffix before *wi* and *gi* parallels OE developments (section 5.1). But according to Hoekstra (2001), cited in Benskin (2011:163, fn.15), the Low German dialects of the Netherlands commonly retain the consonantal suffix, either -*t* in the present, or -*n* in the preterite, even when the third-person plural pronoun is *zee*, which tells against the idea of phonological conditioning alone being the sole impediment to reduced forms occurring with third-person plural pronouns (Luick 1922; Benskin 2011). Such textual evidence suggests that the third-person pronoun stands apart in the West Germanic languages, but for other than purely phonetic reasons.

The results in Table 41 nevertheless indicate that while reduced forms are favoured by inversion, they are not confined to this environment, but also occur in subject~verb contexts. Illustrative examples of reduced forms in both contexts include *ne leornade gie ~ legistis* (Mk.2:25); *ne eft ðohtogie ~ nec recordamini* (Mk.8:18); (Mk.8:18); *ne ongeto gie ~ cognouistis* (Jn.8:55); *ne onfenge we ~ non accepimus* (Mt.16:7); *ne plægdege ~ non saltastis* (Mt.11:17) and *gie un worðade mec ~ uos inhonoratis me* (Jn. 8:49); *ue gesego ~ uidemus* (Jn. 9:41) and *gie leornade ~ non legistis* (Mt.21.42). The occurrence of fully-inflected forms such as *ne gebrohtongie hine ~ non adduxistis eum* (Jn.7:45) and *gesegon we ~ vidimus* (Mt.2:2) highlight the non-categorical nature of reduced forms in verb~subject pronominal contexts.

The results of the quantitative analysis show that though clearly far from categorical, variation between -*e* and -*n* in the preterite reflects the stipulations of the NSR precisely; there is a tendency for adjacent personal pronouns and non-adjacent personal pronouns to favour different morphological material. The excerpt from

Matthew in (43) aptly summarises the NSR formulation found in the preterite in Li. where there is a statistically significant tendency for reduced forms to occur in adjacent contexts involving both inversion and non-inversion (*ne gelefde gie, hæfdigie*, *gie gelefde*) but not with full NP or non-adjacent pronominal subjects (*bær-synnig ... 7 port-cuoeno gelefdon, gie uutedlice gesegon*).

(43) Li. *7* ***ne gelefdegie*** *him* ***bærsynnig*** *soðlice 7* ***portcuoeno gelefdon*** *him* ***gie*** *uutedlice* ***gesegon*** *ne hreonise* ***hæfdigie*** *æfter ðon þaet* ***gie gelefde*** *him*

L. *non credidistis ei publicani autem et meretrices crediderunt ei uos autem uidentes nec paenitentiam habuistis post-ea ut crederetis ei*
f. 70rb 9-16 (Lindis.Mt.Skeat1871, 21.32)
"And ye believed him not: but the publicans and the harlots believed him: and ye, when ye had seen it, repented not afterward, that ye might believe him."

In short, the patterning of reduced and consonantal endings in the preterite in Old Northumbrian conforms only broadly to West Saxon usage. As with the preterite-present verbs, the loss of final *-n* generally occurs in ante-pronominal position with *we* and *gie* as in West Saxon. However, as in the present-indicative and preterite-present paradigms, the use of reduced forms in the preterite differs notably from West-Saxon concord; reduced forms also occur with preceding subject pronouns, in sharp contrast to the southern concord pattern where they are restricted to verb-subject contexts. These differences can further be appreciated by comparing the Northumbrian (Li.) forms in (44a) and (44b) with their West Saxon equivalents in the *West Saxon Gospel* (Ws). The reduced form *dyde* occurs in both ante- and post-pronominal position in Northumbrian, but is restricted to ante-pronominal position in West Saxon.

(44) a. Li. *ic cuoeðo iuh ðende* ***gie dyde*** *anum of ðisum broðrum minum lytlum me* ***gie dydon***

L. *dico uobis quamdiu* ***fecistis*** *uni de his fratribus meis minimis mihi* ***fecistis***
f. 80rb 1-4 (Lindis.Mt.Skeat1871, 25:40)

Ws *ic eow secge swa lange swa* ***ge dydon*** *anum of ðysum minum læstum gebroðorum swa lange* ***ge*** *hyt* ***dydon*** *me*

"I say to you, inasmuch, ye have done it to one of the least of these my brethren, ye have done it to me."

b. Li. *ic cueðo iuh ða hwile* ***ne dydegie*** *anum oflytlum ðissum ne me* ***gie dyde***

L. *dico uobis quamdiu* ***non fecistis*** *uni de minoribus his nec mihi* ***fecistis***

f. 80va 8-11 (Lindis.Mt.Skeat1871, 25:45)

Ws *ic eow secge swa lange swa* ***ge ne dydon*** *anum of ðysum minum læstum* ***ne dyde ge*** *hyt me*

"I say unto you, Inasmuch as ye did it not to one of the least of these, ye did it not to me."

As suggested in section 5.2.3, *ne etto hia* at f. 108va 10, may also constitute an example of a preterite-indicative reduced form with a third-person pronoun subject, which in addition to the previously mentioned present-indicative and subjunctive reduced forms that occur with *hia* (*gecerre hia* f. 52rb 18 (Mt.13:15) 'they should convert'; *ne losiga hia* f. 58vb 6 (Mt.15:32) 'less they faint'; *gehere hia* f. 182ra 14 (L.16:29) 'Let them hear' and *unbinde hia hine* f. 117va 2 (Mk.11:4) 'they unbind it') further illustrate how the distribution of reduced verbal morphology in *Lindisfarne* is found to diverge strikingly from southern patterns.

There are several features of late Old Northumbrian, at least as the language is recorded in *Lindisfarne*, that may have been conducive to the encroachment of a reduced inflectional pattern from the preterite into the present. A degree of interchangeability appears to exist between present and preterite indicative usage in certain contexts. Double glosses consisting of a present and a preterite alternative frequently occur as glosses to Latin present and preterite forms in *Lindisfarne*. Instances of this phenomenon are illustrated in (45). On other occasions preterite-indicative forms gloss present-indicative Latin forms, as in (46).

(45) a. Li. 7 gehera *ðaðe* ***gie geherdon ł geherað*** *7 ne geherdon*

L. et audire *quae* ***auditis*** *et non audierunt*

f. 166va 16 (Lindis.L.Skeat1871, 10:24)

*"*And to hear those things which ye hear / have heard, and have not listened to."

b. Li. *ðas ða ðe **gie gesegon ł geseað***

L. *haec quae **uidetis***

f. 191vb 12 (Lindis.L.Skeat1871, 21:6)

"These things which ye see / have seen."

c. Li. *in ðis **ue gelefeð ł gelefdon** þætte from gode foerdes*

L. *in hoc **credimus** quia a deo existi*

f. 249ra 3 (Lindis.Jn.Skeat1871, 16.30)

"by this we believe / have believed that you came forth from God."

d. Li. ***gie negelefdon ł gie ne gelefeð***

L. *vos non creditis*

f. 235rb 18 (Lindis.Jn.Skeat1871, 10:26)

"but ye believe not / have not believed."

e. Li. *widiua uutedlice sum wæs in ceastra ðær 7 **gecymeð ł cuome** to him*

L. *uidua autem quaedam erat in ciuitate illa et **ueniebat** ad eum*

f. 184ra 24 (Lindis.L.Skeat1871, 18:3)

*"*And there was a widow in that city; and she comes / came unto him..."

f. Li. ***ne oncneawesgie** forðon alle uta **inneode ł inngaas i**n ðone monno*

L. ***non intellegitis** quia omne extrinsecus **introiens** in hominem*

f. 39vb 7 (Lindis.Mt.Skeat1871, 7:18)

"Do ye not understand /have ye not understood, that whatever enters/ has entered into the man, cannot defile him."

g. Li. *7 uðuuto of ðæm ge ofslæs 7 **gie ahengon ł ge ahoas***

L. *ex illis occidetis et **crucifigetis***

f. 75ra 21 (Lindis.Mt.Skeat1871, 23:34)

"and some of them ye shall kill and crucify / have crucified."

h. Li. *ðio wif **hæfde ł hæbbe** fif sceattas…*

L. *quae mulier **habens** dragmas…*

f. 179ra 1 (Lindis.L.Skeat1871, 15:8)

"what woman having ten pieces of silver…"

i. Li. *ðas ðaðe **gie gesegon ł geseað** cymað dagas*

L. *haec quae **uidetis** uenient dies*
f. 191vb 12 (Lindis.L.Skeat1871, 21:6)
"As for these things which you see / have seen, the days will come…"

j. Li. ***hæfeð ł hæfde** to forgeafanne him ðerh ðone symbeldoeg enne an.*
L. ***habebat** dimittere eis per dicem festum unum*
f. 198ra 17 (Lindis.L.Skeat1871, 23:17)
"he has / has had to release one unto them at the feast"

k. Li. *alle suæ oft ł **cymes ł cuomon** ðeafas sint 7 setteras*
L. *omnes quotquot **uenerunt** fures sunt et latrones*
f. 234rb 19 (Lindis.Jn.Skeat1871, 10:8)
"All that ever come / have come before me are thieves and robbers."

l. Li. *nu **hia gesohton ł soecað** ðec to gestænane iudeas*
L. *nunc **quærebant** te lapidare iudaei*
f. 236va 12 (Lindis.Jn.Skeat1871, 11:8)
"recently the Jews have sought / seek to stone thee."

(46) a. Li. ***ue gelefdon** ue seolfa forðon geherdon*
L. ***credimus** ipsi enim audiuimus*
f. 219ra 19 (Lindis.Jn.Skeat1871, 4:42)
"Now we believe / have believed, for we have heard him ourselves."

b. Li. *7 **ge ongeton** soðfæstnisse 7 soðfæstnise gefriað iuih*
L. *et **cognoscetis** ueritatem et ueritas liberabit uos*
f. 230va 3 (Lindis.Jn.Skeat1871, 8:32)
"And ye shall know / have known the truth, and the truth shall make you free."

c. Li. *seðe is from gode uorda godes gehere foreðon **gie ne geherdon** þætte from gode sint*
L. *qui est ex deo uerba dei audit propterea **uos non auditis** quia ex deo non estis*
f. 231rb 5 (Lindis.Jn.Skeat1871, 8:47)
"He that is of God hears God's words: ye therefore hear them not/have not heard them, because ye are not of God."

Given that the present generally conveys imperfective aspect, the scribe's use of a preterite variant alongside that of a present variant in the environments illustrated in (45) seems to indicate an attempt to introduce a "punctual" or perfective reading. Exceptional is (45e), which to all intents and purposes appears to be an early instance of the present tense used with past meaning as a narrative technique. Temporal reference and aspectual interpretation appear inextricably linked in these contexts. Consider too how the majority of verbs involve largely stative verbs of cognition and perception. Careful analysis of the verb types that occur in the above contexts reveal that stative verbs of mental perception (*oncnawan, witan, ongietan, leornan*); attitude (*willan*) or sensory perception (*geheran, geseon*) including *habban* and the intransitive verbs *gan* (and *cuman*) occur disproportionally. High rates of these verbs are also found to favour reduced preterite verb forms; thirty seven out of a total of fifty five reduced preterite forms with *gie* involved stative verbs and forms of *gan*.[49] The tendency for stative verbs to favour reduced preterite forms in pronominal contexts coupled with the apparent interchangeability of present and preterite forms in contexts where either a perfective or imperfective aspectual reading applies, may have facilitated the transfer of the variable processes operating in the preterite via these verb types into the present-indicative paradigm.

Certainly there is evidence in the gloss of the converse scenario, with explicitly present-indicative endings occurring on preterite stems as occasional occurrences of *mæhtes*, instead of the usual northern preterite forms *mæhte/mæhton* indicate, e.g. *huu hine mæhtes to lose gedoa ~ quomodo eum perderent* '[they discussed] how they might destroy him' (Mt.12:14) and *ne mæhtes ðu an huil gewæccæ ~ non potuisti una hora uigilare* **'**Could you not watch one hour?' (Mk.14:37). There are also instances in the gloss where the use of reduced forms makes preterite and present indicative forms occasionally indistinguishable. Take for example, the reduced forms of the verb *oncnāwan* 'understand, perceive' illustrated in (47b-d) which could be either uninflected preterite or present indicative forms. This blurring of the tenses is compounded by extreme root vowel variation: compare how the present form in (47a)

[49] Tokens comprise: *geherde ge* x4, *herde ge* x1, *eadage* x3, i*nneadege* x1, *ineodegie* x1, *leornade ge* x3, *gie leornade* x1, leornadagie x3, *gemende gie* x1, *gemænde ge* x1, *oncneaw gie* x1, gelefde ge x2, *gelefdegie* x1, *gie gelefde* x3, g*ie hæfde* x1, *næfdo gie* x1, *hæfdigie* x1, *eft ðohtogie* x1, cuðugie x1, *gie gesego* x1, *gie nalde* x1, *gie ongette* x2, *ongetto gie* x1, *ongeto gie* x1

ne oncneawesgie ~ non intellegitis and the preterite form in (47d) *oncneaw gie ~ intellexistis* have the same stem vowel.

(47) a. Li. ***ne oncneawesgie*** *forðon alle uta inneode ł inngaas* ***i****n ðone monno ne mæge hine gewidlige*

L. ***non intellegitis*** *quia omne extrinsecus introiens in hominem non potest eum communicare*

f. 39vb 7 (Lindis.Mt.Skeat1871, 7:18)

"Do ye not perceive, that whatever enters from outside into the man, it cannot defile him."

b. Li. *forhon* ***ne on cneuge*** *forðon ne of hlafe sægdig iuh*

L. *quare* ***non intellegitis*** *quia non de pane dixi uobis*

f. 59va 23 (Lindis.Mt.Skeat1871, 16:11)

"How do ye not understand that I spoke to you not of bread?"

c. Li. *from hernise* ***gie geheras*** *7* ***ne oncnæuge ł ne cuðon ge***

L. *auditu audietis et non intelligitis*

f. 52rb 5-6 (Lindis.Mt.Skeat1871, 13:14)

"By hearing, ye shall hear and not understand."

d. Li. ***on cneawgie*** *ł* ***ongetege*** *ðas alle*

L. ***intellexistis*** *haec omnia*

f. 54va 22 (Lindis.Mt.Skeat1871, 13:51)

"Have ye understood all these things?"

5.4 Summary

The preceding sections have examined instances of reduced verbal morphology in the plural present-subjunctive, preterite-present and preterite indicative and subjunctive paradigms, which may constitute the historical source for the reduced ending in the present-indicative pronominal environment. In addition to the present subjunctive, which has long been held as a source for present-indicative *-e*/Ø, I have argued that the preterite present verbs and the preterite paradigms were also crucial sources. Evidence from the historical record corroborates this hypothesis. The Old High German third-person plural *-n* ending in the preterite-indicative, preterite-present and subjunctive paradigms replaced the present-indicative plural ending *-nt* during the Middle High

German period (Ringe & Eska forthcoming, with reference to Paul & Gierach 1929:107). These changes were directly parallel to those that took place in the Midland dialects of Middle English, where the *-n* ending of the preterite indicative, present and preterite subjunctive and the preterite presents replaced present-indicative plural -ð (Brunner 1948:74-75; Mossé 1952:76). The plural endings of the different verb paradigms in Old Northumbrian, as attested in *Lindisfarne,* were roughly the following (*-e* implies *-a*/*o* etc. where relevant):

pres. indic.	pret.indic.	pret. pres.	pres. subj.	pret. sub
-s/ð/-e	*-n/-e*	*-n/-e*	*-e*	*-n/-e*

What occurred in the northern dialects may be viewed as "more of the same", simply that variation between reduced, vocalic forms and *-n* in the preterite present verbs, the preterite indicative and the subjunctive meant both *-n* and the vocalic ending were carried over into the present indicative. That the preterite present verbs and the preterite indicative were the source for *-e*/*Ø*, in addition to the present subjunctive, is borne out by the fact that instances of *-n*, which continued to compete with *-e*/*Ø* in these environments, are also found in pronominal contexts in early northern Middle English (see section 3.1.1). The present subjunctive alone, with its early categorical loss of final *-n* in the North, cannot account for this pattern. Occurrences in *Lindisfarne* of the type *nabbo ue* at f. 254ra 5 (Jn.19:15) and *nallo we* at f. 187ra 21 (L.19:14), and their corresponding forms with *-n* endings in *Rushworth*[2]*, ne habbon ue* and *nallan we,* also appear to corroborate this hypothesis. A crucial difference with the aforementioned case of levelling in Middle High German was the manner in which the spread of *-e*/*Ø*/*n* into the present indicative in early northern English dialect was restricted to adjacent pronominal environments. It remains to be determined whether this was phonologically or syntactically motivated.

5.5 Discussion

In view of the close investigation of reduced morphology in Old Northumbrian discussed in the present chapter, let us reconsider the hypothesis that consonant cluster simplification was the determining force behind the observed outcome (Luick 1922, Benskin 2011). From this perspective, while consonant cluster simplification led to the development of reduced verbal forms with following *we* and *gie*, the process was

impeded in the third-person plural pronominal environment due to the weakening of Gmc χ to [h] in Pre Old English thereby making the sequence *-e* + *hia* unsustainable as OE [h] could no longer initiate an unstressed syllable (Benskin 2011:161). Regardless of the theoretical predictability of the outcome that consonant cluster simplification takes in this account, the phonotactic considerations put forward do not explain the occurrence, if marginal, of reduced forms with following third-person plural subject pronouns in the *Lindisfarne* glosses, nor the occurrence of reduced indicative forms with preceding pronominal subjects. The data from *Lindisfarne*, discussed in this study do not corroborate the claim that occurrences such as *binde hie* did not exist in late Northumbrian (Benskin 2011:162) and they raise a serious challenge for the hypothesis that reduced verbal morphology is solely conditioned by phonological considerations rather than grammatical system. Pre-empting objections that "verb-forms ending in *-e* very commonly do precede the *h* of an unstressed third-person *singular* subject pronoun … so *hierde heo* 'did she hear?', *binde he* 'let him bind', etc." Benskin proceeds (2011:162, fn.13):

> There is a great difference, however, between the maintenance of an established usage that admits no ready-made alternative, and innovation that runs counter to current speech habits. In the third-person plural, hiatus and fusion were both avoidable merely by retaining the final consonant of the inflection, that is, by avoiding innovation; whereas in the third-person singular, there was no such inflectional consonant to be retained, and in the written language, {VERB-e *he(o)*} endured.

Such a hypothesis is simply not borne out by the Northumbrian data in *Lindisfarne* where verb-forms ending in *-e do* precede the [h] of an unstressed third-person *plural* subject pronouns in present subjunctive sequences of the type *gecerre hia* f. 52rb 18 (Mt.13:15) 'they should convert'; *ne losiga hia* f. 58vb 6 (Mt.15:32) 'less they faint'; *gehere hia* f. 182ra 14 (L.16:29) 'Let them hear', and in indicative sequences of the type *unbinde hia hine* f. 117va 2 (Mk.11:4) and 'they unbind it' *ne etto hia* f. 108va10 (Mk.7:4) 'they eat not'. Here, too hiatus and fusion could presumably have been avoided by retaining the final consonant, but this is not the outcome. Phonotactic considerations might account for the West Saxon system; the history of reduced verbal morphology need not have been the same in all dialects, but in the case of late Old Northumbrian close analysis of the available data does not substantiate the view that

phonological factors alone as opposed to grammatical system explains the distribution of reduced morphology. While parallels with the West Saxon system are to be found, the northern system of reduced verbal morphology diverges substantially from its southern counterpart in ways that are significant for the emergence of the Northern Subject Rule. Although there is no denying that instances of reduced indicative forms in the glosses constitute a mere handful of tokens, those that do occur do not do so randomly. At times they exist in contexts which parallel the West-Saxon reduced inflection pattern, but unlike the West-Saxon system, northern reduced forms do not co-occur solely with first- and second-person plural pronoun subjects in contexts of subject–verb inversion. Instead, they occur in all plural environments, either immediately following or preceding a pronominal subject; as an extremely low variant form, true, but in perfect conformity with the NSR.

The functionalist perspective, first put forward by Horn (1921,1923) and taken up a generation later by Berndt (1956:46-53), explains reduced inflection in terms of redundancy in pronominal contexts. As Benskin notes, "the verb~subject cluster is a bound unit, bound to the extent that the verbal suffix proper, *-e*, cannot be used in the plural except with the immediately-following pronoun" (2011:162). Of relevance here is Börjars and Chapman's work on adjacency effects in modern dialects. To account for the *they go* versus *they usually goes* contrast found in dialects affected by the Type-of-Subject Constraint and the Position-of-Subject Constraint, Börjars & Chapman (1998) and Chapman (1998) posit an analysis from the perspective of Lexical-Functional Grammar such that the phenomenon is viewed in terms of pronominal cliticisation in contexts of adjacency. Under this analysis, pronouns in immediate proximity to the verb, as in *they go,* are clitic-like elements that have been reanalyzed as verb inflections and function as agreement markers. In this position the pronoun belongs, as such, to the realm of morphology rather than of syntax and appears in complementary distribution with verbal-agreement (Chapman 1998:39). In contrast, 'they' in *they usually goes* functions as an argument pronoun and triggers an inflectional affix. The combination of pronoun and adjacent verb seems to have, in the words of Chapman (1998:39), "special status. It appears to form a syntactic unit which is interrupted if additional information is added in the form of a second pronoun, for example, or some sort of modifier between the pronoun and verb."

Despite a sound theoretical proposal, Börjars and Chapman's proposal is marred by their own admission by sketchy data (and it might be added by an ignorance of the

historical record), leading the scholars eventually to reject their adjacency hypothesis due to the lack of empirical data to prove the following (Börjars & Chapman 1998:86):

> If the key to the difference in behaviour of these pronouns does lie in adjacency then we would expect to get the non-inflected form of the verb as long as the pronoun is adjacent to the verb regardless of whether it precedes or follows the verb.

Data from the historical record (of which the authors appear unaware) reveal that adjacent pronouns trigger non-inflected forms of the verb regardless of whether they precede or follow the verb, hence the adjacent post-pronominal uninflected verbal forms of northern Middle English, *þey pretende þam or feyneþ* (*Rosarium Theologie* 59/20, East Midlands [McIntosh 1989:119]); *þai caste þair mantil and rennis a-mise* (*Rule St. Benedict*, 13.457-460, North [Haas & van Kemenade (2009)]). Middle English attestations of non-inflected verb-forms in both ante- and post-pronominal adjacent position support Börjars and Chapman's analysis and suggest that pronouns may have been reanalysed as inflectional material in early varieties of the language.

The clitic properties of pronouns in Old English, and the manner in which the syntactic behaviour of pronominal subjects differs from that of full noun phrase subjects in OE has been widely discussed in the literature (cf. van Kemenade 1987, Pintzuk 1991). The writing conventions of Old English also tell in this direction. As is common in Old English manuscripts the glossator of *Lindisfarne* frequently fuses pronominal subjects and adjacent verbs together as illustrated by the examples in (48). This tendency suggests these elements may function as a single integrated syntactic unit. Note that the pronouns are attached to both the right and left edge of the verb and often involve the deletion of inflectional morphology.

(48) a. wallige f. 127rb 11 (Mk.15:12)
b. nallaðgie f. 214vb 1 (Jn.2:16)
c. ðumæht f. 97rb 14 (Mk.1:40)
d. cwomeðu f. 96va 18 (Mk.1:24)
e. genaelle f. 235vb 23 (Jn.10:38)
f. *geseaðgie ł giegeseas* f. 192va 8-10 (L.21:20)
g. eadage f. 47rb 14 (Mt.11:7)

Givón's (1976) influential work on the historical development of anaphoric pronouns into agreement markers may also be relevant to Old English developments.[50] Following Givón, Börjars and Chapman (1998:72) outline the development as follows (49).

(49) a. Oscar, he is usually lazy even for a cat.
TOPIC PRO SUBJECT

b. Oscar he-is usually lazy even for a cat.
SUBJECT AGR

c. He-is usually lazy even for a cat.

In (a), Oscar is a topicalized nominal and the actual subject slot of the sentence is filled by an anaphoric pronoun *he*, which agrees with the topicalized phrase. The second stage of the development is illustrated in (b). Due to overuse of this highly marked construction in (a), *Oscar* is reanalyzed as the subject of the sentence and *he* is pushed out of the argument position and reanalyzed as a subject-agreement marker, making the combination 'he-is' a bound unit.

Constructions of the type given in (a) parallel constructions found in modern German and Norwegian: *Marit, hun kommer I morgen* 'Marit, she is coming tomorrow' and were not uncommon in Old English as the examples taken from *Lindisfarne* in (50) show.

(50) a. L. *ut faciant uobis hominess*
Li. *þæt hea gedoe iuh ða menn*
that they.NOM.PL. do to you the men.NOM.PL.
f. 39rb 23-24 (Lindis.Mt.Skeat1871, 7:12)

b. L. *catelli sub mensa commedunt*
Li. *hwoelpes under bead hia eattas*
the dogs.NOM.PL. under the table they.NOM.PL. eat
f. 109vb 67 (Lindis.Mk.Skeat1871, 7:28)

[50] The development of anaphoric pronouns into agreement markers is not unknown in the history English, so the widely-cited case of the West Saxon second-person singular suffix *-st* which is generally believed to have derived from the reanalysis of the SUFFIX + PRONOUN sequence *-s þu* (in rapid speech *-stu*) as inflectional *-st* (Campbell 1959:§731; Benskin 2011:162, fn.14).

c. L. *quare* *discipuli iohannis et pharisaeorum* *ieiunant*
Li. *forhwon* *ðegnas iohannis 7 [pharisaeorum]* *hiafæstas*
why disciples of John and of Pharisees.NOM.PL. they.NOM.PL. fast.?
f. 98va 22-24 (Lindis.Mk.Skeat1871, 2.18)

d. L. *uerba mea* *in uobis* *manserint*
Li. *worda mina* *in iuh* *hia* *gewunias*
my words.NOM.PL. in you they.NOM.PL. abide
f. 246ra 7-8 (Lindis.Jn.Skeat1871, 15:7)

e. L. *et* *uos* *testimonium* *perhibetis*
Li. *7* *gie* *cyðnise* *gie* *getrymies*
and you.NOM.PL. witness you.NOM.PL. bear
f. 247rb 10-11 (Lindis.Jn.Skeat1871, 15:27)

f. L. *uos* *non potestis* *uenire*
Li. *gie* *ne magogie* *gecuma*
you.NOM.PL. not can you.NOM.PL. come
f. 243va 8 (Lindis.Jn.Skeat1871, 13:33)

In examples (a-d) the scribes inserts a pronoun immediately next to the verb despite the occurrence of an explicit noun phrase subject in close vicinity to the verb. This suggests that the full NP is analysed as the subject of the sentence while the pronoun takes on the role of a subject-agreement marker (stage 2 of Gívon's analysis). Examples (e) and (f) involve the second person plural pronoun *gie*. Here, it may plausibly be suggested that non-adjacent *gie* is an argument pronoun, which retains its anaphoric properties, while *gie* in immediate adjacency to the verb acts as a bound agreement marker. Bear in mind that although the verb is inflected, the impoverished morphology of late Old Northumbrian means the pronoun is the only identifier of person and number. Note how pronouns are frequently attached to the verb when they function as agreement markers.

Consider too the excerpts in (51). The scribe's rendering of the Latin future indicative form *uiuet* in (51a) involves two alternative forms, the present-indicative form *lifeð* and the subjunctive construction *þæt hiu lifige*. Note how the glossator inserts a pronoun with the uninflected subjunctive form *lifige*, but not with the

indicative verbal form *lifeð.* Similarly, in (51b), the pronoun *hea* is inserted next to the pronoun despite the use of an explicit NP subject *ða menn***.**

(51) a. L. *inpone manum super eam et uiuet*
Li. *on sett hond ofer hia 7 lifeð vel þæt hiu lifige*
lay hand upon her & lives.SG.SUBJ. or that she.NOM.SG. live.SG.SUBJ.
f. 43va 8-9 (Lindis.Mt.Skeat1871, 9:18)

b. L. *ut faciant uobis hominess*
Li. *þæt hea gedoe iuh ða menn*
that they.NOM.Pl. do.PL.SUBJ. to you the men.NOM.Pl.
f. 39rb 23-24 (Lindis.Mt.Skeat1871, 7:12)

A recent morphosyntactic analysis of the NSR is that of de Haas & van Kemenade (2009) and de Haas (2011). Central to de Haas's analysis of the NSR is the role of differential subject positions in eME in licensing agreement. Building on Henry (1995) and her discussion of verbal-*s* in the syntax of contemporary Belfast English within a late principles-and-parameters version of generative grammar, de Haas (2011) provides an analysis for the emergence of the NSR, which posits that differentiated subject positions underlie the syntax of the NSR. The crux of the theoretical argument is the following.

In the transition to Middle English the highest inflectional position in the clausal configuration became exclusively reserved for nominative personal pronouns (van Kemenade & Los 2006; van Kemenade 2009). This signalled a syntactic innovation with regards to Old English. In Old English, as is well know, this position typically hosted nominative personal pronouns, whereas nominal subjects occurred in a lower subject position (Kemenade 1987; Pintzuk 1991; Haeberli 2000). Some examples illustrating this phenomenon, taken from Pintzuk (1991), and cited in Kroch et al. (2000), are given below in (52):

(52) a. 7 *of heom twam is eall manncynn cumen* (Whom 6.52)
"and of them two is all mankind come"

b. *ælc yfel he mæg don* (Whom, 4.62)

"each evil he can do"

Under more recent analyses (van Kemenade & Los 2006; van Kemenade, Milicev & Baayen 2008; van Kemenade 2009), any element that carried specific reference to an antecedent in the discourse ("discourse-given" elements in the terminology of the analysis' advocators) could in fact occur in the higher position, including independently-used demonstrative pronoun subjects and objects and personal pronoun objects, in addition to nominative personal pronouns. The restriction of nominative pronouns to the fixed higher syntactic position during the transition to Middle English, coupled with a rapid rise in V-to-T movement (evident in the marked rise of SUBJECT ~ FINITE VERB ~ *not* word order) resulted in the linear adjacency of subject + finite verb. The resulting clausal configuration involved multiple subject positions, which determined the availability of agreement, or its absence, and was "characterised by emerging adjacency conditions on syntactic relations such as agreement."

Following Henry (1995), de Haas postulates an analysis in which subject pronouns are in Spec, AgrSP, i.e. the higher syntactic position, and require agreement, as long as the subject is adjacent to the finite verb. Nominal subjects are in Spec,TP (the lower subject position) and do not induce agreement. From this perspective *-Ø* is analysed as agreement with Spro in AgrSP and *-s* as default agreement, occurring with full NP subjects in the lower syntactic position Spec,TP (cf. Henry 1995). The linear adjacency brought about by the marked rise in SUBJECT ~ FINITE VERB ~ *not* word order, however, affects both pronominal and nominal subjects, and begs the question of why adjacency effects operated only on pronoun subjects. The authors are not unaware of this weakness in their analysis, although they fail to provide a satisfactory answer.

> We hypothesise that the adjacency effect in the core NSR structure reflects one possible parametric choice on the part of a language learner trying to construct a grammar on the basis of a language environment undergoing massive change. This in turn raises the question why this choice was made for pronominal and not for nominal subjects. The answer to this question must be that the position of pronominal subjects was generally far more fixed as a higher position than that of nominal subjects.

An inherent problem of the account posited by de Haas & van Kemenade is that under such an analysis the emergence of the NSR hinges on syntactic innovations that characterise the development of Middle English. From this perspective the subject and

adjacency effects at the heart of NSR are assumed to have developed in the transition from Old English to Middle English and are not to be found in Old Northumbrian, as the authors explicitly state, "in the 10th century texts from the Northern dialects, there is no evidence for syntactically keyed agreement differentiation of the kind witnessed by the NSR". The results of the present study show that subject and adjacency effects *do* condition variation in late Old Northumbrian, independently of the syntactic innovations of Middle English.

A recurrent problem for formal proposals of the type outlined by de Haas & van Kemenade (2009) is what Pietsch (2005) refers to as the "markedness paradox". With reference to the theoretical accounts proposed by Henry (1995) and Börjars & Chapman (1998), he observes the following:

> all the existing formal analyses implicitly operate with the concept of marked and unmarked forms (even when they do not explicitly use that term). However, which of the two forms involved in the dialect concord system (-*s* or -*Ø*) is the marked member of the paradigm and which is the unmarked one?

Pietsch goes on to discuss the concept of 'markedness' in northern dialect (2005:180). Standard English -*s* is generally considered the marked form of the present-indicative paradigm in so far as it carries person and number information (third singular), in contrast with the featureless default marker -*Ø*. The -*s* form in the northern system, on the other hand, is not an agreement morpheme in the normal sense; formally it carries the overt agreement morpheme, but it is functionally featureless. Its generalisation throughout the present-indicative paradigm neutralises all person-number agreement contrasts. In contrast, the formally unmarked -*Ø* form, as Pietsch explains "has the effect of upholding agreement oppositions, particularly that between singular and plural in the third person. It is therefore usually regarded as the one that functionally does carry genuine person-number agreement features." This is the analysis adopted by Henry (1995) and de Haas & van Kemenade (2009) who analyse -*Ø* as agreement and -*s* as default agreement. Yet this is only one possible interpretation. Quite the opposite analysis is adopted by Börjars & Chapman (1998), who view -*Ø* as default agreement devoid of person-number features and -*s* as an agreement marker. Pietsch considers this "a plausible synchronic analysis for the modern system" but suggests that diachronically the system must have been just the reverse when the zero forms first

emerged (Pietsch 2005:180-81):

> […] the zero forms were originally a product of erosion of agreement morphology. They were reanalysed as genuine plural agreement forms, taking on a new functional load as carriers of agreement information, only after the two formerly distinct endings *-eð/-es* and *-að/-as* happened to fall together and were re-analysed as default singular forms.

So too, de Haas & van Kemenade (2009) ask:

> A remaining question is how 'real' agreement became associated with the zero ending. The answer here must remain speculative: one fact that may be relevant here is that the zero ending derives historically from the older subjunctive plural ending *en* by loss of final *n* and further reduction of unstressed syllables […]

Isaac (2003) also accounts for the NSR in terms of a disambiguation strategy that had the effect of reintroducing a plural-singular contrast into the present indicative. He suggests that various developments during the transition to Middle English would have triggered such a development including the merger of the inflectional vowel in *-es* and *-as* in schwa and the falling together of unstressed third singular and plural *h*-pronouns in *ha* (Isaac 2003:56-57). Note, however, that the *-Ø* versus *-s* contrast posited to uphold singular/plural distinction only has effect in the adjacent pronominal environment. In no other context is the *-Ø* suffix utilised by the speaker as a means of number disambiguation, e.g. *the men/the man who works*; *he/they usually works*; *the men/the man works* vs. *he works, they work*. Neither author offers any indication as to why this number disambiguation would only be necessary in adjacent pronominal environments. This shortcoming of Isaac's account if pointed out by Benskin (2011:180) as are other incongruences. For instance, it remains unclear why the adoption of *-Ø* as a disambiguation mechanism would have been necessary at such a late, i.e. Middle English, stage given that the inflectional distinction between singular and plural had already been lost by late Northumbrian times with *-as*, *-es*, *-að* and *-eð* occurring in plural and third singular environment alike. Moreover, the replacement of the inherited *h*-pronouns *hi(o)* and *hia* by *scho* and *þai,* complete by early Middle English times, meant that a singular-plural disambiguation strategy based on

inflectional morphology was rendered redundant (Benskin 2011:180).

Verbal morphology in a NSR agreement system is not used to convey person-number features. In an 'idealised' categorical system based on subject category, there is no attempt to uphold number distinctions. The distribution of verbal morphology in such a system reflects a system based on a pronominal~nonpronominal distinction. Indeed, following Pietsch (2003, 2005), a basic premise of the present study is that it is the very erosion of the inherited agreement system based on a person-number contrast that leads to the restructuring of the agreement system upon a pronominal versus non-pronominal distinction. Naturally, this raises the question of why the rule is not operative in the third-person singular if the agreement system is based on a pronominal-nominal distinction rather than a person-number distinction. That this appears to be the outcome of the constraint in northern Middle English and in the peripheral Midland dialects in which the rule operated is undoubtedly true. But the effects of the constraint need not have been the same in all dialects, and indeed they were not. Diachronically the effect and categoricalness of the constraint may also have varied in the same dialect at different times according to the changing sociolinguistic scenario and the effects of standardisation and dialect mixture. The results of the present study into variation between *-s* and *-ð* in Old Northumbrian show that subject effects were not restricted to the plural environment, but also conditioned the selection of verbal morphology in the third-person singular. The emerging EModE standard of the fifteenth and sixteenth centuries witnessed extensive morphological variation in the present-indicative between competing *-s*, *-th* and zero forms. In this scenario of intense morphological variation, competing variants were also governed by subject type and adjacency constraints whose effects were felt in both the third-person singular and plural (see section 3.2.1).

The innovative agreement system based on category subject marking was not to gain acceptance in the emerging EModE standard, and manifested itself variably and in competition with the standard agreement system based on person and number features, as Bailey et al. (1989:291-292) note:

> In some varieties of EModE the grammatical category of the subject was an important constraint on the occurrence of verbal *-s* and *-th*. In fact, this constraint competed strongly with person/number agreement for the function of *-s*. In other words, the situation was one of two functions (person/number marking and category marking) competing for the same form.

The argumentation that person/number agreement did not underlie the northern system is also corroborated by quantitative evidence from early Middle English and from fifteenth- and sixteenth-century northern legal texts (Fernandez Cuesta, in press). The levelling of *-s* into the first-person singular further eroded the inherited system by eliminating the last remaining distinctive inflectional ending and its variable presence is found to be conditioned by adjacency; first-person singular forms inflected in *-s* (or *-th*) are only found in non-adjacent position (cf. fn.7 and fn.10).

In contrast with the aforementioned internally-motivated accounts, a growing number of studies into Brittonic influence on English have posited significant contact-induced influence, especially in the domain of grammatical structure and more recently phonological interference (Laker 2010). The Northern Subject Rule, is one such feature that is argued to be a substratum feature carried over into English during a sustained period of Brittonic/Anglo-Saxon contact in the North of England between the mid-seventh and late-eighth centuries (Hamp 1975-76; Klemola 2000; Vennemann 2001; de Haas 2008; Filppula et al. 2008; Benskin 2011).

Close typological similarities between the Modern Welsh verb-agreement system and the northern pattern have led a number of scholars to posit a language-contact-induced motivation for the development of the Northern Subject Rule. The Welsh agreement system is also determined by a pronominal vs. nominal subject constraint, reminiscent of the northern system. In his grammar of Modern Welsh, King (1993:137) outlines the following agreement system, "3rd pers. pl. forms are only used when the corresponding pronoun nhw *they* is explicitly stated. In all other cases, where the subject is 3rd person. pl., the 3rd pers. sing. form must be used." Relative clauses with plural relative pronoun subjects also pattern like full NPs and trigger third-person singular verb forms. In contrast to the NSR paradigm, however, zero subjects with no overt subject pattern like adjacent pronoun subjects.

Pietsch (2005:173) dismisses a Brittonic derivation on the following grounds. Firstly, he argues that the timeframes between the conjectured period of contact and the development of the Northern Subject Rule simply do not match up. He also considers the generalisation of *-s*, and the emergence of reduced/zero forms, processes which are "not complete until the Middle English period", prerequisite developments for the emergence of the constraint. The objections raised by Pietsch, however, are based firstly on the premise that reduced endings were entirely lacking in Old Northumbrian,

and secondly, that the NSR necessarily describes alternation between -*s* and a reduced suffix. While the present study shares common ground with the language internal motivation posited by Pietsch, it demonstrates that the aforementioned suppositions upon which the scholar dismisses a Brittonic derivation are erroneous. In fact, the late Old Northumbrian dating of the NSR posited by the present study may ultimately eliminate an impediment for the cogency of the 'Celtic hypothesis'.

A further objection to the tenability of a Celtic language-induced motivation is that the antiquity of this agreement pattern in written Welsh cannot be pinpointed with any certainty. The earliest attestations of the pattern come from Middle Welsh (Lewis & Pendersen 1961:§433, §345). Evans argues that "lack of concord was the normal practice in spoken Welsh from the very beginning" (Evans 1971:50), although there is no attested evidence for such a conviction. The absence of the NSR in early Old Northumbrian might act as a caveat against assuming that phenomena found in northern ME necessarily characterised earlier stages of the language.

In a forceful critique of the defective arguments that have so far been put forward by Celticists in defence of a Brittonic derivation, Benskin (2011) reconsiders the 'Celtic hypothesis' in detail. His advocacy of a Brittonic derivation for the Northern Subject Rule is the first to go beyond merely highlighting the surface similarity of the Brittonic and northern Middle English systems and attempts to demonstrate the mechanics of the substratum syntax transfer using the earliest attested evidence available, that of Middle Welsh. He addresses an issue that has plagued the credibility of a Brittonic transfer hypothesis and remained unanswered in previous accounts: why is the morphological patterning of Brittonic effectively reversed in the northern English rule? Why if adjacent personal pronouns trigger full suffixes and noun phrases zero suffixes in Brittonic does *we syng(e)* and *foghels synges* occur in the northern Middle English as opposed to ***we synges* and ***foghels syng(e)* (examples taken from Benskin 2011:167). Through systemic correlations of the verbal systems of early Northumbrian and Brittonic, Benskin proposes a scenario in which a Brittonic explanation for the emergence of the NSR can only be sustained precisely *if* such a reversal took place, "If the Brittonic system does indeed underlie the northern English rule, the morphological alignments not merely could be reversed, but would have to be so" (2011:167).

Benskin's proposal is built on the premise that the emergence of the suffix in -*s* is not a pre-condition for the system involved in the rule and that the rule describes

alternation between two plural suffixes; a consonantal suffix and a reduced suffix in -*e*. The outline of Brittonic present-indicative morphology in Table (42) is based on Benskin (2011:172). Note that verb-subject is the 'unmarked' declarative order in Brittonic, whereas subject-verb word order is 'marked'.

Table 42. Present-indicative verbal morphology in verb~subject word order in early Brittonic. (*Source*: based on Benskin 2011:172)

VERB $_{\text{zero suffix}}$	+	NP_{pl} subject
VERB $_{\text{zero suffix}}$	+	NP_{sg} / PRO_{sg} subject
VERB $_{\text{consonantal suffix}}$	+	PRN_{pl} subject

The essential observation made by Benskin is that third-person singular and plural environments share the same suffix in Brittonic except when verbal forms co-occur with adjacent plural personal pronouns. In other words, the suffix shared by the third-person singular and plural environments is blocked when the subject is a plural personal pronoun. As plural and third person singular environments in Northumbrian shared a suffix in -*ð*, it follows that the suffixal alternation of Brittonic would be reinterpreted using Northumbrian morphology in the following way: third-person singular -*ð* would be aligned with -*ð* in the plural except with plural personal pronoun subjects. In plural environments -*ð* would be barred because this environment excludes the suffix shared by plural and third-person singular environments. The co-variant reduced Northumbrian plural suffix in -*e* would therefore occur in plural pronominal contexts by default. So, Benskin (2011:172-3):

> The essence of the rule is that when the subject is a personal pronoun immediately next after the verb the suffix is *not* the same as that for the third-person singular. This negative formulation is crucial: at issue is the *de*selection of the ending that is like that of the third-person singular, when the subject is an immediately following personal pronoun.

The realignment of Northumbrian present-indicative verbal morphology in accordance with the Brittonic system in verb~subject word order would thus produce the following NSR outcome outlined in Table 43.

Table 43. Realignment of Northumbrian present-indicative verbal morphology in accordance with the Brittonic system in verb~subject word order. (*Source*: based on Benskin 2011:172).

VERB -*ð* $_{\text{suffix}}$	+	NP_{pl} subject
VERB -*ð* $_{\text{suffix}}$	+	NP_{sg} / PRO_{sg} subject
VERB -*e* $_{\text{suffix}}$	+	PRN_{pl} subject

Under Benskin's analysis of consonant cluster simplification at syllable boundaries, it is to be supposed that -*e* would initially have been restricted to VERB + *we*/*gie* sequences and would not have extended to the third-person plural pronoun until *hia* had been replaced by *þai* (see above). Theoretically, it would make no difference whether the consonantal suffix at the time of the transfer was inherited -*ð* or the innovative -*s* (Benskin 2011:171). Had the transfer occurred early when the full consonantal suffix was -*ð,* as in Benskin's account, then as -*s* spread through the present-indicative paradigm "it would there inherit the grammatical constraints to which the older inflection was already subject" (2011:171).

The scholar also addresses an issue hitherto unexplored in previous accounts, which is that the Brittonic rule applies, not just to the present indicative, but also to the present and preterite subjunctive and the preterite indicative. If Brittonic influence underlies the NSR, its influence would be expected to extend past the present indicative. According to Benskin, the realignment of Northumbrian morphology in conformity with the Brittonic inflectional system in the subjunctive and preterite paradigms would theoretically follow the same principles of selection as in the present indicative. Crucially, when the sequence was VERB + PRN_{pl} the Brittonic rule selected the non-third-person singular suffix. The realignment of the distribution of Northumbrian verbal morphology in accordance with the Brittonic rule would thus be as follows: in the case of the preterite indicative, adjacent plural pronoun subjects would occur with suffixes in -*dun* (later -*don*) in the case of the weak preterites, or -*un* (later -*on*) in the case of strong preterites. In the subjunctive, adjacent plural pronoun subjects would select -*æn or -en*. Reduced plural preterite and subjunctive suffixes would be barred from this environment due to their structural similarity with third-person singular forms. Attested evidence for such a claim is scarce. Subjunctive plurals are not attested in early Northumbrian. For the preterite indicative the evidence is, by Benskin's own admission, "uncertain" and amounts to little more than expected Old English agreement (2011:175).

The early Northumbrian attestations Benskin cites as corroborating evidence for the Brittonic rule are, both his own admission, uncertain.[51] The non-third-person singular ending, i.e. *-un*, occurs in subject-verb order and with plural pronoun subjects in verb-subject order, otherwise the suffix is *-u*, conforming in effect to the Brittonic system. Nonetheless, most of the attested examples are drawn from badly damaged inscriptions whose reconstructed readings are contested, e.g., the final *-n* of *bihealdun in bihealdun hiæ* 'they beheld', is an inferred reading (Dickens & Ross 1954: 29, cited by Benskin 2011: 175, fn.45) and is contested by Okasha (1971:112, cited by Benskin 2011:175, fn.45) who reads it as [BIH]EA[LD]U [H]IÆ. Thus, the instance could just as eagerly be cited as early evidence of reduced forms occurring with adjacent third-person plural pronouns.

Benskin also discusses the infrequently used subject~verb word-order pattern of Brittonic, whose history is uncertain, but is believed to have formed part of the Brittonic system at the time of contact (Lewis & Pedersen 1961: §433,§435, cited in Benskin 2011: fn.39). Essentially there is a word-order constraint in the NP_{pl} domain in Brittonic whereby NP_{pl} in verb-subject sequences triggers a zero ending, while NP_{pl} in subject-verb sequences triggers a consonantal suffix.[52] In the subject-verb context the remodelled Northumbrian system would look something like the following:

Table 44. Realignment of Northumbrian present-indicative verbal morphology in accordance with the Brittonic system in subject~verb word order . (*Source*: based on Benskin 2011:183)

NP_{sg} / PRN_{sg} subject	+	VERB *-ð* $_{suffix}$
PRN_{pl} subject	+	VERB *-e* $_{suffix}$
Np_{pl} subject	+	VERB *-e* $_{suffix}$

The remodelling of the Northumbrian system along these dimensions would have led to plural nominal subjects and non-adjacent pronoun subjects in subject-verb order triggering *-e* rather than *-s/-ð* suffix (Benskin 2011:182-83), i.e. the subject~verb word

[51] Instances cited by Benskin (2011:175) include the following taken from the Ruthwell Cross: *bismæradu uŋket men* 'they reviled us' (a separated impersonal pron subject *men)*; *alegdun hiæ* 'they laid down'; *bihealdun hiæ* 'they beheld'; *hiæ ... gistoddun* 'they stood'; *fusæ ... fearran kwomu æþþilæ* 'eager noble men came from afar'.

[52] As mentioned in section 4.2.5, a similar phenomenon is found in Semitic languages. In Modern Standard Arabic the verb is marked in the singular in verb-subject order, whether the noun subject is singular of plural. In subject-verb order, if the noun subject is singular the verb is marked in the singular (as in verb-subject order), but if the noun subject is plural it is marked in the plural (Vennemann 2001:357-58; Klemola 2000:337).

order pattern of Brittonic militates against the occurrence of fully-inflected forms with full NP subjects, leading Benskin to conclude that "There are hence grounds for thinking that a transfer of the Brittonic system to Old English would be partial at most, and partial congruence is what appears in the northern subject rule" (2011:182)

The transfer of the Brittonic rule as described by Benskin hinges on the availability of reduced morphology, of a co-variant vocalic plural form, which it might be argued is not persuasively demonstrable in Old Northumbrian (as the scholar is aware). There is no attested evidence that reduced forms were as prevalent as the transfer mechanics of Benskin's analysis require; the late Northumbrian text under scrutiny in the present investigation would suggest that reduced verbal morphology was at an incipient stage of development. Even if we assume that reduced inflection was more widespread than extant Northumbrian material would lead us to believe, which is not in itself impossible (cf. chapter 5), there are other incongruencies in the contact-induced account proposed by Benskin that cannot be glossed over. Benskin's assertion that *-s* would inherit the grammatical constraints to which the older suffix was already subject is not borne out by the distribution of *-s* in *Lindisfarne* (see section 4.2). According to such an analysis, the shared innovative third-person singular and plural suffix *-s* would be expected to show more immediate signs of inheriting the syntactic constraints that applied to *-ð*. However, rather than favouring third-person singular environments and non-pronominal plural environments as we might expect under Benskin's analysis, these are precisely the contexts where fewer occurrences of *-s* are registered; *-s* forms are significantly more common in adjacent pronominal plural environments, precisely the environment that bars the shared third-person singular and plural suffix in Brittonic. The distributional system, as recorded by the gloss, is the diametric opposite and this applies not just to the present indicative, but also to the preterite where the structurally identical third-person singular and reduced plural ending *-de*, *-e is* favoured rather than barred from plural pronominal contexts. The Brittonic rule, as Benskin acknowledges, effectively works against the occurrence of reduced verbal morphology in plural pronominal environments in the subjunctive and preterite paradigms (Benskin 2011:173).

It is undoubtedly true that *-s* eventually went to completion in the north in all third-person singular environments regardless of subject type and in all non-pronominal plural environments, i.e. it eventually realigned itself (as it happens) in accordance with the Brittonic system. But the story told by the gloss would necessarily force the rather

unlikely conclusion that there was an interim period in which the distribution of present-indicative verbal morphology bore scarce resemblance to the Brittonic system, before it once again emerged in accordance with the Brittonic system some three or four hundred years after the supposed contact period. This suggests that the surface similarity between the two systems is not related and developed independently. In the case of English (and it would appear some other Germanic languages such as Swedish) evidence from both the historical record and from studies on variation in present-day varieties suggest there is an inherent tendency for processes of regularisation and variation to be conditioned by subject type and adjacency.

Pietsch's (2005) account of the NSR discusses the northern concord system from the perspective of usage-based theory (Kemmer & Israel 1994) in which high discourse frequency plays a crucial role in entrenching representations of particular morphosyntactic (or phonological) schema in the mind. He identifies the need for a description of the NSR that integrates the workings of the subject and adjacency constraints in the categorical system of northern Middle English, as well as the highly variable nature of the constraints in present-day varieties, and account for the NSR-like patterns reported in a wide range of overseas and non-northern varieties of English, as well as related patterns of concord variation, such as *was*/*were* levelling.

His account shares common ground with theories of competing multiple grammars (Kroch 1989) or the traditional variable rules model of variationist studies (Labov 1972, Cedergren & Sankoff 1974), but introduces the effect of frequency on determining production. A strength of Pietsch's account is that it explains both the Type-of-Subject and the Position-of-Subject constraints at the heart of the NSR in a unified account, a feat unachieved by previous accounts that have tended to concentrate on one constraint at the expense of the other (Pietsch 2005:190). Pietsch hypothesizes that subject effects in language develop when specific morphosyntactic schema and more general morphosyntactic schema exist in memory. Combinations of verbs and personal pronouns are entrenched separately due to their high discourse frequency, and thus attain unit status. An adjacency constraint results from specific and more general schema competing in the production of an utterance. As Pietsch puts it:

> …the more specific schema in memory – a *gestalt* consisting of a particular pronoun and a verb – will be more salient, and hence more likely to be activated as the relevant categorizing unit, if the utterance that is being formed involves a direct collocation of

> the pronoun and the verb. If both items are not adjacent, the construction less closely matches the *gestalt* prototype of the stored schema. It will than be less likely to be categorized as an instance of that particular schema, and by default the more abstract schema will be more likely to win out as the relevant categorizing unit.

Under the effects of standardization and dialect levelling, construction schemata involving standard subject-verb concord and northern-type agreement may be available to the speaker. The variation between standard and northern-type agreement prevalent in some varieties is analysed as competition between construction schemata in the production of an utterance with frequency-conditioned entrenchment playing a crucial role in determining which construction schemata wins out (Piestch 2005:194).

> […] different construction schemata can compete with each other during production of an utterance, and that variability in a speaker's production can be explained by this competition […] The more heavily entrenched a constructional schemata is in memory, the higher its probability of being selected as the relevant categorization unit for the production of a specific usage event.

The most crucial observation made by Pietsch and corroborated by the findings of the present study is that the emergence of subject effects are likely in a situation where levelling and erosion has led to a break down of the inherited system based on person and number. In situations of extreme person-number neutralisation, a system based on a distinction between pronominal and non-pronominal subjects may, in the words of Pietsch (2005:198) "become cognitively more salient in processing that the person-number distinction".

It is my contention that the categorical manifestation of the effects of subject type, typical of northern Middle English and Middle Scots, and the variable effects reported in late Old Northumbrian by the findings of the present study, in addition to similar effects in EModE and in a wide range of non-northern and overseas varieties of PdE should be viewed as manifestations of the same agreement phenomenon. Namely, subject effects based on a pronominal versus non-pronominal distinction compete with person and number for the function of morphological material in linguistic scenarios involving variation.

The processes of levelling that affected late Old Northumbrian and the details of variation that accompanied these changes exhibit the same direction of effect. There is

evidence of three parallel processes of levelling in the gloss: firstly, the spread of the present-tense marker -*s* throughout the present-indicative (and imperative) paradigms, secondly, the generalisation of the vocalic marker (and to an extent -*n*) from the plural present-subjunctive, preterite-indicative and preterite-present environments into the present-indicative plural environment, and, finally, the levelling of reduced endings throughout the plural preterite. These morphological processes cannot be understood in isolation from each other, but should be viewed as manifestations of an inherent drive towards morphological simplification that is governed by the same syntactic constraints and continues to be played out in non-standard varieties of present-day English (see section 3.5.1).

All three processes are variably governed by a NP/PRO constraint whereby the levelled form (-*e*/*n*/*s*) is consistently favoured by pronoun subjects. A constraint hierarchy also operates across the different person categories such that the third plural tends to emerge as the most conservative category. The variability of -*e* across *we*, *gie* and *hia* in the preterite plural and present indicative in ONrth exhibits a pronominal constraint hierarchy. A 2pl > 1pl > 3pl hierarchy can be discerned whereby the 2pl environment stands out as the most progressive environment followed by the first plural and a notably more conservative 3pl. In the case of the generalisation of the -*s* marker, the proliferation of -*s* is equally favoured by pronoun subjects across all person categories, but when person is considered in isolation a definite second > first > third person hierarchy emerges (see section 4.2.3.1). recall that the very same person constraint is reported to characterise *was*/*were* variation in PdE (see section 3.5).

Conclusions

The present dissertation has carried out a detailed quantitative and statistical appraisal of the distribution of verbal morphology in late Old Northumbrian using data from the interlinear gloss to the *Lindisfarne Gospels*. Two analyses formed the basis of this study; a multivariate statistical analysis of -*s*/-*ð* variation and a contextual and quantitative analysis of reduced verbal morphology. A particular aim of this dissertation was to investigate *Lindisfarne* for early evidence of the Northern Subject Rule. In chapter three I detailed a diachronic account of how subject and adjacency effects have characterised

morphological variation in English throughout its attested history. It was also shown that such effects are not unknown in other Germanic languages. The chapter served as a framework within which to evaluate developments in ONrth. The multifactorial exploratory approach adopted in chapter 4 for examining the replacement of the interdental fricative by the innovative alveolar suffix highlights the complexity of the replacement process. Syntactic, lexical and phonological factors combine to shape the proliferation of the innovative default marker, a result that is in line with the levelling of invariant forms in other Germanic languages such as Swedish. The proliferation of the invariant *-s* form exhibits the common manifestations of a generalisation process, namely the working of a NP/PRO constraint and a direction of effect from low to high frequency lexical items, although phonotactic considerations were also crucial in explaining its spread and origin. Of particular relevance is the finding that both subject type and adjacency exert a statistically significant influence on the occurrence of the innovative alveolar ending.The language of ONrth constitutes the first attestation of an agreement system based on subject category marking and adjacency that has characterised the language to varying degrees ever since and in all likelihood governed similar levelling processes in the prehistorical record.

The results of the data analyses on *s*/*ð* illustrate the possibility of a much earlier date for the emergence of the NSR pattern than has been assumed. In fact, the results of the present study prove a pre-conquest origin for the constraint that pushes back/antedates the origins of the NSR by at least two centuries. The results also show that the NSR constraint operates independently of its surface morphology and does not necessarily involve the alternation of an inflected form with an uninflected form as has generally been assumed (Poplack & Tagliamonte 1989; King 1997; Benskin 2011).

The results of the quantitative analysis on the distribution of reduced morphology in the gloss also indicate subject and adjacency effects were operative in the present indicative and preterite as a low frequency variant, and consequently corroborate the earlier dating proposed here for the emergence of the NSR. This is not to say that *-s* and reduced endings in the glosses pattern according to the (near) categorical manifestation of the NSR in ME, as they clearly do not; however, the results of the data analyses discussed in chapters 4 and 5 indicate that the selection of verbal morphology in the glosses is environed, among other factors, by a tendency for subject type and adjacency to condition verbal morphology and disprove the assertion that, "in the 10th century texts from the Northern dialects, there is no evidence for syntactically keyed

agreement differentiation of the kind witnessed by the NSR" (de Haas & van Kemenade 2009). Instead it is found that the syntactic configuration at the crux of the NSR was already a feature of late Old Northumbrian.

There is evidence of parallel processes of levelling occurring in the present indicative in the glosses: firstly, the spread of *-s* throughout the present-indicative paradigm, and, secondly, the generalisation of the vocalic marker from the plural present-subjunctive, preterite-present and preterite environments into the present-indicative plural environment. Both levelled forms (*-s* and *-e*) are found to favour adjacent pronominal environments. The subject constraint therefore conditioned, not just the spread of *-s* forms, but also the levelling of *-e* (and *-n*) into the plural present-indicative environment. The examination of reduced present-indicative forms carried out in the present study indicates that inflected and uninflected variants already competed in pronominal environments in ONrth. Although there is no denying that instances of reduced present-indicative forms in the glosses constitute a mere handful of tokens, those that do occur do not do so randomly. At times they exist in contexts which parallel the West-Saxon reduced inflection pattern, but unlike the West-Saxon system, northern reduced forms do not co-occur solely with first- and second-person plural pronoun subjects in contexts of subject–verb inversion. Instead, they occur in all plural environments, either immediately following or preceding a pronominal subject; as an extremely low variant form, true, but in perfect conformity with the NSR. This study also establishes a NSR system in the preterite that governed variation between the inherited plural ending in *-n* and the innovative plural ending in *-e*/*o*.

The three morphological processes that fall under scrutiny in the present study; the loss of final *-n* in the preterite and its replacement by *-e*/*Ø,* the proliferation of *-e*/*Ø* endings into adjacent pronoun environments in the present indicative and the replacement of *-ð* by *-s* are all found to be governed by the same constraints, namely subject and adjacency effects such that adjacent pronominal environments favour the levelled forms (*-e*/*n*/*s*) while non-pronominal subjects retain the inherited suffixal form for longer. These are the very same effects that are found to condition variation throughout the history of English wherever variation occurs. This is true not only of varieties where a diffusionist 'northern English' effect might be posited but also of varieties where Northern input is irrelevant. Indeed, such effects are also found to govern variation in Swedish.

Similarities between the type of subject that is favoured by default markers in the non-northern varieties scrutinised, (e.g. coordinated NPs, existential *there* and relative clauses) and in weaker manifestations of the NSR in the transitional northern/midland area and in northern varieties subject to the effects of standardisation suggest that the categorical effect of the rule in northern ME and the less robust NSR-rule patterns found in non-northern varieties are manifestations of the same rule.

Comparison with ONrth reveals that the type-of-subject constraint found to operate in cases of levelling in modern varieties holds through time as well. The broad graded pattern identified in these contemporary studies, in particular, the differential behaviour between personal pronoun as opposed to full NP subjects, is replicated in the levelling of verbal-*s* throughout the present-indicative paradigm of Old Northumbrian. In other words the internal constraints that govern processes of regularisation hold, not just cross-dialectally in modern varieties of English, and in other Germanic languages, but diachronically as well, which further corroborates the universal tendency of this subject constraint in conditioning processes of regularisation.

Should we therefore rule out the role played by contact dynamics in accounting for the rapid spread of the innovative -*s* form and the constraints that governed its proliferation? Sarah Thomason (2009:349) warns that a strict dichotomy between vernacular universals and contact-induced change is not possible because many linguistic changes involve both contact-induced change and universal tendencies of various kinds. She discusses how dialect borrowing and foreign interference (themselves inseparable in any precise way) overlap with drift as a cause of change. Drift, which refers to universal structural tendencies, especially those driven by markedness, often leads to the generalization of forms (simplification) and a loss of grammatical redundancy. The problem, as Thomason points out, is that one of the main driving forces behind internally-motivated language change, namely ease of learning, also informs most types of contact-induced change, in other words, the same principles may be at work in motivating both types of change. "It is hardly surprising" she concludes, "that the same types of change, and often the very same changes, result from drift and interference. For this reason, anyone seeking the best explanation for a given linguistic change must consider potential internal motivations and potential external motivations" (2009:349-350).

It would appear that in the reconfiguration of the northern present-indicative morphological pattern an interplay among internal developments, universals and

processes of koinëisation was at work. While it is my contention that the subject and adjacency effects that govern variation in ONrth are internally motivated and owe little to external input, the language contact situation in the North during the late OE period was no doubt conducive to the levelling of an invariant form, or would at the very least have compounded such a development.

Further lines of research: importance of older texts. Cross linguistic comparison with other Germanic languages

Appendix A

Statistical models: Matthew, Mark, Luke and John (N = 3053)

Table 1. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third-person singular environments in Matthew, Mark, Luke and John (*N* = 3053)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. *-s* suffix	1000/1503 (67%)	0.746	0.68
(p = < .001)	prec. *-ð* suffix	504/1550 (33%)	-0.746	0.32
LEXICAL ITEM	*worðian*	19/22 (86%)	2.136	0.89
(p = < .001)	*weccan*[b]	12/15 (80%)	1.516	0.82
	stondan	17/21 (81%)	1.453	0.81
	gangan	26/33 (79%)	1.313	0.79
	sendan	48/62 (77%)	1.231	0.77
	cluster7	67/85 (79%)	1.193	0.77
	sprecan	13/20 (65%)	1.155	0.76
	haldan	31/42 (74%)	1.091	0.75
	wyrcan	46/65 (71%)	0.957	0.72
	cweðan	95/129 (74%)	0.901	0.71
	(ge)biddan	27/33 (82%)	0.900	0.71
	samnian	10/14 (71%)	0.787	0.69
	giefan	9/13 (69%)	0.769	0.68
	ongietan	10/14 (71%)	0.710	0.67
	etan	14/22 (64%)	0.644	0.66
	(ge)feallan	9/15 (60%)	0.631	0.65
	sittan	9/13 (69%)	0.599	0.65
	cigan	13/24 (54%)	0.493	0.62
	cluster 1	174/99 (75%)	0.449	0.61
	gearwian	9/15 (60%)	0.395	0.60
	settan	11/23 (48%)	0.297	0.57
	cluster8	28/66 (42%)	0.234	0.56
	oncnawan	13/18 (72%)	0.224	0.56
	faran	11/22 (50%)	0.178	0.55
	lædan	14/26 (54%)	0.099	0.53
	secgan	16/35 (46%)	0.082	0.52
	cluster5	201/408 (49%)	0.011	0.50
	cluster6	7/31 (23%)	-0.060	0.49
	wunian	17/32 (53%)	-0.069	0.48
	eowan	10/19 (53%)	-0.079	0.48
	sawan	8/16 (50%)	-0.089	0.48
	fylgan	8/18 (44%)	-0.093	0.48
	gerisan[a]	4/13 (31%)	-0.094	0.48
	brengan	9/17 (53%)	-0.118	0.47
	cluster 3	8/27 (30%)	-0.158	0.46
	geheran	34/71 (48%)	-0.185	0.45
	gan	40/83 (48%)	-0.201	0.45
	secan	24/48 (50%)	-0.267	0.43

	trymman	11/25 (44%)	-0.293	0.43
	lifian	5/15 (33%)	-0.321	0.42
	gelefan	32/68 (47%)	-0.359	0.41
	habban	71/173 (41%)	-0.493	0.38
	(ge)selan	28/75 (37%)	-0.496	0.38
	lufian	12/30 (40%)	-0.501	0.38
	cuman	45/123 (37%)	-0.503	0.38
	onfon	29/67 (43%)	-0.519	0.37
	losan	10/32 (31%)	-0.525	0.37
	cluster2	17/29 (59%)	-0.551	0.37
	witan	10/18 (56%)	-0.589	0.36
	læran	8/28 (29%)	-0.620	0.35
	ofslean	8/20 (40%)	-0.627	0.35
	cluster 4	53/142 (37%)	-0.646	0.34
	drincan	6/17 (35%)	-0.694	0.33
	onginnan	8/26 (31%)	-0.717	0.33
	ahebban	6/16 (38%)	-0.721	0.33
	leoran	5/16 (31%)	-0.748	0.32
	arisan	11/38 (29%)	-1.036	0.26
	don	31/108 (29%)	-1.219	0.23
	geseon	32/114 (28%)	-1.251	0.22
	niman	7/30 (23%)	-1.325	0.21
	giwian	7/21 (33%)	-1.331	0.21
	willan	28/79 (35%)	-1.413	0.20
	gemitan	3/14 (21%)	-1.539	0.18
GRAMMATICAL PERSON (p = < .001	*gie*[b]	314/526 (60%)	0.638	0.66
	hia	73/116 (63%)	0.517	0.63
	dem.prn.	23/38 (61%)	0.409	0.60
	we	29/51 (57%)	0.337	0.58
	'zero' pl.imp.	206/357 (58%)	0.120	0.53
	relative cl.sg.	222/449 (49%)	-0.025	0.49
	relative cl.pl.	66/132 (50%)	-0.073	0.48
	he	34/67 (51%)	-0.120	0.47
	full NP pl.	96/196 (49%)	-0.148	0.46
	'zero' 3pl.	61/131 (47%)	-0.231	0.44
	indef.prn.	42/84 (50%)	-0.239	0.44
	full NP sg.	185/446 (42%)	-0.444	0.39
	'zero' 3sg.	153/460 (33%)	-0.742	0.32

N = 3053
Nagelkerke R^2 = 0.294
Deviance = 3472.216
df = 76
Cross-validation estimate of accuracy = 0.693

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[a] Includes one token of *arisan* (L.9:22).
[b] This code includes indicative *gie* tokens (*N* = 395), imperative *gie* (*N* = 113) and second person plural zero subjects (*N* = 18). During preliminary analyses, collapsing these groups turned out to be statistically justified.

Table 2. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third-person singular environments in Matthew, Mark, Luke and John (*N* = 3053)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. *-s* suffix	1000/1503 (67%)	0.728	0.67
(p = < .001)	prec. *-ð* suffix	504/1550 (33%)	-0.728	0.33
STEM ENDING	dental /d, ð/	335/450 (74%)	1.079	0.75
(p = < .001)	affricate /ʧ,ʤ/	75/106 (71%)	0.709	0.67
	consonant	768/1593 (48%)	-0.055	0.49
	sibilant /s/	45/122 (37%)	-0.485	0.38
	bilabial	125/339 (37%)	-0.557	0.36
	vowel	156/443 (35%)	-0.691	0.33
GRAMMATICAL PERSON	dem.prn.	23/38 (61%)	0.614	0.65
(p = < .001)	*hia*	73/116 (63%)	0.444	0.61
	gie[a]	314/526 (60%)	0.363	0.59
	we	29/51(57%)	0.273	0.57
	'zero' pl.imp.	206/357 (58%)	0.118	0.53
	relative cl.sg.	222/449 (49%)	-0.016	0.50
	he	34/67 (51%)	-0.024	0.49
	relative cl.pl.	66/132 (50%)	-0.076	0.48
	full NP pl.	96/196 (49%)	-0.165	0.46
	indef.prn.	42/84 (50%)	-0.174	0.46
	'zero' 3pl.	61/131 (47%)	-0.227	0.44
	full NP sg.	185/446 (42%)	-0.421	0.40
	'zero' 3sg.	153/460 (33%)	-0.711	0.33
LOG.LEXICAL FREQUENCY (p = < .05)	continuous logodds		-0.177	

N = 3053
Nagelkerke R^2 = 0.253
Deviance = 3590.598
df = 20
Cross-validation estimate of accuracy = 0.68

[a] This code includes indicative *gie* tokens (*N* = 395), imperative *gie* (*N* = 113) and second person plural zero subjects (*N* = 18). During preliminary analyses, collapsing these groups turned out to be statistically justified.

Table 3. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third person singular environments in Matthew, Mark, Luke and John (*N* = 3053)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING (p = < .001)				
LEXICAL ITEM (p = < .001)				
SUBJECT TYPE (p = < .001)	dem.prn.	23/38 (61%)	0.500	0.62
	personal prn.	438/742 (59%)	0.153	0.54
	relative clause	288/581 (50%)	0.108	0.53
	indefinite prn.	42/84 (50%)	-0.092	0.48
	noun phrase	281/642 (44%)	-0.237	0.44
	'zero' subject	432/966 (45%)	-0.433	0.39
NUMBER (p = < .01)	plural	866/1543 (56%)	0.162	0.54
	singular	638/1510 (42%)	-0.162	0.46
PERSON (p = < .05)	second	520/883 (59%)	0.253	0.56
	first	29/51 (57%)	-0.089	0.48
	third	955/2119 (45%)	-0.164	0.46

N = 3053
Nagelkerke R^2 = 0.291
Deviance = 3479.354
df = 72
Cross-validation estimate of accuracy = 0.688
Internal estimate of accuracy = 0.705

Table 4. Multivariate analysis of the contribution of factors selected as significant to the

probability of *-s* (as opposed to *-ð*) in plural pronominal environments in Matthew, Mark, Luke and John (*N* = 694)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
PRIMING	prec. *-s* suffix	262/365 (72%)	0.568	0.64
(p = < .001)	prec. *-ð* suffix	152/329 (46%)	-0.568	0.36
STEM	dental /d, ð/	97/112 (87%)	1.461	0.81
ENDING	affricate/ʧ,ʤ/	29/39 (74%)	0.744	0.68
(p = < .001)	consonant	196/334 (59%)	0.050	0.51
	bilabial	36/74 (49%)	-0.493	0.38
	vowel	50/118 (42%)	-0.658	0.34
	sibilant /s/	6/17 (35%)	-1.105	0.25
ADJACENCY/	adj prn. S~V	253/396 (64%)	0.376	0.59
INVERSION	adj prn. V~S	127/224 (57%)	0.055	0.51
(p = < .01)	non-adj prn.	34/74 (46%)	-0. 431	0.39

N = 694
Nagelkerke R^2 = 0.213
Deviance = 816.663
df = 9
Cross-validation estimate of accuracy = 0.681
Internal estimate of accuracy = 0.702

Statistical models: Mark, Luke and John (*N* = 2016)

Table 5. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third person singular environments in Mark, Luke and John (*N* = 2016)

Factor Group (significance)	*Factors*	*-s/total* (% -s)	*Log Odds*	*Factor Weight*
LEXICAL ITEM (p = < .001)				
GRAMMATICAL PERSON (p = < .001)	*gie*[a]	172/354 (49%)	0.869	0.71
	hia	28/60 (47%)	0.716	0.67
	we	18/37 (49%)	0.528	0.63
	indef.prn.	36/71 (51%)	0.372	0.59
	'zero' pl.imp.	101/227 (44%)	0.206	0.55
	he	15/36 (42%)	0.151	0.54
	dem.prn.	10/22 (46%)	0.149	0.54
	relative cl.sg.	101/297 (34%)	0.022	0.50
	relative cl.pl.	25/84 (30%)	-0.223	0.44
	'zero' 3pl.	26/89 (29%)	-0.296	0.43
	full NP sg.	70/290 (24%)	-0.615	0.35
	full NP pl.	24/112 (21%)	-0.805	0.31
	'zero' 3sg.	60/337 (18%)	-1.030	0.26
PRIMING (p = < .001)	prec. *-s* suffix	326/685 (48%)	0.473	0.62
	prec. *-ð* suffix	360/1331 (27%)	-0.473	0.38

N = 2016
Nagelkerke R^2 = 0.28
df = 76
Deviance = 2130.03
Cross-validation estimate of accuracy = 0.716
Internal estimate of accuracy = 0.738

[a] This code includes indicative *gie* tokens (*N* = 284), imperative *gie* (*N* = 58) and second person plural zero subjects (*N* = 12).

Table 6. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third-person singular environments in Mark, Luke and John (*N* = 2016)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
STEM	dental /d, ð/	165/265 (62%)	1.127	0.75
ENDING	affricate /ʧ,ʤ/	46/72 (64%)	0.901	0.71
(p = < .001)	consonant	331/1045 (32%)	-0.116	0.47
	bilabial	67/260 (26%)	-0.503	0.38
	sibilant /s/	18/85 (21%)	-0.521	0.37
	vowel	59/289 (20%)	-0.887	0.29
PRIMING	prec. *-s* suffix	326/685 (48%)	0.441	0.61
(p = < .001)	prec. *-ð* suffix	360/1331 (27%)	- 0.441	0.39
SUBJECT	dem.prn.	10/22 (46%)	0.556	0.64
TYPE	*gie*[a]	172/354 (49%)	0.539	0.63
(p = < .001)	*hia*	28/60 (47%)	0.481	0.62
	indef.prn.	36/71 (51%)	0.429	0.61
	we	18/37(49%)	0.377	0.59
	he	15/36 (42%)	0.249	0.56
	'zero' pl.imp.	101/227 (45%)	0.146	0.54
	relative cl.sg.	101/297 (34%)	0.014	0.50
	relative cl.pl.	25/84 (30%)	-0.269	0.43
	'zero' 3pl.	26/89 (29%)	-0.280	0.43
	full NP sg.	70/290 (24%)	-0.519	0.37
	full NP pl.	24/112 (21%)	-0.843	0.30
	'zero' 3sg.	60/337 (18%)	-0.880	0.29

N = 2016
Nagelkerke R^2 = 0.214
Deviance = 2247.568
df = 19
Cross-validation estimate of accuracy = 0.719
Internal estimate of accuracy = 0.725

Table 7. Multivariate analysis of the contribution of factors selected as significant to the probability of *-s* (as opposed to *-ð*) in plural and third person singular environments in Mark, Luke and John (*N* = 2016)

Factor Group (significance)	*Factors*	*-s/total (% -s)*	*Log Odds*	*Factor Weight*
LEXICAL ITEM (p = < .001)				
PRIMING (p = < .001)				
SUBJECT TYPE (p = < .001)	indefinite prn.	36/71 (51%)	0.499	0.62
	dem.prn.	10/22 (46%)	0.282	0.57
	personal prn.	227/475 (48%)	0.273	0.57
	relative clause	126/381 (33%)	0.064	0.52
	noun phrase	94/402 (23%)	-0.536	0.37
	'zero' subject	193/665 (29%)	-0.581	0.36
PERSON (p = < .001)	second	273/581 (47%)	0.415	0.60
	first	18/37 (49%)	0.014	0.50
	third	395/1398 (28%)	-0.401	0.40

N = 2016
Nagelkerke R^2 = 0.272
Deviance = 2144.629
df = 71
Cross-validation estimate of accuracy = 0.721
Internal estimate of accuracy = 0.742

habban ‘have’ 173
cweðan ‘say’ 129
cuman ‘come’ 123
gesēon ‘see’ 114
dōn ‘do, make, achieve’ 108
gān ‘go’ 83
willan ‘want, wish’ 79
sēlan/gesēlan ‘give’ 75
geheran ‘hear’ 71
gelefan ‘believe’ 68
onfōn ‘receive’ 67
wyrcan ‘work, make, do’ 65
sendan ‘send’ 62
sēcan ‘seek’ 48
haldan ‘behold, observe’ 42
ārīsan[1] ‘arise, get up’ 38
secgan ‘say’ 35
biddan/gebiddan ‘ask for’ 33
geongan ‘go’ 33
losan ‘perish’ 32
wunian ‘dwell, abide’ 32
lufian ‘love’ 30
niman ‘take, catch’ 30
læran ‘teach’ 28
lædan ‘lead’ 26
onginnan ‘begin’ 26
trymman ‘confirm’ 25
cīgan ‘call, summon’ 24
settan ‘set, place’ 23
etan ‘eat’ 22
faran ‘go, travel’ 22
worðian ‘honour’ 22
giwian ‘ask, request, pray’ 21
stondan ‘stand’ 21
ofslēan ‘slay, kill’ 20
sprecan ‘speak’ 20
ēowan ‘reveal, disclose’ 19
fylgan ‘follow’ 18
oncnāwan ‘understand’ 18
witan ‘know’ 18
brengan ‘bring’ 17
drincan ‘drink’ 17
āhebban ‘lift, raise’ 16
lēoran ‘depart, pass’ 16
sawan ‘sow’ 16
feallan/gefeallan ‘fall’ 15
lifian ‘live’ 15
gearwian ‘prepare’ 15
weccan/wæccan[53] ‘rouse, keep vigil’ 15
gemitan ‘meet’ 14
ongietan ‘understand, know’ 14
samnian ‘gather, collect’ 14
findan ‘find’ 13
gefan ‘give’ 13
gerīsan ‘be necessary’ 13
sittan ‘sit’ 13
dēman ‘judge’ 12
fæstan ‘fast, abstain’ 12
stīgan ‘go up’ 12
ðrēatian ‘urge, threaten, force’ 12
ondspurnan ‘offend, scandalize’ 11
genēolēcan ‘approach’ 11
swerian ‘swear’ 11
wēnan ‘imagine, think, expect’ 11
wilnian ‘desire, ask for’ 11
wōsan ‘be’ 11
behōfian ‘be necessary’ 10

[53] There is confusion in the usage of ‘*wecca(n)* rouse’ and *wæcca(n)* ‘keep vigil, watch’ in Li., hence 3sg. *awæcceð* besides forms with *e* (Hogg & Fulk *** 276, fn.4).

Appendix B

Lexical items with -s / -ð endings in Lindisfarne according to frequency

bindan ‘bind together’ 10
cyrran ‘turn’ 10
hēnan ‘insult, despise’ 10
slepan ‘sleep’ 10
tellan ‘tell, charge against’ 10
brūcan ‘partake of food’ 9
bycgan ‘buy’ 9
flēon ‘flee’ 9
gedafenian ‘be fitting, necessary’ 9
gefēogan ‘hate’ 9
geldan ‘yield, pay’ 9
hælan ‘cure, heal’ 9
ondrædan ‘fear, dread’ 9
scēadan ‘divide, separate’ 9
syngian ‘sin, commit adultery’ 9
wīdlian ‘defile’ 9
drīfan ‘force to move, exorcise a devil’ 8
gefēagan ‘rejoice’ 8
gefrægnan ‘enquire, question’ 8
hātan ‘command, order’ 8
hripan ‘reap’ 8
tōslītan ‘tear asunder, destroy’ 8
ðencan ‘think’ 8
weorpan ‘throw, cast down’ 8
ondwyrdan ‘answer, reply’ 7
bēcnan ‘beckon, make a sign’ 7
bodian ‘preach, announce’ 7
clǣnsian ‘cleanse’ 7
clipian ‘call out’ 7
gegȳman ‘cure’ 7
inlihtan ‘light’ 7
onsacan ‘deny’ 7
timbran ‘build’ 7
ðolian ‘suffer, endure’ 7
ābīdan ‘wait for, expect’ 6
ācwellan ‘kill, put to death, destroy’ 6
āgnian ‘own, possess’ 6
bēgan/gebēgan ‘bend, convert, humiliate’ 6
būan ‘inhabit, dwell’ 6
byrian ‘belong, be of concern’ 6
embehtian ‘serve’ 6
frēogan ‘set free’ 6
fullwian ‘baptise’ 6
gebernan ‘burn’ 6
lōcian ‘look, behold’ 6
restan ‘rest’ 6
smēan ‘think, reflect’ 6
ðyrstan ‘thirst’ 6
weaxan ‘wax, grow’ 6
gadrian ‘gather, collect’ 5
gefæstnian ‘make fast, entrust’ 5
hogian ‘think about, care for’ 5
hyhtan ‘trust’ 5
niðerian ‘condemn, accuse’ 5
rīcsian/rixan ‘reign, govern’ 5
spillan ‘destroy, kill’ 5
swīcan ‘deceive’ 5

tacnan ‘represent, indicate’ 5
tȳnan ‘slander, insult’ 5
wendan ‘turn, wind one's way’ 5
āhōn/hōn ‘hang, crucify’ 4
ondettan ‘confess’ 4
beran ‘carry, bear a child’ 4
dǣlan ‘divide up’ 4
delfan ‘dig, delve’ 4
ēaðmōdian ‘obey’ 4
ebolsian ‘blaspheme’ 4
fagian ‘vary’ 4
fyllan ‘make full, fill ‘ 4
gebyrgan ‘taste, taste death’ 4
hrīnan ‘lay hold of’ 4
hungran ‘hunger’ 4
leornan ‘learn’ 4
redan ‘read’ 4
swingan ‘scourge’ 4
wepan ‘weep’ 4
winnan ‘work, toil’ 4
begytan ‘find, obtain’ 3
bītan ‘bite’ 3
bletsian ‘bless’ 3
brecan ‘break’ 3
costian ‘tempt’ 3
dwolian ‘go astray, wander’ 3
ēhtan ‘pursue, persecute’ 3
fēdan ‘feed’ 3
gemunan ‘remember’ 3
hlaðian ‘summon’ 3
līcian ‘please, be sufficient’ 3
sceacan ‘shake’ 3
rǣcan ‘give, offer’ 3
scēawian ‘see, behold, observe’ 3
sceomian ‘be ashamed’ 3
scinan ‘shine’ 3
singan ‘sing’ 3
slītan ‘split, tear’ 3
stǣnan ‘stone’ 3
stregdan ‘scatter, disperse’ 3
strīnan ‘acquire’ 3
trīewan ‘trust, hope’ 3
wundrian ‘marvel, wonder’ 3
bēadan ‘bid hello’ 2
blinnan ‘cease’ 2
ċēapian ‘buy, sell’ 2
cennan ‘beget a child’ 2
ceorfan ‘cut down, kill’ 2
cnylsian ‘knock’ 2
cwician ‘come back to life’ 2
dēadian ‘die’ 2
drȳgan ‘dry’ 2
faldian ‘make a sheep or cattle fold’ 2
fore-bēodan ‘preach, proclaim’ 2
frasian ‘ask, question’ 2
gecunnian ‘know, discern’ 2
geēhtan ‘persecute’ 2
grētan ‘greet’ 2
grindan ‘grind’ 2
gyrdan ‘gird, encircle’ 2
hālgian ‘sanctify’ 2
hersumian ‘obey’ 2
hlǣfan ‘leave, bequeath’ 2
hlæhan ‘laugh’ 2
hlinian ‘lean, incline’ 2
hrēman ‘weep’ 2
hreowian ‘repent’ 2
iornan ‘meet’ 2
lecgan ‘lay, deposit’ 2

lēcnian ‘cure’ 2
lūtan ‘lay down 2
mǣnan ‘grieve, mourn 2
miclian ‘enlarge’ 2
mierran ‘obstruct, err, confuse’ 2
nēahwian ‘cleave, adhere’ 2
nemnan ‘name’ 2
nestan ‘spin’ 2
nīwian ‘renew, restore’ 2
stelan ‘steal, rob’ 2
teogoðian ‘pay tithes’ 2
ðancian ‘thank, rejoice’ 2
ðringan ‘press, squeeze, throng’ 2
ðurfan ‘need, be necessary’ 2
wæstmian ‘bear fruit’ 2
wuldrian ‘glorify’ 2
ācennan ‘give birth’ 1
āfyrran ‘depart’ 1
ārīsan[2] ‘be necessary’ 1
āwedan ‘go insane’ 1
awerian ‘cover, clothe’ 1
āwrītan ‘write’ 1
āwyltan ‘roll back’ 1
æthrīnan ‘stick to, adhere to’ 1
bebēadan ‘command’ 1
bebyrgan ‘bury' 1
bēotian ‘promise, vow’ 1
bewærlan ‘pass by’ 1
brǣdan ‘spread, broaden’ 1
bringan ‘bring’ 1
byrlian ‘pour out’ 1
cnyssan ‘beat, strike’ 1
cōlian ‘become cold’ 1
cȳðan ‘tell, say, make known’ 1
cynllan ‘strike’ 1
drysnan ‘extinguish fire’ 1
dwīnan ‘shrink, dwindle’ 1
dȳpan ‘dip’ 1
ēðian ‘breathe, blow upon’ 1
ealdian ‘grow old’ 1
eardian ‘dwell’ 1
efne-gecunnan ‘prove, demonstrate’ 1
fǣman ‘foam, froth’ 1
fatian ‘marry, take a wife’ 1
flōwan ‘flow’ 1
forcunnian ‘tempt’ 1
forð-aweorðan ‘perish’ 1
frēfran ‘console, comfort’ 1
fretan ‘devour’ 1
gebētan ‘make good, restore’ 1
geflītan ‘argue’ 1
gehȳdan ‘hide’ 1
genyht-sumian ‘be sufficient’ 1
grāpian ‘handle, grasp’ 1
grīpan ‘grasp’ 1
haðerian ‘shut, restrain’ 1
hregnan ‘rain’ 1
hriordan ‘dine’ 1
hræfnan ‘undergo, perform’ 1
hycgan ‘think, resolve upon, accuse’ 1
hāwian ‘notice, look at’ 1
iorsian ‘get angry’ 1
lǣðan ‘hate’ 1
limpan ‘occur, happen’ 1
līxan ‘shine, glitter’ 1
loccetan ‘belch forth’ 1
lysnan ‘listen 1
mænsumian ‘marry’ 1
mǣrsian ‘make known, glorify’ 1

macian ‘make, prepare’ 1
magan ‘be able’ 1
mercian ‘mark, define’ 1
nēodian ‘require’ 1
ōnettan ‘be busy’ 1
onscynian ‘fear’ 1
plontan ‘plant’ 1
rēafian ‘plunder’ 1
rendan ‘cut down’ 1
rihtan ‘set right, straighten’ 1
scǣnan ‘break’ 1
sceððan ‘injure, hurt’ 1
scearfian ‘cut off’ 1
scendan ‘corrupt, injure, shame’ 1
scrincan ‘shrink, pine away’ 1
sēman ‘pacify’ 1
sīwian ‘sew’ 1
smerian ‘laugh, scorn’ 1
snīwan ‘rain, snow’ 1
sōðian ‘bear witness to’ 1
spildan ‘waste, ruin’ 1
spittan ‘spit’ 1
stincan ‘smell’ 1
sundrian ‘separate’ 1
sūpan ‘taste’ 1
swelgan ‘devour’ 1
swīgian ‘be silent’ 1
tien-geāgnian ‘pay tithes’ 1
trahtian ‘comment on’ 1
tryccan ‘trust’ 1
twēon ‘hesitate’ 1
ðeahtian ‘agree’ 1
ðrōwian ‘endure, suffer’ 1
ðyncan ‘seem’ 1
wǣgan ‘deceive’ 1
wealdan ‘rule, govern’ 1
wēodian ‘weed, clothe’ 1
wergan ‘curse, abuse’ 1
wirdan ‘obstruct, violate’ 1
wisnian ‘dry up, wither’ 1
wītegian ‘predict’ 1
wrēon ‘conceal’ 1
wræðian ‘be angry’ 1
wynnsumian ‘be glad’ 1
wyrðan ‘irrigate’ 1
wyrtrūman ‘uproot’ 1
ymbceorfan ‘circumcise’ 1
ymbiernan ‘run round’ 1
ymbstyrian ‘stir about’ 1

Appendix C

Low-frequency lexical clusters

Cluster 1		Cluster 2	Cluster 3	Cluster 4	Cluster 5			Cluster 6	Cluster 7	Cluster 8	
afyrran	mænan	awedan	bebeadan	bletsian	agnian	gedafenian	tacnan	acennan	(a)bidan	acwellan	singan
ahon/hon	nestan	beadan	brædan	buan	andettan	gefrægnan	tellan	æthrinan	andwyrdan	awerian	slitan
be-wærlan	niwian	cnyssan	cnylsian	clænsian	andspurnan	gemunan	timbran	becnan	bindan	awritan	spittan
begytan	plontan	fæman	cyðan	clipian	began/	geneolecan	toslitan	ðyncan	faldian	awyltan	swigian
beotian	sceacan	forð-aweorðan	dypan	deman	gebegan	gretan	triewan	gefæstnian	fedan	bebyrgan	trahtian
blinnan	scearfian	Fore-beodan	eðian	ðencan	behofian	halan	tynan	hregnan	findan	bringan	witegian
brecan	siwian	frasian	gehydan	ebolsan	beran	henan	wenan	lician	geldan	byrlian	wreon
ceapian	smerian	genyht-sumian	gyrdan	fleon	bicgan	hlæfan	widlian	loccetan	grindan	colian	wuldrian
ðeahtian	stelan	grapian	hreman	freogan/	bitan	hogian	wilnian	macian	hlaðian	cwician	wundrian
ðrowian	sundrian	gripan	hriordan	frigan	bodian	hreowian	winnan	mercian	ondrædan	cynllan	ymbceorfan
drygan	swelgan	lixan	lædan	gefeon/	brucan	hrinan		nemnan	redan	ðancian	
eaðmodian	swerian	mærsian	limpan	gefeagan	byrian	hungran		onettan	sceadan	ðringan	
ealdian	swingan	neodian	mænsumian	gefeon/	cennan	hyhtan		reafian	stregdan	drysnan	
eardian	tien-geagnian	sceððan	rendan	gefeogan	ceorfan	iernan		scrincan	wendan	dwinan	
efne-	wægan	seman	scendan	gegyman	costian	inlihtan		sniwan		dwolian	
gecunnian	wergan/	smean	soðian	hersumian	cyrran	lecnian		stincan		fatian	
ehtan	wiergan	supan	spildan	hripan	dælan	locian		wisnian		flowan	
forcunnian	ymbiernan	twigan/tweon	tryccan	ricsan	deadian	miclian		ymbstyrian		frefran	
fretan		wealdan	wæstmian	slepan	delfan	mierran				gecunnian	
gadrian		weodian	wirdan	teogoðian	ðolian	neahwian				geflitan	
gebetan		wyrtruman	wræðian	weaxan	ðreatian	onsacan				hlæhan/	
geehtan			wynnsumian	weorpan	drifan	ræcan				hliehan	
haðerian			wyrðan	wepan	ðurfan	restan				hlinian	
halgian				wosan	ðyrstan	sceawian				hræfnan	
hatan					embehtan	scinan				hycgan	
hawian					fagian	spillan				iorsian	
lecgan					fæstan	stænan				niðerian	
leornan					fullwian	stigan				onscynian	
lutan					fyllan	strinan				rihtan	
lysnan					gebernan	swican				scænan	
magan					gebyrgan	syngian				sceomian	

Appendix D

-s / -ð tokens according to grammatical person

zero 3pl

getrymeð Jn.*4:13; nabbað Jn.2:3; worðiað Jn.5:23; geseað Jn.6:19; soecað Jn.7:25; cuæðas Jn.7:26; fylgæð Jn.10:5; ongeatas Jn.10:14; gehereð Jn.10:16; fylgeð Jn.10:27; soecað Jn.10:27; losað Jn.10:28; geseað Jn.12:40; ongeattað Jn.12:40; gesomnas Jn.15:6; sendas Jn.15:6; bernað Jn.15.6; nabbas Jn.15:22; gedoas Jn.16:2; ongeattað Jn.17:3; habbas Mk.*2:5; eðmodi(g)að Mk.1:27; cuoeðað Mk.1:30; habbað Mk.2:19; cumað Mk.3:19; geseað Mk.4:12; geseað Mk.4:12; geherað Mk.4:12; oncnaweð Mk. 4:12; geherað Mk.4:16; onfoeð Mk.4:16; nabbað Mk.4:17; bycges Mk. 6:36; ceapas Mk.6:36; ettes Mk.6:36; etteð Mk.6:36; worðiað Mk.7:7; abidas Mk.8:2; geseað Mk.9:1; onslaeð Mk.9:31; geniðriað Mk.10:33; selles Mk.10:33; bismera(g)eð Mk.10:34 : cuoeðað Mk.11:28; arisað Mk.12:26; geseallas Mk.13,9; geseas Mk.13,26; asægcas Mk.14:12; ageafað Mk.14:12; ahenas Mk.15:4; sellas Mk.15:23; ahoas Mk.15:27; worpas Mk.16:17; gedrincas Mk.16:18; onsettað Mk.16:18; gerises L.*6:14; lædeð L.4:10; niomað L.4:10; geongas L.4:36; gefæstað L.5:35; onfoað L.6:34 gesomnað L.6:44; geseað L.8:10; oncnaueð L.8:10; gelefas L.8:12; geherað L.8:25; geseað L.9:27; on-foað L.10:8; onfoæð L.10:10; ofslæð L.11:49; doað L.12:4; inlædæð L.12:11; eft wilnað L.12:20; untynað L.12:36; cymeð L.13:29; hlinigað L.13:29; hræstað L.13:29; habbað L.16:29; geherað L.16:31; gelefæð L.16:31; cuoeðas L.17:21; cuoeðas L.20:41; onginnað L.21:7; on-worpað L.21:12; sellas L.21:12; seallað L.21:12; acuoellað L.21:16; geseað L.21:27; doað L.23:31; fagas Mt.*1:2; fagegas Mt.*1:2; ondweardað Mt.*1:12; nabbas Mt.*8:6; æt-eawas Mt.*8:8; genimmæs Mt. 4:6; gesuicas Mt.5:11; wæges Mt. 5:11; mis-begaas Mt.6:16; somnigas Mt.7:16; fæstas Mt.9:15; sendeð Mt.9:17; geselleð Mt.10:19; go-oehtas Mt.10:23; cueðað Mt.11:17; cueðas Mt.11:18; coeðas Mt.11:19; gefraignades Mt.12:10; mæhtes Mt.12:14; geseas Mt.13:13; ne seað Mt.13:13; habbas Mt.14:16; nabbas Mt.14:16; eattas Mt.15:2; ðerh-uunas Mt.5:32; habbas Mt.15:32; cueðas Mt.16:20; saegas Mt.16:20; ofslaas Mt.17:23; sellas Mt.20:19; cueðas Mt.21:31; cuoeðas Mt.23:3; doas Mt.23:3; nallas Mt.23:4; doað Mt.23:5; lufað Mt.23:6; geseles Mt.24:9; ofslæs Mt.24:9; cueðas Mt.24:26; ondueardas Mt.25:44; coeðas Mt.27:13; sacas Mt.27:13

3sg zero

gewyrces Jn.* 3:3; gebecnas Jn.*3:10; setteð Jn.*3:14; getrymeð Jn.*4:3; gefæstnað Jn.*4:3; ceigeð Jn.*4:12; foresægeð Jn.* 5:2; geceiges Jn.*5:3; spreceð Jn.* 5:6; tobecnað Jn.*5:17; gedæfneð Jn.* 6:10; ceigeð Jn.*6:12; soð-sæges Jn.*6:15; fore-sendeð Jn.* 6:16; fore-fylgeð Jn.*6:18; getrymeð Jn.*7:9; inbecnað Jn.*7:10; æd-eaueð Jn.*7:13; inlædeð Jn.*7:16; gebecnas Jn.*7:16; getri[m]að Jn.*7:17; bebeadas Jn.*7:19 ; saegeð Jn.* 8:2; gebecnað Jn.* 8:6; ariseð Jn.2:22; geriseð Jn.3:7; behofað Jn. 3:7; gedæfned Jn.3:7; cymað Jn. 3:8; gaað Jn. 3:8; færað Jn.3:8; gedæfnað Jn. 3:30; gesiis Jn.3:32; gehereð Jn.3:32; getrymeð Jn.3:32; gesægeð Jn. 4:25; getrymeð of mec Jn.5:32; deada(g)eð Jn.6:50; lifeð Jn.6:51; besuicað Jn.7:12; ongetteð Jn.7:17; sprecað Jn.7:26; wyrcað Jn.7:31; wyrcas Jn.7:51; ofslæð Jn. 8:22; forleteð Jn.8:29; spreceð Jn.8:44; sprecað Jn.8:44; geseað Jn. 8:51; gebirgeð Jn.8:52; gedæfnað Jn.9:4 imp.; haldas Jn.9:16; gesiið Jn. 9:19; geseað Jn.9:21; gesiið Jn.9:21; hæfis Jn.9:23; geherað Jn.9.31; ceigeð Jn.10:3; gebrengað Jn.10:3; lædað Jn.10:3; sendeð Jn.10:4; forletes

Jn.10:4; gaeð Jn.10:4; inn-færeð Jn.10:9; ut-færeð Jn.10:9; gemoetað Jn.10:9; gedæfnað Jn.10:16; geuorðes Jn.10:16; hæfes Jn.10:20; auoedeð Jn.10:20; ondspyrneð Jn.11:9; gesiið Jn.11:9 ; gegeongað Jn.11:10; ondspyrnað Jn.11:10; eft arisæð Jn.11:24; gaas Jn.11:31; stenceð Jn.11:39; behofas Jn.11:50; cymeð Jn.11:56; gebyreð Jn.12:6; tobrengas Jn.12:24; worðias Jn.12:26; gedæfneð Jn. 12:34; geongas Jn.12:35; gesilið Jn.14:16; gesiið Jn.14:17; uunas Jn.14:17; gehaldas Jn.14:23; nimeð Jn.15:2; drygeð Jn.15:6; wisneð Jn.15:6; selið Jn.15:16; behofað Jn.16:7; gecymeð Jn.16:8; sprecces Jn.16:13; geheres Jn.16:13; spreces Jn.16:13; onfoæð Jn.16:14; gesægeð Jn.16:14; onfoeð Jn.16:15; sægeð Jn.16:15; spreceð Jn.16:18; acennes Jn.16:21; hæfið Jn.16:21; gemynes Jn.16:21; geseleð Jn.16:23; silið Jn.17:2; behofað Jn.18:14; gedaefnað Jn.19:7; sendeð Mk.*3:1; ceigað Mk.*3:3; wæccað Mk.*3:8; læreð Mk.*3:10; friað Mk.*3:17; gemeð Mk.*3:20; læreð Mk.*4:8; gelefes Mk.*4:9; forbeades Mk.*4:9; læreð Mk.*4:10; bloedsað Mk.*4:11; ðreað Mk.*4:14; ðreatað Mk.*4:14; sceomia(g)að Mk.*5:1; telað Mk.*5:3; læreð Mk.*5:4; cyðað Mk.*5:5; læreð Mk.*5:8; hatas Mk.1:27; hæfeð Mk.3:22; drifeð Mk.3:22; hæfeð Mk.3:26; reafað Mk.3:27; hæfes Mk.3:30; geherað Mk.4:9; cymeð Mk.4:22; geherað Mk.4:23; hæfeð Mk.4:25; doæð Mk.4:32; wyrcað Mk.4:32; byreð Mk.4:38; inn-gaað Mk.7:19; ut-gaas Mk.7:19; clænsas Mk.7:19; fore-stondes Mk.8:36; cymeð Mk.8:38; fæmeð Mk.9:18; gristbitteð Mk.9:18; scrinceð Mk.9:18; eft arisað Mk.9:31; losað Mk.9:41; eft arisað Mk.10:34; ceigas Mk.10:49; forlætes Mk.11:3; cuoeðas Mk.11:23; becymeð Mk.11:24; cymeð Mk.12:9; fordoeð Mk.12:9; seleð Mk.12:9; gerises Mk.13:10; rises Mk.13:14; oncnauað Mk.13:14 ; sendes Mk.13:27; gesomniað Mk.13:27; gecymmes Mk.13:36; gemitteð Mk.13:36; licas Mk.14:41; ceiges Mk.15:35; færes Mk.16:7; sceððað Mk.16:18; gerises L.*3:8; spreces L.*3:14; gerises L.*4:5; seles L. *4:8; gemeð L.*5:1; gehæleð L.*5:1; nemneð L. *5:6; ceigeð L.*5:7; setteð L.*5:9; gemeð L.*5:10; gemacað L.*5:13; hæled L.*6:1; sendeð L.*6:2; læreð L.*6:6; ðreatað L.*6:8; læreð L.*6:11; ðreatað L. *6:12; sileð L.*6:14; geðreatas L.*6:15; insægeð L.*6:18; gebiddes L.*7:4; gemeð L.*7:5; læreð L. *7:9; hateð L.*7:17; g[e]fæstnuið L.*7:19; fore-sægeð L.*8:1; sægeð L.*8:3; tæcnað L.*8:3; æfsægeð L.*8:5; nemneð L.*8:8; geðreaðe L.*8:8; seteð L.*8:12; gesceadeð L.*8:15; setteð L.*8:16; sægeð L.*8:18; geðrað L.*9:1; læreð L.*9:7; foresægeð L.*9:12; setteð L.*9:12; læreð L.*9:14; mercað L.*9:15; fore-sægeð L *10:2; ge-trymað L.*10:10; soecað L.*10:10; togeneolecað L.*10:18; gewundrað L.*11.9; gefæstnaðe L.*11.13; drincað L.1:15; gecerreð L.1:16; seleð L.3:11; doeð L.3:11; clænseð L.3:17; geberneð L.3:17; licað L.3:22; efne-gehereð L.4:10; gehateð L.4:36; gedæfneð L.4:43; lufað L.7:5; gaeð L.7:8; cymeð L.7:8; doað L.7:8; hæfeð L.7:33; saweð L.8:5; geherað L.8:8; woeneð L. 8:18; hatteð L.8:25; slepeð L.8:52; onsæccað L.9:23; lædað L.9:23; fylgeð L.9:23; cymeð L.9:26; clioppiað L.9:39; bites L.9:39; fordoað L.9:39; fearras L.9:39; tosliteð L.9:39; onfoað L.9:48; fylges L.9:49; eftgecerrað L.10:6; selles L.11:8; ariseð L.11:8; ariseð L.11:8; seleð L.11:8; hæfeð L.11:8; seleð L.11:11; seleð L.11.11; giuað L.11.12; ræceð L.11.12; aworpeð L.11.15; genimeð L.11.22; gaeð L.11.26; soecað L.11.29; ofer-hlæfeð L.11.41; behofað L.12:12; gehriseð L.12:12; ge-cerres L.12:36; cymeð L.12:36; cnyllsað L.12:36; gegyrdeð L.12:37; doað L.12:37; gaeð L.12:37; embehtað L.12:37; cymeð L.12:38; ge-cymeð L.12:38; gemoetað L.12:38; agnegæð L.12:44; gesettes L.12:44; hyhtað L.12:46; woenað L.12:46; gi-ónetað L.13:7; gemerras L.13:7; gedoað L.13:9; doað L.13:9; geriseð L.13:14; cuoeðeð L.13:25; cuoeðes L.13:27; gehriseð L.13:33; gedæfneð L.13:33; cuoeðað L.14:10; hæfeð L.14:28; gehereð L.14:35; forlorað L.15:3; losað L.15:3; forleteð L.15:3; gaað L.15:3; gemoetað L.15:5; on-settað L.15.5; geceigeð L.15:6; losað L.15:8; berneð L.15:8; ymbstyreð L.15:8; soecað L.15:8; gefindes L.15:9; efne-geceigað L.15.9; gefiweð L.16:13, lufæð L.16.13, æthrineð

L.16.13; genehuað L.16:13; forhogeð L.16:13; doað L.17:3; gehreues L.17:4; hérsumiað L.17:6; hafeð L.17:9; gehriseð L.17:24; stigeð L.17:31; awoendað L.17:31; gehriseð L.18:1; cymeð L.18:5; geteleð; hæfeð L.18:7; doeð L.18:8; arísað L.18:33; hæfis L. 19:25; hæfeð L.19:26; cymeð L.20:16; spilleð L.20:16; selleð L.20:16; gegrindæs L.20:18; hæfeð L.20:24; gelimpeð L.21:13; ingaað L.22:1:; bebycgeð L.22:36; bygeð L.22:36; geriseð L.22:37; gecerreð L.23:5; hæfeð L.23:17; efternlocað L.24:29; to-on-foes Mt. *1:7; efne-gecunnes Mt.*1:12

redas Mt.*3:8

haefis Mt.*6:3

locetað Mt.*7:5

gebyres Mt.*8:16

gegemes Mt.*14:6

of-sceades Mt.*14:6

gesundras Mt.*14:6

æt-eawas Mt.*14:7

eft-genniues Mt.*14:13

gesetes Mt.*14:13

gebeotes Mt.*14:13

æt-eawues Mt.*14:14

fore-bodas Mt.*16:9

hates Mt. *16:9

ceigeð Mt. *16:10

fore-bodas Mt. *16:11

gelaeras Mt. *16:12

gelaereð Mt. *16:12

gehates Mt. *16:15

hates Mt.*17:1

fore-beadas Mt. *17:3

laeres Mt. *17:4

getrymmas Mt. *17:5

laeres Mt. *17:8

læres Mt. *17:10

læreð Mt. *17:12

getrymes Mt. *17:15

laeres Mt. *17:16

sæges Mt. *17:18

sægeð Mt. *18:1

gehlutes Mt. *18:3
hæleð Mt. *18:7
ceigas Mt. *18:7
hæleð Mt. *18:10
inlihtas Mt. *18:11
foretacnas Mt. *18:14
aedeawas Mt. *18:16
saeges Mt. *18:17
hæles Mt. *19:1
lecneð Mt. *19:2
hæles Mt. *19:2
haeles Mt. *19:3
freweð Mt. *19:3
ahefes Mt. *19.16
geheras Mt. *19:18
læreð Mt. *20:5
hæled Mt. *20:7
hæles Mt. *22:3
gefrasas Mt. *21:6
gefylles Mt. *21:6
geðreatas Mt. *21:16
forcyðas Mt. *21:16
forcyðas Mt. *21:17
geðreatas Mt. *21:17
fore-sægeð Mt. *22:3
cueðes Mt. *22:6
gehates Mt. *22:11
(she) gecennes Mt. 1, 21
(he) somnas 3,12
(he)forbernes 3,12
(it) lihteð Mt.5,15
(he)lehteð Mt. 5,16
(it) behofes Mt.5,30
(he) doeð Mt.5,45
sniueð Mt.5,45

hregnað Mt.5,45
iuh (it) behofes Mt.6,32
(it) licas Mt.6,34
(he) wilniað Mt.7,10
(he) guias Mt.7,10
(he) gaes Mt.8,9
(he) geongas Mt.8,9
(he) faeres Mt.8.9
(he) cymeð Mt.8,9
(he) does Mt.8,9
(he)…gehlutes Mt.8,20
(he)…gebeges Mt.8,20
(she) lifeð Mt.9,18
(he) fordrifes Mt.9,34
(he) hæfis 11,18
gif (it) gefallas Mt.12.11
(he) genimeð Mt.12,29
(he) gehrypes Mt.12,29
(he) gaað 12, 43
(he) saues 'when he sows' Mt.13,4
geherað Mt.13,9 Let him hear
(he) hæfis Mt.13,12
(it) hafes Mt.13,27
(he) hæfes Mt.13,44
(he)...& byges Mt.13,44
(she) cliopas Mt.15,23
(he) gefylgeð Mt.16,24
geðolas Mt.16,26
ðolas Mt.17,15
(he)fallas Mt.17,15
(he)eft-arisas Mt.17,23
(it)behofas Mt.18,6
ne (he)forletes Mt.18,12
(he)geongeð Mt.18,12
(he) geworðas Mt.18,13

(he) gefeað Mt.18, 13
gif ðec (he)geheres Mt.18,15
gif ne ðec geheres Mt.18,16
ne (he)heres Mt.18,17
(it)ne forstondes 19,10
(he) eft arisæs Mt.20,19
(he) does Mt.21,40
(he) losas Mt.21, 41
(it) fallas Mt.21,44
(it) gebrecceð Mt.21,44
(he) cymes Mt.24,46
(he) gesettes Mt.24,47
(he) ne hyhtas 24,50
(he) ne woenas 24,50
(he) hæfis Mt.25,29
(he) to-sceades Mt.25,32
(he)neoleces Mt.26,46
ðynces Mt.26,66
(he) getreweð Mt.27,43
gefrigeð Mt. 27,43
(it)gelihteð Mt.28,1

Appendix E

Non-Adjacent Pronominal Tokens

- ***hia*** *oncnawæð ł* ***hogað*** *~ sapiant* 'They know' f.* (Mt.*2:6)
- ***hea*** *gæð 7 ne* ***eft-cerras*** *ł* ***wendas*** *~ ibant et non reuertebantur* 'They go and don't turn back' f * (Mt. *7:17)
- *hiora ł* ***ða*** *miltheortnise him* ***gefylges*** *~ ipsi misericordiam consequentur* 'They shall obtain mercy' f.* (Mt.5:7)
- ***ða*** *god* ***geseas*** *~ ipsi deum uidebunt* 'They will see God' f.* (Mt.5:8)
- *mið ðy yfle* ***hia*** *gecuoeðas iuh 7 mið ðy* ***oehtas*** *iuih 7* ***cuoeðas*** *eghwelc yfel wið iuih ~ cum maledixerint uobis et cum persecuti uos fuerint et dixerint omne malum aduersum uos* 'when they say evil about you and persecute you and all sorts of evil' f.* (Mt.5:11)
- *þaet* ***hea*** *geseað ł gesege iuerra goda werca 7* ***wuldriað*** *~ ut uideant uestra bona opera et glorificent* 'That they might see the works of God and marvel' f * (Mt. 5:16)
- *giwias****ge*** *ł* ***gebiddas*** *... cnysað* ***ge*** *ł* ***cnyllas*** 'ask ... knock' f. 39ra 23 (Mt.7:7)
- *7 gesegende ge sciolon gesea ł* ***ge*** *geseas 7 ne* ***geseað*** *ł ne sciolon gesea ~ uidentes uidebitis et non uidebitis* 'And seeing ye shall see, and shall not perceive' f * (Mt.13:14)
- *ðy læs mið* egu'* ***hia*** *geseað 7 mið* earu'* ***herað*** *~ ne quando oculis uideant et auribus audiant* 'lest at any time they should see with their eyes, and hear with their ears' f * (Mt.13:15) [**mið* inserted but underlined. Skeat notes this but omits the forms in the main body of his edition]
- ***gie*** *forðon* ***geheras*** *ł* ***lysnas*** *~ uos ergo audite* 'Hear you therefore' f.** (Mt.13:18)
- *geadriges* ***hia*** *...* ***7 sendas*** *hia ł ða ~ colligent ...et mittent eos* 'They gather ... and send them' f.* **(**Mt.13:42)
- *þæt* ***hia gegaæ*** *in ceastra* ***byccað*** *him mett ~ ut euntes in castella emant sibi escas* 'that they may go into the villages, and buy themselves food' f.** (Mt.14:15)
- ***seallas*** *him* ***ge*** *ł* ***iuh*** *eatta ~ date illis uos manducare* 'Give ye them to eat' f.** **(**Mt.14:16)
- *sceawgias* ***ge*** *7* ***behaldas*** *~ intuemini et cauete* 'Take heed and be aware' f.** (Mt.16:6)
- ***ge*** *oncnauas ne* ***eftgemynas*** *ł* ***geðencas*** *fif hlafana ~ intellegitis neque recordamini quinque panum* 'Do ye not know nor remember the five loaves' f.** (Mt.16:9)
- ***sittes*** *7* ***gie*** *ofer seatla tuelf ~ sedebitis et uos super sedes duodecim* 'And ye shall also sit upon twelve thrones' f * (Mt.19:28)
- ***gaað 7 gie*** *in win geard ~ ite et uos uineam* 'And go ye into the vineyard' f * (Mt.20:4)
- ***gaað 7 gie*** *in win geard ~ ite et uos uineam* "And go ye into the vineyard" f * (Mt.20:7)
- ***hia*** *gebindas uutedlice byrðenna hefiga ł pisa...****7 settas*** *in scyldrum ł bæccum monna ~ alligant autem onera grauia...et inponunt in umeros hominum* 'They bind heavy burdens...and lay them on men's shoulders' f * (Mt.23:4)
- ***hia*** *gebrædas forðon ðuuencgu hiora 7* ***miclas*** *ða her ł wloeh ~ dilatant enim*

philacteria sua et magnificant fimbrias ‘They make broad their phylacteries, and enlarge their garments’ f * (Mt.23:5)

- ***hia*** *ne* ***æwades*** *ł* ***mersades*** *hine ~ ne manifestarent illum* ‘(that) they not make him know’ f. * (Mk.3:12)
- *7* ***ða*** *herend* ***geherað*** *7 ne* ***oncnaweð*** *~ et audientes audiant et non intellegant* ‘and hearing they may hear, and not understand’ f.** **(**Mk.4:12)
- ***hia*** *saueð ł* ***sauas*** *~ seminantur* ‘they sow’ **f. ** (**Mk.4:18)
- ***gie*** *uutudlice* ***cuoeðas*** *~ vos autem dicitis* ‘but ye say’ f. * (Mk.7:11)
- ***gie*** *doas ł* ***wyrcas*** *~ facitis* f.** **(**Mk. 7:13)
- *huoenne ł ðonne* ***ðas*** *alle* ***onginnað*** *~ quando haec omnia incipient* ‘When they all begin’ f. * (Mk.13:4)
- *slepað gee 7* ***ræstas*** *~ dormite iam et requiescite* ‘sleep and rest’ f.** Mk.14:41
- *ne ænig monn gedroefað* ***gie*** *7 ne telnise ł sceoma* ***gedoað*** *7 ðæm* ***wosað*** *nestum iurom ~ neminem concutiatis neque calumniam faciatis et contenti estote* ‘Do violence to no man, neither accuse any falsely and be content’ f * (L.3:14)
- ***ðas*** *wyrtruma ne* ***habbað*** *~ hi radicem non habent* ‘These/they have no root’ f * (L.8:13)
- ***gie*** *ðonne huelcne mec þaet ic se* ***cuoaðas*** *~ vos autem quem me esse dicitis* ‘Whom then do ye say that I am?’ f * (L.9:20)
- ***gie*** *geherdon ł* ***geherað*** *~* auditis ‘Ye hear’ f.** (L.10:24)
- ***giæ*** *teigðas meris 7 cunela 7 ælc wyrt 7* ***bi-wærlas*** *þaet dom 7 lufo broðerscip godes ~ decimatis mentam et rytam et omne holus et praeteritis iudicium et caritatem dei* ‘Ye tithe mint and rue and all manner of herbs, and pass over judgment and the love of God’ f * (L.11:42)
- ***gie*** *seol anum fingre mið iuer ne* ***gehrinað*** *ðæm hond-hæfum ~ ipsi uno digito uestro non tangitis sarcinas* ‘ye yourselves touch not the burdens with one finger’ f * L.11:46
- ***gie*** *ða* ***getimbras*** *hiora byrgenna ~ uos autem ædificatis eorum sepulchra ye build their* ‘ye build their sepulchres’ f * (L.11:48)
- ***hia*** *willniað ł* **giuað** *~ petunt* f.** (L.12:48)
- *hueðre gif hreonise* ***gie*** *ne* ***doað*** *~ si non paenitentiam egeritis* ‘unless ye not do penance’ f. * (L.13:5)
- ***gie*** *ne* ***geseað*** *mec ~ non uidebitis me* ‘Ye shall not see me’ f * (L.13:35)
- ***hia*** *ne* ***habbað*** *~ non habent* ‘they have not’ f * (L.14:14)
- ***ge*** *willnias gesea enne doeg sunu monnes 7* ***ne geseað*** *~ desideretis uidere unum diem filii hominis et non uidebitis* ‘Ye shall desire to see one of the days of the Son of man, and ye shall not see it’ f. * (L.17:22)
- **gie** gesegon *ł* **geseað** *~ uidetis* ‘ye see’ f.** (L.21:6)
- ***gie*** *ðonne* ***sittas*** *in ða ceastra ~ uos autem sedete in cuitate* ‘but tarry ye in the city’ f *

(L.24:49)

- ***gie*** *gelefeð ł* ***wunað*** *~ manseritis* f.** (Jn.*5.14)
- ***hia*** *efnum ðegnum* ***doað*** *~ ipsi conseruis faciant* (Jn.*7:1)
- ***gie*** *iuh me cyðnisse* ***ðerhtrymmes*** *~ ipse uos mihi testimonium perhibetis* 'ye yourselves bear me witness' f. * (Jn.3:28)
- ***gie*** *ne* ***gelefeð*** *~ non creditis* 'ye believe not' f.* (Jn.5:47)
- ***gie*** *alle* ***wundriað*** *~ omnes miramini* 'ye all marvel' f. *(Jn.7:21)
- *soecað* ***gie*** *mec 7 ne* ***gemoeteð*** *~ quaeritis me et non inuenietis* 'ye shall seek me and not find me' f.* (Jn.7:36)
- ***gie*** *æfter lichoma* ***gedoemas*** *~ vos secundum carnem iudicatis* 'ye judge after the flesh' f * (Jn.8:15)
- ***gie*** *fylges mec ł* ***soecas*** *7 in synno iuero* ***deadageð*** *~ queritis me et in peccato uestro moriemini* 'ye shall seek me and in your sins die' f * (Jn.8:21)
- *ne* ***fylgæð*** *ł ah* ***hia*** *fleas ~ non sequentur sed fugiant* 'they flee but will not follow' f.** **(**Jn.10:5)
- ***hia*** *gesohton ł* ***soecað*** *~ quærebant* f.** Jn.11:8
- ***ðas*** *cyðnisse* ***ðer-trymmeð*** *mec ~ haec testimonium perhibent* 'they bear witness of me' f * (Jn.10:25)
- ***gie*** *ne* ***gelefeð*** *~ vos non creditis* 'ye believe not' f* (Jn.10:26)
- ***gie*** *ongeattas hine 7* ***geseað*** *hine ~ cognoscitis eum et uidistis* 'ye know him and have seen him' f.* (Jn.14:7)
- ***gie*** *uutudlice* ***ongeattas*** *hine ~ vos autem cognoscitis* 'but ye know him' f.* (Jn.14:17)
- *giuas* ***gie*** *ł* ***biddeð*** *~ petetis* f.** (Jn.15:7)
- ***hia*** *doað ł* ***wyrcað*** *~ facite* f.** (Jn.16:3)
- ***gie*** *soecas bituih iuh þaet ic cuoeð lyttil 7 ne* ***geseað*** *mec 7 eftersona lyttil 7* ***geseað*** *mec ~ quaeritis inter uos quia dixi modicum et non uidebitis me et iterum modicum et uidebitis me* 'ye shall enquire among yourselves a little what I said and shall not see me and after a while shall see me' f.* (Jn.16:19)
- ***gie*** *mec* ***lufað*** *~ uos me amatis* 'ye love me' f.* (Jn.16:27)
- ***onfoað*** *hine iuh ł* ***gie*** *~ accipite eum uos* 'Take him' f. * (Jn.18:31)
- *onfoað* ***gie*** *hine 7* ***ahoað*** *ł* ***acuoellað*** *~ accipite eum vos et crucifigite* 'Take him and crucify him' f. * (Jn.19:6)
- ***ue*** *ae* ***habbas*** *~ nos legem habemus* 'we have a law' f.* (Jn.19:7)
- *ne* ***toscaenas*** *ł ni gebraecgað* ***ge*** *~ non comminuetis* f.** **(**Jn.19:36)

Appendix F

Preterite-present verbs tokens

non personal pronoun tokens

magon Mt. 9:15; *scilo* Mt.10:19; *ne magon* Mt.10:28; *sciolon* Mt.13:13; *magon* Mk.2:19; *magon* Mk. 2:19; *magon* Mk.4:32; *ne wuton* L.11:44; *magon* L.11:46; *magon* L.16:26; *magon* L.20:36; *magon* L.21:15; *wuton* L.23:34; *magon* Jn.3:9; *uuton* Jn.10:4; *nuutton* Jn.15:21; *nutton* Jn.16:3; *uuton* Jn.18:21;

personal pronoun subject tokens (subject ~ verb)

we magon Mt.20:22; *we magon* Mt.21:38; *ge gesea magon* Mt.28:7; *gie wuton* Mt.20:25; *we wuton* Mt.22:16; *gie wuton* Mt.27:65; *ge nuuton* Mt.22:29; *hia ne sciolon* Mt.13:13; *ge sciolon* Mt.13:14; *ge ne sciolon* Mt.13:14; *gie sprecca scilon* Mt.10.20; *we scilon stige* Mt.20:18; *ge spreca scilo* Mt.10:19 ; *ge gebrucca scile* Mt.6:25; *gie magon* Mk.4:13; *hia magon* Mk.4:32; *we magon* Mk.10:39 ; *gie magon* Mk.14:7; *gie scilon gesea* Mk.14:61; *ne gie cunnon* Mk.8:17; *we uuton* Mk.12:14; *we wutton* L.20:21; *gie sciolon* L.13:5; *gie sciolo* L.13:3; *we wutton* L.20:21; *gie ne magon* Jn.8:22; *gie ne mago cume* Jn.7:34; *ue wuton* Jn.3:11; *ue wuton* Jn.4:42; *ue wutton* Jn.6:42; *ue uuton* Jn.3:2; *ue uuton* Jn.4:22 ; *ue uuton* Jn.7:27; *ue uuton* Jn.9:20; *gie uuton* Jn.7:28; *gie uuton* Jn.7:28; *gie ne uuton* Jn.7:28; *gie ne mago cuma* Jn.8:21; *gie uuton* Jn.13:12; *gie uuton* Jn.14:4; *ne gie cunnon* Mk.8:17; *gie iuh ne cunnon* Jn.1:26; *ue wutton* Jn.9:24; *gie nutton* Jn.4:22; *gie nuutton* Jn.9:30; *gie nuutton* Jn.11:49; *ue uutton* Jn.9:29; *gie iuh ne uutton* Jn.4:32; *we ne uutton* Jn.9:21; *we wutun* Jn.21:24; *ue uutton* Jn.9:31; *gie uutton* Jn.14:4; *ue uutun* Jn.16:30; *gie ðas witæ* Jn.13:7

Personal pronoun subject tokens (verb ~ subject)

ne magon hie Mt.10:28; *magage* Mt.20:22; *nutu we* Mt.21:27; *nutige* Mt.24:42; *ne wutige* Mt.24:44; *ne wutige* Mt.24:42; *ne maga gie* Mt.6:24; *ne maga ge* Mt.16:3; *magage* Mt.12:34; *ne maga ge* Mt.16:3; *nuuto gie* Mt.25:13; *ne uutuge* Mt.20:22; *mago ge* Mk.10:38; *ne wuto gie* Mk.13:33; *ne cunnige* - nescitis Mk.4:13; *ne uuto gie* Mk.10:38; *uuto gie* Mk.13:35; *ne uutogie* Mk.12:24; *ne cunnoge* Mk.12.24; *neutu woe* Mk.11.33; *ne magon hia* L.21:15; *magogie* L.5:34; *magogie* L.12:26; *ne mago gie* L.16:13; *moto we* L.22:49; *ne mago gie* Jn.7:36; *ne mago gie* Jn.8:43; *ne mago gie* Jn.13:33; *mago ue* Jn.14:5; *ne mago gie* Jn.16:12; *noht magon gie* Jn.15:5; *mago gie* Jn.5:44; *nuuton ue* Jn.9:29; *nutto ue* Jn.16:18; *nuutu ue* Jn.20:2; *ne uutu ue* Jn.9:21; *nuutuwe* Jn.14:5;

ne uutto gie Jn.8:14; *ne nuutto gie* Jn.8:19; *ne mægon gie* Jn.13:36

Appendix G

Preterite indicative and subjunctive tokens according to subject type

CwomunMt.2:1
ða ðe geherdon Mt.2:9
Cl.geeadon Mt.2:9
(they) gesegon Mt.2.9
(they) gesegon Mt.2.10
(they) inneadon Mt.2:11
(they) gefundun Mt.2:11
(they) gefeallon Mt.2:11
(they) geworðadun Mt.2:11
(they) untyndon Mt.2:11
(they) gebrohton Mt.2:11
(they) eft gecerrdon Mt.2:12
(they) eft gewoendon Mt.2:13
ða ðe sohton Mt.2:20
geondeton Mt.3:6
to-geneolocedon Mt. 4:11
ge-embehtadon Mt. 4:11
gesendon Mt.4.18
ða ilco... forleorton Mt.4:20 glosses L.illi
ða ilco... gefylgdon Mt.4:20 glosses L.illi
geboeton Mt.4:21
gestricedon Mt.4:21
hea/ða ilca...forleorton Mt.4:22 glosses L.illi
hea/ða ilca... gefylgdon Mt.4:22 glosses L.illi
(they) gebrohtun Mt.4:24
hæfdon Mt.4:24
ða (qui)...hæfdon Mt.4:24
gefylgdon Mt.4:25
geneolecedon Mt.5.1
(they) geoehton Mt.5:12
ða ðe laeðedon Mt.5:44
(they) onfengon Mt.6:5
(they) onfengon Mt.6:16
worhton Mt.7:23

cuomon Mt.7.25
geblewun Mt.7.25
In-ræsdon Mt.7.25
cuomon Mt.7.27
geblewun Mt.7.27
In-ræsdon Mt.7.27
gefylgdon Mt.8:1
fylgdon Mt.8.10
(they) gebrohton Mt. 8:16
menigo...hæfdon Mt.8:16
alle...hæfdon Mt.8:16
(they) geneolecdon Mt.8:25
(they)to-cuomon Mt.8:25
(they) awehton Mt.8:25
(they) cuedon Mt.8:25
menn...cuedon Mt.8:27
hæfdon Mt.8:28
ge.eadon Mt.8:28
(they) geceigdon Mt.8:29
gebedon Mt.8:31
(they) ge-eadon Mt. 8:32
(they) deadedon Mt. 8:32
geflugun Mt.8:33
cuomon Mt.8.33
gesaegdon Mt.8:33
ða ðe hæfdon Mt. 8:33
(they) gebedon Mt.8:34
(they) gebrohtun Mt.9:2
cuedon Mt.9:3
gesegon Mt.9:8
(they) ondreardon Mt. 9:8
(they) geuuldradon Mt. 9:8
cuomun Mt. 9:10
ge-ræstun Mt. 9:10
gesegon Mt. 9:11
(they) cuedon Mt. 9:11
geneolecdon Mt.9:14

cuomon Mt.9:14
(they)gefæsdon Mt.9:15
(they) gehlogun Mt.9:24
(they) smerdon Mt.9:24
gefylgdon Mt.9:27
geneolecdon Mt.9:28
ða ilco..ge-eadon Mt.9:31
(they) gemersadon Mt. 9:31
ða ilco gebrohtun Mt.9:32
(they) legon Mt.9:36
næfdon Mt.9:36
(gie) inge-eadon Mt.10:12
(they) geceigdon Mt.10:25
(they) geceigdon Mt.10:25
(gie) geherdon Mt.11:4
(gie) gesegon Mt.11:4
ða ðe gecliopadon Mt.11:16
(they) ne dydon Mt.11:20
(they) ne worhton Mt.11:20
(they) dydon Mt.11:21
(they) worhton Mt.11:21
gesegon Mt.12:2
(they) cuedon Mt.12:2
ge-adon Mt.12:14
fylgdon Mt.12.15
ne (they) dedon Mt.12.16
(they) ne dydon Mt.12.16
gestylton Mt.12:23
gesuigdon Mt.12:23
cuedon Mt.12:23
(they) cuedon Mt.12:24
gewondueardon Mt.12:38
(they) cueðon Mt.12:38
ða ilco...gedydon Mt.12:41
(they) inneadon Mt.12.45
(they) gewunedon Mt.12.45
(they) gebyedon Mt.12.45

gestodon Mt.12:46
(they) bedon Mt.12.46
(they) sohtun Mt.12.46
(they) sohton Mt.12.47
gefeollon Mt.13:4
cuomun Mt. 13:4
gebrecon Mt. 13:4
eton Mt. 13:4
freton Mt. 13:4
oðra gefeallon Mt. 13:5
(they) ne hæfdon Mt. 13:5
(they) ne hæfdon Mt. 13:6
(they) gescriungon Mt. 13:5
woxon Mt. 13:7
underdulfon Mt. 13:7
oðero gefeollon Mt.13:8
oðero saldon Mt.13:9
geneolecadon Mt.13:10
cuedon Mt.13:10
(they) geherdon Mt.13.15
(they) getyndon Mt.13.15
gewillnadon Mt.13:17
ne gesegon Mt.13:17
ne herdon Mt.13:17
geslepdon Mt.13:25
Æd-eawadon Mt.13:26
to-geneolecdon Mt.13:27
cuoedon Mt.13:27
cuoedon Mt.13:28
geneolecdon Mt.13:36
cuedon Mt.13:36
(they) of-gelædon Mt.13:48
(they) gebrohton Mt.13:48
(they) geseton Mt.13:48
(they) gecuron Mt.13:48
(they) gesendon Mt.13:48
(they) cwoedon Mt.13:51

(they) sægdon Mt.13:51
(they) hæfdon Mt.14:5
ða ðe gelionodon Mt.14:9
geneolecton Mt.14:12
genomon Mt.14:12
bebyrgdon Mt.14:12
cuomon Mt.14:12
saegdon Mt.14:12
geherdon Mt.14:13
geneolecdon Mt.14:15
cuedon Mt.14:15
gewondueardon Mt.14:17
(they) gesegon Mt.14:26
(they) ge-ceigdon Mt.14:26
(they) clioppadon Mt.14:26
gecuomon Mt.14:33
ge-worðadon Mt.14:33
(they) foerdon Mt.14:34
(they) cwomon Mt.14:34
ongeton Mt.14:35
oncneawn Mt.14:35
(they) sendon Mt.14:35
(they) gebrohton Mt.14:35
(they) gebedon Mt.14:36
(they) moston Mt.14:36
genealecdon Mt.15:1
cueðon Mt.15:1
genelecdon Mt.15:12
to-geneolecdon Mt.15:23
bedon Mt.15:23
genealecdon Mt.15:30
hæfdon Mt.15:30
gefeollon Mt.15:30
gesegon Mt.15:31
gesprecon Mt.15:31
ge-eadon Mt.15:31
gesegon Mt.15:31

(they) ge-undradon Mt.15:31
(they) worðadon Mt.15:31
ge-eton alle Mt.15:37
(they) genomon Mt.15:37
ða ðe eton Mt.15:38
to-geneolecdon Mt.16:1
bedon Mt.16:1
gecwomun Mt.16:5
(they) ongeton Mt.16:12
gesprecon Mt.17:3
geherdon Mt.17:6
gefeallon Mt.17:6
ondreardon Mt.17:6
(they) ahofon Mt.17:8
gesegon Mt.17:12
(they) ne ongeton Mt.17:12
(they) ne oncneawn Mt.17:12
(they) geworhton Mt.17:12
(they) waldon Mt.17:12
(they) ongeton Mt.17:13
(they) ne mæhton Mt.17:16
genelecdon Mt.17:19
cuedon Mt.17:19
(they) efne-gecerrdon Mt.17:22
(they) geneolecdon Mt.17:24
(they) onfengon Mt.17:24
(they) cuedon Mt.17:24
geneolecdon Mt.18:1
ða ðe ne duoladon Mt.18:13
gesegon Mt.18:31
(they) gecuomun Mt.18:31
(they) sægdon Mt.18:31
gefylgdon Mt.19:2
geneolecdon Mt.19:3
(they) cuedon Mt.19:7
cuedon Mt.19:10
ða ðe beheoldon Mt.19:12

geðreatadon Mt.19:13
(they)gewundradon Mt.19:25
(they)cuedon Mt.19:25
(they)we forleorton Mt.19:27
(they) cuoedun Mt.20:7
(they) gecuomun Mt.20:9
ða ðe gecuomon Mt.20:9
(they) onfengon Mt.20:9
(they) onfengon Mt.20:10
(they) gefengon Mt.20:11
we ða ðe beron Mt.20:12
(they) geniðredon Mt.20:18
(they) geteldon Mt.20:18
(they)cuedon Mt.20:22
geherdon Mt.20:24
geherdon Mt.20:30
ceigdon Mt.20:30
(they) cuedon Mt.20:33
(they) gesegon Mt.20:34
(they) geneolecdon Mt.21:1
ge-eadon Mt.21:6
to-læddon Mt.21:7
gesetton Mt.21:7
(they) dydon Mt.21:7
gebrædon Mt.21:8
ða ðe fore-eadon Mt.21:9
ða ðe fylgdon Mt.21:9
ða ðe cuedon Mt.21:9
ða ðe cuedon Mt.21:9
alle bebohton Mt.21:12
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hia waldon L.10:13
hea gehreawsadon L.10:13
hea geboeton L.10:13
hea gehendon L.11:54
hia/ða suigdon L.14:4
hia geceason L.14:7
hia cyme L.14:17
hia woendon L.19:11
hia gesmeaudon L.20:5
ða/hia ongunnon L.22:23
hia cuoedon L.22:35
hia cuoedon L.22:38
hia cuoedon L.22:71
hia/ða ontrymmedon L.23:5
hia onstodon L.23:23
hia sægdon L.24:35
hia gebrohton L.24:42
ða/hia geworðadon L.24:52
hia gefrugnon Jn.1:19
hia gelæfdon Jn.6:12
hia gelæfdon Jn.6:12
hia gestændon Jn.10:31
hia gesohton Jn.11:8
hia stylton Jn.13:22
hia tuiaton Jn.13:22
hia hæfdon Jn.15:25
hia gebrecon Jn.18:28

VS
gecuedon hia Mt.8:30
mæhton hia Mt.14:1
gefoerdon hia L.8:31
cuoedon hia L.20:16

X

hia eft ne cerdon/ne cerrde Mt.12.2 'that they should not turn back'

Hia /ne cerrde Mt.12.2 'that they should not turn back'

hea/ða ilca...forleorton Mt.4:22 glosses L.illi

hea/ða ilca... gefylgdon Mt.4:22 glosses L.illi

hia...& gecuedon Mt.13:54

hia..onfengon Mt.16:5

hia..sprecon Mt.20:11

ðas ...dydon Mt.20:12

ðas...worohton Mt.20:12

hia..gebredon Mt.21:8

hia..legdon Mt.21:8

pte hia ...genome Mt.26:4

pte hia...7 ofsloge Mt.26:4

pte hia..genæglede Mt.27:31

ða..7 gehealdon Mt.28:9

hia..dedon Mt.28:15

ða ilco/hia..gesetton Mk.1:19

hia ne fortredon Mk.3:9

hia ...cliopadon Mk.3:11

hia...gesegon Mt.6:49

Hia..7 ceigdon Mt.6:49

Hia..7 clioppaddon Mt.6:49

hia...7 ne mæhton Mt.9:18

hia ne cuðon Mt.9:32

hia...7 ondreardon Mt.9:32

hia...7 fylgdon Mt.10:32

hia..mæhton Mt.11:18

hia...walldon Mt.14:11

ða ne oncneaun L.2:50

hia...7awundradon L.4:22

hia.. gecuomon L.7:4

hia ne oncneaun L.9:45

hia...geteldon L.12:1

hia ne wiston L.20:7

hia...uoendon Jn.11:13

ða/hia ne ineodon Jn.18:28

gie SV
gie onfengon Mt.10:8
ge herdon Mt.10:27
ge wiston Mt.12:7
ge dydon Mt.15:6
gie onfengon Mt.16:9
gie worhton Mt.21:13
gie liornadon Mt.21:16
gie gelefde Mt.21:32
gie leornade Mt.21:42
gie eadon Mt.22:5
gie tyndon Mt.23:13
ge ymb-hurfon Mt.23:15
gie forleortun Mt.23:23
gie ahengon Mt.23:34
gie ofslogun Mt.23:35
gie somnadon Mt.25:35
gie clæðdon Mt.25:36
gie wrigon Mt.25:36
gie sohton Mt.25:36
gie cuomun Mt.25:36
gie dyde Mt.25:40
gie dydon Mt.25:40
gie dyde Mt.25:45
gie eadon Mt.26:55
gie cwomun Mt.26:55
gie genomon Mt.8:19
gie geheron Mt.8:19
gie nomon Mt.8:20
gie foerdon Mt.14:48
gie sohton L.2:49
ge geherdon L.6:27
gie gesego L.7:22
gie herdon L.7:22
ge g[e]herdon L.8:18

gie geherdon L.10:24
gie nomon L.11:52
gie bewoeredon L.11:52
gie cuoedon L.12:3
gie hæfde L.17:5
gie cuoede L.17:5
gie gesegon L.21:6
gie cuomon L.22:52
gie brohton L.23:14
ge geuorðadon Jn.4:21
gie gelefde Jn.5:46
gie gelefde Jn.5:46
gie segon Jn.6:26
gie gebrecon Jn.6:26
gie segon Jn.6:36
gie gebrucce Jn.6:53
gie gedrinca Jn.6:53
ge ongeton Jn.8:32
gie gesegon Jn.8:38
gie nalde Jn.8:42
gie un-uorðade Jn.8:49
gie geherdon Jn.10:20
gie setton Jn.11:34
gie ongette Jn.14:7
gie ongette Jn.14:7
gie geherdon Jn.14:24
gie geherdon Jn.14:28
gie gelefdon Jn.16:27
ge ginomun Jn.21:10
ge gifengon Jn.21:10

gie VS
geherde* ge Mt.5:21 L. audistis
geherde ge Mt.5:27 L. audistis
herde ge Mt.5:33 L. audistis
geherde ge Mt.5:38 L. audistis
geherde ge Mt.5:43 L. audistis

ne gemende gie Mt.6:25
eadage Mt.11:7 'went ye'
eadage Mt.11:8 'went ye'
eadage Mt.11:9 'went ye'
ne plægdege Mt.11:17
ne heafegde ge Mt.11:17
ne gemænde* ge Mt.11:17
ne leornade ge Mt.12.3
ne leornade ge Mt.12.5
geteldon ge Mt.12.7
ne cuðon ge Mt.13:14
oncneaw gie Mt.13:51
onfengige Mt.16:10
ne gelefde ge Mt.21:25
ne gelefde ge Mt.21:32
hæfdigie Mt.21:32
ne leornade gie Mt.22:31
gie..ne inn-eadege Mt.23:13
ne sealdo gie Mt.25:42
ne saldo gie Mt.25:42
ne gesomnade gie Mt.25:43
ne awrigon gie Mt.25:43
ne dyde gie Mt.25:45
gehealdige Mt.26:55
ne leornadege Mk.2:25
ðohtogie Mt.8:18
leornadagie Mt.12:10
hefigo gie Mt.14:6
geherdongee Mt.14:64
cuðugie L.2:49
foerdongie L.7:24
foerdegie L.7:25
foerdongie L.7:26
ne plægade gie L.7:32
ne wæpde gie L.7:32
ne ineodegie L.11:52
forestemdongie L.11:52

unbundongie L.19:31
ne gelefdegie L.20:5
ne rahton gie L.22:53
gebrohtongie Jn.7:45
ne ongeto gie Jn.8:55
næfdo gie Jn.9:41
ne ongetto gie Jn.14:9
ne geginade gie Jn.16:24

X
gegeadredon /ge Mt.13:29
ge ne leornadon Mt.19:4
gie...gesegon Mt.21:32
gie ne dedon Mt.25:45(margin)
ge ne nomo Mt.26:55
gie...7 cuedon Mt.8:20
gie..geworhton Mt.11:17
gie..dydon Mt.11:17
gie..ne gesegon L.10:24
gie..7 ne geherdon L.10:24
gie hia ofslogon L.11:48
gie ne infoerdon L.11:52
gie..gedydon L.19:46
gie ne geherdon Jn.8:47
gie geherdon Jn.9:27
gie ne gelefdon Jn.10:26
ne gie mec geceason Jn.15:16

Abbreviations

AAE African American English

AAVE African American Vernacular English

AS Anglo-Saxon

eME Early Middle English

EModE Early Modern English

f.	Folio
Gmc	Germanic
IE	Indo-European
L.	Latin
Li.	*Lindisfarne Gospels*
ME	Middle English
MnNw	Modern Norwegian
MnSw	Modern Swedish
MS(S)	manuscript(s)
NP	noun phrase
NSR	Northern Subject Rule
OE	Old English
OFr	Old Frisian
OHG	Old High German
ON	Old Norse
ONrth	Old Northumbrian
PdE	Present-day English
PIE	Proto-Indo-European
PGmc	Proto-Germanic
PRO	pronoun
WGmc	West Germanic
Ws	West Saxon