The restructuring of the Old English second weak verbal class: Evidence from late Northumbrian

Elisa Ramírez Pérez

Thesis submitted for the degree of Doctor of Philosophy
Cardiff University
School of English, Communication and Philosophy

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Abstract

The Lindisfarne Gospels is one of the most renowned surviving Anglo-Saxon treasures. Not only is it a stunning codex, it is of great importance to the history of the English language because its interlinear glosses to the main Latin text constitute the first ever translation of the Holy Gospels into the English language. These glosses are written in the tenth-century late Northumbrian dialect of Old English. This dialect is also attested in the majority of the interlinear glosses to another early medieval codex, namely the Rushworth Gospels. These two sets of interlinear glosses inform this thesis.

Earlier studies on the language of the Northumbrian glosses described them in a considerably negative fashion, highlighting that they did not conform to the expected (West-Saxon) grammar and, therefore, represented a problem to the study of Old English (Lindelöf 1927; Campbell 1959). More recent scholarship has taken a more sympathetic approach and has identified the peculiarities of the Northern dialect simply as specific grammatical features of this variant. What is remarkable about this dialect is that it attests to many linguistic innovations that are generally associated with the Middle English period. Thus, it can be claimed that the late Northumbrian dialect is closer to the grammatical system of Middle English than to that of any other contemporary Old English dialect.

The present thesis thoroughly investigates one such innovation, namely the loss of the characteristic -i- stem formative in weak class 2 verbs. To this end, I first introduce the research questions tackled by this thesis in the Introduction. Chapter 2 provides the necessary historical and linguistic background to the late Northumbrian glosses, in an attempt to position my study in its socio-historical context. Given the focus on late Northumbrian verbal morphology in this thesis, chapter 3 includes the main theoretical framework, and chapter 4 covers the methodological approach followed. The results of the several statistical (regression) analyses are presented in chapter 5, where the main factors conditioning the loss of the -i- formative are identified: frequency, etymological class, and structure of the following segment. The results obtained and the factors identified in chapter 5 are discussed in great detail in chapter 6, where I argue that the loss of the -i- formative in weak class 2 verbs is a conceptually and analogically motivated change conditioned by several factors and lexically spreading in late Northumbrian via the low frequency verbs.

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List of Abbreviations

1SG	first person singular
2SG	second person singular
3SG	third person singular
DOE	Dictionary of Old English
DOEC	Dictionary of Old English Corpus
Imper	imperative
Li	Lindisfarne gloss
ME	Middle English
OE	Old English
OED	Oxford English Dictionary
ON	Old Norse
Past part	Past participle
PDE	Present-Day English
PGmc	Proto-Germanic
Pres indic	Present indicative
Pres part	Present participle
Pres subj	Present subjunctive
Pl/PL	Plural
Ru	Rushworth^{1} or Rushworth^{2} gloss (depending on section)

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Chapter 1

Introduction

1.1. Introductory remarks

Old English, being a Germanic language, presents a rather complex grammatical system, especially compared to Present-Day English. Middle English, on the other hand, is usually considered the period when such grammatical complexity began to diminish by means of inflectional levelling, giving rise to the gradual shift which changed the typology of the language from synthetic to analytic (Lass 1992a: 23-25). Language change is a gradual process, hence scholars have stressed the fact that, although from a synchronic perspective Old English emerges as a grammatically complex language, it had already undergone significant changes in the prehistoric period resulting in a much less complex system (Ringe and Taylor 2014). The transitional period covered by the late Old English period already sees a number of significant innovations, the most crucial one being the change in phonological salience of unstressed vowels in terms of the consequences it had on a grammatical level.

The present thesis is concerned with grammatical changes in this transitional late Old English period. Most specifically, morphological changes to the weak verbal system in the late Northumbrian dialect of Old English. In recent years, the late Northumbrian dialect has received considerable scholarly attention for reasons outlined in section 1.3., whereas, in the past, this dialect was disregarded because it deviated quite noticeably from the synchronic pseudo-standard or focused variety, that is, West-Saxon. A very illustrative example of this attitude is provided in Lindelöf's (1927) introduction to Durham, Cathedral Library, MS A.iv.19 where late Northumbrian glosses are found translating Latin texts (see further section 1.2. and 2.2.).[1] Lindelöf (1927: lvi) described the glossator's translation as: "careless renderings" featuring numerous "mistakes of a grammatical character, some of them easy to explain from the nature of the Latin construction, others simply the result of ignorance and carelessness on the part of the glossator". Numerous additional negative comments in relation to the language of the glossator can be found in Lindelöf's introduction. Similarly but more succinctly, Cook (1894) stated in the preface to his glossary of the

[1] Durham, Cathedral Library, MS A.iv.19 is also commonly referred to as Durham Ritual or Durham Collectar. See Jolly (2012) for a discussion on the terminology.

Northumbrian Gospels: “The Northumbrian dialect is perplexed and confusing in many of its phenomena, both phonological and inflectional.” These perplexing and confusing phenomena, careless errors and grammatical mistakes are now understood as being the dialectal features of an extremely interesting variety which displays a great deal of linguistic innovation (see further sections 1.3., and 2.2 to 2.5. below). This thesis provides further evidence supporting the now accepted view that the late Northumbrian dialect presented a much more advanced and simplified grammar, heralding the state of affairs encountered in the Middle English period.

1.2. Research questions, data, and methodology

As noted above, this thesis investigates changes to the morphology of weak verbs in late Northumbrian. More specifically, this thesis traces the loss of the stem formative in weak class 2 verbs, known as the -i- formative. As shown in section 6.3., these verbs presented stem allomorphy whereby the -i- formative occurred etymologically only in certain morphosyntactic categories, namely the infinitive, inflected infinitive, first person singular and plural present indicative, singular and plural present subjunctive, imperative plural, and present participle.

My initial investigation on this topic (Ramírez Pérez 2017 and 2020) revealed that the loss of the -i- formative in weak class 2 verbs can already be seen in the glosses to the Northumbrian gospels, contrary to traditional accounts dating this morphological innovation to the Middle English period (cf. Lass 1992a). Given my initial findings, I considered it relevant to carry out a more in-depth analysis of the process of -i- formative deletion in the late Northumbrian dialect. This tenth century dialect is found in the interlinear glosses to three texts, namely the Lindisfarne Gospels, Rushworth Gospels and Durham, Cathedral Library, MS A.iv.19. As indicated in the following chapter (section 2.2.), the Rushworth Gospels were glossed by two different glossators, Owun and Farman. Owun added glosses in late Northumbrian whereas Farman did so in Old Mercian. Because this thesis is exclusively interested in late Northumbrian for the reasons outlined in the previous paragraph, only the Northumbrian glosses have informed this thesis. I started this project before the COVID pandemic with the intention to include all three sets of interlinear glosses in my analysis. However, due to the closure of libraries associated with the pandemic, I was unable to access a copy of Lindelöf’s (1901) edition of

Durham, Cathedral Library, MS A.iv.19. Thus, the present thesis is based on the Northumbrian glosses found in the Lindisfarne and Rushworth Gospels.

In terms of data collection, I have used Skeat's (1871-1887) edition of Lindisfarne and the more recent edition of Rushworth by Tamoto (2013) in order to manually identify all verbal instances.[2] For weak class 2 verbs, the forms found in Skeat and Tamoto were partially collated against the original manuscripts in order to rule out editorial interference, a prominent issue especially in the context of the Lindisfarne gloss (for which see section 4.3.) (cf. Cole 2014 and Fernández Cuesta 2016).

Unlike my previous incursions into the topic at hand, this thesis has quantitatively analysed the data collected in order to answer some of the research questions mentioned below. More details on my methodological approach are included in chapter 4. This statistical approach is the most significant distinguishing feature between this thesis and earlier and more superficial scholarly approaches on the loss of the -i- formative in weak class 2 verbs (for which see section 2.5.). As such, this thesis significantly expands my earlier work (Ramírez Pérez 2017), which focused exclusively on data collected from Matthew's Gospel in both Lindisfarne and Rushworth[1].

With this work I aim to answer the following research questions. First of all, I intend to establish what the level of paradigmatic innovation and simplification was in the system of weak class 2 verbs in late Northumbrian, that is, how well the innovative process of -i- formative deletion is attested in the Northumbrian glosses. Based on my pilot study which contrasted the level of paradigmatic simplification in late Northumbrian and in Old Mercian, it is expected that the morphological change under study is well attested in Northumbrian. Further, this thesis aims to provide a detailed account on the loss of the -i- formative in weak class 2 verbs. First, I intend to identify which factors condition this morphological process. The rationale behind the selection of potential factors for examination is given in chapters 3 and 4, from a theoretical and practical perspective, respectively. Finally, I intend to provide a justification for the loss of the -i- formative, both accounting for the motivation behind the change but also the

[2] By Lindisfarne Gospels and Rushworth Gospels, this thesis refers to the manuscripts containing late Northumbrian glosses. In order to avoid confusion, the glosses to these two texts will be referred to by the following names: Lindisfarne, Rushworth[1] (Old Mercian portion of the glosses only), and Rushworth[2] (late Northumbrian portion of the glosses only).

manner in which this change is visibly spreading in the language. These aspects are extensively covered in chapters 5 and 6.

In answering these questions, this thesis touches on other topics of scholarly interest. Firstly, I have addressed the topic of transferred verbs at several points throughout this thesis, that is, those verbs originating in the other two weak classes which gradually developed inflections in line with the paradigm of weak class 2 verbs. This transferral process is of significance for my thesis mainly because the processes affecting the other two classes of weak verbs (and which are covered in detail in sections 2.5. and 6.3.) can also be found in the paradigm of weak class 2 verbs. This fact suggests that changes such as the loss of the -i- formative in weak class 2 verbs must be understood as part of a larger restructuring of the weak verbal system as a whole, as argued in section 6.3. Secondly, in terms of the process of -i- formative deletion, transferred verbs are considerably more conservative than original weak class 2 verbs, in the sense that fewer forms showing deletion of the formative are found amongst these verbs. A justification for this seemingly peculiar behaviour can also be found in section 6.3.

The next two topics are related to the notion of scribal practice. Firstly, the linguistic variation found in the Lindisfarne glosses (covered in sections 2.3. and 2.4.) has sparked a lively debate in relation to the possible authorship of these glosses. The main issue under consideration is whether such level of linguistic variation was compatible with the notion of a single glossator. The data presented in this thesis are also quite varied in nature, as presented in chapters 5 and 6, therefore, providing a fitting context in which to consider the vexed question of authorship. A similar contentious topic pertains to the similarities between Lindisfarne and the Northumbrian portion of Rushworth (see further sections 2.3.2. and 2.4.). While traditional scholarship interpreted these similarities as clear evidence of scribal copying on the part of Owun (Skeat 1871: xii-xii; Bibire and Ross 1981), more recent studies opt for a more nuanced interpretation which also considers the many differences found in these two sets of glosses (Kotake 2008a; 2008b; 2016). It will become apparent in the presentation and discussion of my data in chapters 5 and 6 that there are indeed many similarities between these glosses in relation to the incidence of the -i- formative in weak class 2 verbs. There are also considerable discrepancies which problematize the traditional account, both in terms of the incidence of the -i- formative and the choice of verb glossing a given Latin lemma. Thus, this thesis sheds some additional light on

this contentious issue. Both the authorship and the scribal copying debates are addressed in chapter 7 on the basis of my data.

1.3. Relevance of the study

Both the findings in my earlier project and this thesis confirm the fact that the gradual loss of the -i- formative in weak class 2 verbs is well underway in the late Northumbrian dialect. On the one hand, these findings challenge claims that label this process a Middle English innovation (cf. Lass 1992a: 126-127). On the other hand, it will become apparent in the following chapter that these findings are expected, for recent scholarship on this dialect has collectively demonstrated that it is a fascinating variety from a linguistic perspective, providing earlier evidence for grammatical innovations and change usually associated with the Middle English period. Examples include the collapse of the case and grammatical gender system (Jones 1967; Dolberg 2012; McColl Millar 2016), or the restructuring of the weak verbal system (Lass 1992a; Fulk 2012). It will be noted that these changes, amongst others, majorly contributed to the typological change of English. Therefore, by researching the late Northumbrian dialect, scholars of English will be better placed to discuss its overall development and history.

Such wealth of scholarly interest is the result of a change in attitude regarding the validity of late Northumbrian. What earlier scholars considered grammatical errors and confusion (cf. section 1.1.) is now regarded as evidence of synchronic variation in a period marked by ongoing linguistic change (Fernández Cuesta and Pons-Sanz 2016: 2).

On a more general note, this thesis contributes to the field of historical linguistics because it addresses key aspects in the study of language change such as the motivation and means of implementation of a given change. These aspects are theoretically covered in chapter 3 and explored in detail in the context of my data in chapter 6. Finally, this thesis addresses another aspect related to the field of historical linguistics, namely, the use of modern statistical tools for the study of historical data. As mentioned earlier in this chapter, the quantitative analysis of the data is arguably the most significant distinguishing feature of this thesis, especially when compared to existing scholarship on the topic under study. This project constitutes, therefore, further testing ground for the validity of these research methods on historical data.

Chapter 2

The Lindisfarne Gospels and Rushworth Gospels in their historical and linguistic context

2.1. Introduction

Given the aims presented in the introductory chapter, the purpose of the present chapter is to offer all the necessary contextual information so that the goals of the present thesis, its methodology, and its relevance are understood. First of all, section 2.2. below introduces the Northumbrian dialect, which is typically divided into two distinct periods, namely early and late Northumbrian. Textual evidence where these dialects are found is mentioned below, where it is revealed that the earliest extant texts written in Old English are Northern in origin.

Since the focus of this thesis is morphological, the more salient morphological features which distinguish early from late Northumbrian, but also Northumbrian from other Old English dialects, are listed. Where relevant, their importance in the context of the Northumbrian dialect or, indeed, the wider history of the English language is discussed. The majority of this chapter (sections 2.3. and 2.4.) logically focuses on late Northumbrian because the texts which inform the present thesis, namely the Lindisfarne Gospels and the Rushworth Gospels, present glosses mainly written in this dialectal variant. As briefly mentioned in chapter 1 (footnote 1) and as covered in more detail below in section 2.3., the interlinear glosses added to the Lindisfarne Gospels by the scribe Aldred attest late Northumbrian, as do the majority of the glosses in the Rushworth Gospels, added by the scribe Owun. The latter is typically referred to as Rushworth^{2}. Rushworth^{1}, on the other hand, refers to some glosses found in Rushworth added by the scribe Farman which attest the Old Mercian dialect. For the purposes of this thesis, only the late Northumbrian glosses have been collected and analysed.

In line with the approach followed in the first part of this chapter, the late Northumbrian data are also discussed from a primarily morphological angle, focusing first on nominal morphology before moving on to verbal morphology, the specific topic of this thesis. Such a focused treatment of late Northumbrian reveals fascinating details, most notably its advanced stage of implementation of a number of innovative changes, such as the collapse of the Old English gender system or the appearance of

the *-s* verbal inflection in the present tense. When compared to other contemporary Old English dialects, late Northumbrian emerges as rather linguistically innovative. A curious detail, however, emerges when the language of Lindisfarne and Rushworth^2 are compared, as done in section 2.4. For it will become apparent that, in general terms, the language in Rushworth^2 is more conservative than that of Lindisfarne.

It is important the mention that the language of these glosses is far from uniform. In fact, they present considerable variation not only when compared to one another, but also when compared internally. This is particularly true for the language of Lindisfarne, whose pronounced internal variation has led scholars to question Aldred's claim found in Lindisfarne's colophon stating that he was the sole glossator. While the varied nature of these glosses is more congruent with the presence of various glossators, section 2.3.1.a. reveals that palaeographical evidence refutes this alternative. Instead, scholars now favour the interpretation that the varied language of Lindisfarne is the result of mixed glossing where several textual informants must have been consulted by Aldred as he was glossing the gospels. The source of contention in relation to the language of Rushworth^2 is the fact that it presents many similarities to Lindisfarne, as detailed in section 2.3.2. These similarities led scholars including Skeat (editor of the Lindisfarne and Rushworth Gospels) to believe than the scribe Owun must have had access to Lindisfarne and copied the language found there. More recent scholarship refutes this claim, as detailed later in this chapter, and demonstrates that remarkable differences not mentioned in previous studies exist between the glosses, hence rendering the notion of scribal copying if not improbable, at least suspect. The most widely accepted alternative adopted by more recent studies suggests that Owun must have had access to some of the written informants Aldred is thought to have employed in his own rendering of the gospels, thus explaining both the similarities and discrepancies between both sets of late Northumbrian glosses.

Finally, this chapter concludes by providing a detailed overview of the weak verbal system in Old English (section 2.5.), emphasising the major changes which were affecting the structural make-up of this conjugation. This section is of prime importance for the present thesis because many parallels are identified between the restructuring processes affecting the paradigm of weak class 2 verbs and those affecting the wider weak verbal system in Old English. Thus, the process of -i- formative deletion in the paradigm of weak class 2 verbs can be understood as yet another attempt at reducing paradigmatic variation and, as a result, structurally

simplifying the Old English verbal system. These changes foreshadow the state of affairs found in early Middle English, which continue their course of action during this period. Because the loss of the -i- formative in weak class 2 verbs is first attested in the late Northumbrian dialect (so far as written records allow one to see), it is possible to claim that this dialect is closer to Middle English grammar than it is to any of the contemporary Old English dialects. As becomes apparent in the following sections, many other late Northumbrian linguistic innovations support this interpretation, too.

2.2. Northumbrian dialect

For the Anglo-Saxon period, which covers the period from the seventh century to approximately 1150 (Campbell 1959: 1; Hogg 2011: 1), four different dialects have traditionally been identified, namely Northumbrian, Mercian, West-Saxon and Kentish. This classification was first put forward by Henry Sweet in his 1876 article for the *Transactions of the Philological Society* entitled 'Dialects and Prehistoric Forms of Old English' and it was retained in almost all traditional accounts of the dialectal varieties of Old English such as Toon's (1992).

The first recorded texts written in Old English are of Northern origin, and these include (following Sweet 1876: 543; Campbell 1959: 4; Hogg 2011: 4-5, and Fernández Cuesta et al. 2008: 133):

- Runic inscriptions on the Ruthwell Cross and Franks Casket (eighth century)
- Cædmon's Hymn found in two extant manuscripts dated from the eighth century: Kk.5.16, Cambridge University Library (Moore's MS), and Saint Petersburg, National Library of Russia, lat. Q. v. I. 18 (Leningrad's MS)
- Approximately 6000 proper names and place names found in Bede's Historia Ecclesiastica Gentis Anglorum, text found in Kk.5.16, Cambridge University Library (Moore's MS), and Saint Petersburg, National Library of Russia, lat. Q. v. I. 18 (Leningrad's MS)
- Liber Vitae Dunelmensis (eighth/ninth century, British Library, MS Cotton Domitian A.vii)
- Bede's Death Song (ninth century, Oxford, Bodleian Library, Digby 211)
- Leiden Riddle (ninth century, Leiden, Bibliotheek der Rijksuniversiteit, Vossius Lat. 4° 106)

All these texts have been regarded as representative of the early Northumbrian dialect. This classification was established not only on the basis of evidence concerning provenance, that is to say, the area north of the river Humber, but also on the basis of linguistic characteristics shared by these texts. Some later texts have also been identified as belonging to the Northumbrian dialect, albeit to its later variant, that is, late Northumbrian. These are (according to Campbell 1959: 4 and Hogg 2011: 5):

- Interlinear glosses to the Lindisfarne Gospels (tenth century, British Library, Cotton MS Nero D.iv)
- Interlinear glosses to the Rushworth Gospels (tenth century, Oxford, Bodleian Library MS Auctarium D.ii.ixi). The Northumbrian section, traditionally known as Rushworth^{2}, was glossed by a scribe named Owun. The Northumbrian section covers the whole of Mark's Gospel except MkGl (Ru) 1.1-2, 15, the whole of Luke and the whole of John except JnGl (Ru) 18.1-3. The preceding section of this text, that is, Rushworth^{1}, was glossed by the scribe Farman in a different dialect, namely Old Mercian, and it covers the whole of Matthew, three verses in Mark (Mark 1.1-2, 15) and three verses in John (18.1-3) (Tamoto 2013: xcv)
- Interlinear glosses to Durham, Cathedral Library, MS A.iv.19 (tenth century)

It is important to stress from the outset that the study of Old English texts, particularly where it concerns their dialect and their place in the history of the language is hampered by the fragmentary nature of the data at our disposal. For the Northumbrian dialect only, for instance, data for the ninth century are sparse (the short poem Bede's Death Song and the Leiden Riddle contain five lines and fourteen lines, respectively), and the same is true for the first half of the tenth century. The scarcity of major texts from dialects other than West-Saxon is also to be borne in mind when making assumptions about dialectal features and their manifestation across time. For the whole of the Anglo-Saxon period, we have approximately a dozen long Old English texts spanning three centuries. To add to this limitation, the places of (relative) provenance of these major texts show that most of Britain is largely left unattested for

the Anglo-Saxon period, for it is not until the mid-tenth century when several dialectal varieties are attested at the same time (Toon 1992: 427).

Traditionally, the study of Old English dialects has focused on a series of well-attested criteria which distinguish the four dialects. The seven most important criteria are listed in Crowley (1986: 104):

1. West-Saxon /æ:/[1] and non-West-Saxon /e:/[1] (as the reflexes of Proto-Germanic */æ:/): West-Saxon *strǣt* 'road' vs non-West-Saxon *strēt*[3]
2. The distinctive products of breaking (West-Saxon *eall* 'all', *meaht* 'might' vs Anglian *all*, *maht*), retraction (*earm* 'poor' is found as *ærm* in West-Saxon texts vs *arm* 'poor' in Anglian texts; *worða* 'become' in Anglian texts vs West-Saxon *weorþan* 'become'), *i*-mutation (*gæst* 'guest' in Anglian texts vs *gest* in West-Saxon) and Anglian smoothing (*mæht* 'might', *werc* 'work' vs *meaht* and *weorc* in West-Saxon)[4]
3. West-Saxon and Northumbrian diphthongisation of vowels after word-initial palatal consonants (palatal diphthongisation): *giefan* 'to give', *scēap* 'sheep'
4. Kentish and Mercian back mutation (*reogol* 'rule', *siofon* 'seven') and Mercian second fronting (*feder* 'father', *sprec* 's/he spoke')
5. Kentish fronting and raising of /æ:/ and /y:/ to /e:/: *efter* 'after', *netenes* 'ignorance'
6. West-Saxon and late Kentish syncope of present indicative endings in second and third person singular: *rītst* 'you ride', *gebȳgð/gebēgð* 'he bows'
7. Dialectal vocabulary

Most of these diagnostic features, that is, criteria 1-6, are concerned with the phonological development of Old English. Crowley (1986: 105) explains that the

[3] A note on vowel length marking in this thesis: vowel length is only marked when words are discussed generically, since the headword as found in grammars and dictionaries is given. When providing attestations, vowel length is not marked since my rendering follows the attested spelling found in the relevant texts. An example includes the treatment of adverb *ǣr* 'early, soon' below, which in the Leiden Riddle is found (in its superlative form) as *aerest* 'first' (where vowel length is not marked).

[4] The Anglian dialect comprises the Northumbrian and Mercian dialects (Campbell 1959: 4; Hogg 2011: 4). For definitions and further examples of the phonological processes mentioned on this list (breaking, retraction, *i*-mutation, Anglian smoothing, palatal diphthongisation, back mutation and second fronting), see Hogg (2011).

tendency of historical linguists to concentrate nearly exclusively on phonological features is due to the fact that these occur more frequently than inflectional or lexical features, in more types of texts and are regarded to be closer representations of speech. Crowley, much like his predecessors, only engages in a lengthy discussion regarding the dialectal distribution of West-Saxon /æ:[1]/ and non-West-Saxon /e:/ as the development of Proto-Germanic */æ:/, that is, criterion 1 (Crowley 1986: 105-109). Nevertheless, more recent research has expanded the scope of linguistic features examined and has demonstrated that Old English dialects also differ when it comes to nominal and verbal morphology, as will be shown below.

Based on this framework, the diagnostic features of early Northumbrian are as follows (following Fernández Cuesta et al. 2008: 134-137):

1. Proto-Germanic */æ:/[1] > early Northumbrian /e:/[1] which tends to be spelled <e>. The few instances spelled <æ> are believed to be influenced by the contemporary spelling of Latin (Campbell 1959: 50-51 fn2)
2. Proto-Germanic */a/ > early Northumbrian <o> when followed by a nasal consonant, although there are also spellings with <a>
3. Germanic */eu, au/ > early Northumbrian <ea> and <eo>, the former more frequent in Cædmon's Hymn and the latter in Bede's Death Song
4. Breaking of primitive Old English vowels is not very frequent
5. Retraction and Anglian smoothing are more frequent than breaking.
6. Palatal diphthongisation occurs but not consistently in its environment
7. Back mutation occurs too, and its effects are also irregular
8. Epenthesis in final consonant clusters containing a liquid consonant, a velar fricative and another consonant (see also Hogg and Fulk 2011: 231, 233 fn2)
9. Loss of /n/ in final position: first attestations although the consonant tends to be preserved in most cases
10. Unstressed vowels of the inflectional endings are preserved in the nominal, adjectival and verbal paradigms, although some forms show early weakening to /ə/ by a vowel represented by <e>: for example *aerest* 'first' (superlative form of adverb *ǣr* in the Leiden Riddle (LRid 2), where the non-weakened ending

would have been -*ost*).[5] Early materials also show instances of unetymological inflectional endings such as *rodi* 'cross' for etymologically locative *ō*-stem *rōdæ* or *blodæ* 'blood' for etymologically instrumental *a*-stem *blōdi* on the Ruthwell Cross. These have been explained either as products of weakening or merging of cases (Lass 1991)

11. Verbal inflectional endings:
    I. 3SG. pres. indic. -*ith*/-*iþ*/-*it* endings: *hlimmith* 'resounds' in the Leiden Riddle (LRid 6); *drigiþ* 'suffers' and *sitiþ* 'sits' in Franks Casket (right side); *uuiurthit* 'he becomes' in Bede's Death Song *(*BDSN 1)
    II. Pl. pres. indic. -*ath*/-*aþ* endings: *scelfath* 'shake' and *fraetuath* 'adorn' in the Leiden Riddle (LRid 7, 10, respectively); *fegtaþ* 'they fight' in Franks Casket (back side)
    III. Pres. part. -*endu* ending: *hrutendu* 'hissing' in the Leiden Riddle (LRid 7)
    IV. Imper. pl. -*aþ/-as* endings: *gebiddaþ* 'pray' in Thornhill III inscription; *gebidæs* 'pray' in Great Urswick inscription
    V. *Bēon* 'be' forms: pl. pres. indic. *biað* 'they are' in the Leiden Riddle (LRid 5), as opposed to the expected *bēoð*

From the evidence Fernández Cuesta et al. (2008) found in early Northumbrian texts and inscriptions, the following verbal paradigm can be inferred:

Strong verbs	**Weak verbs**
Infinitive -an, -a	**Infinitive** -an, -a **Inflected infinitive** -nae
Present indicative	
3SG -it, -ith, -iþ **Plural** -ath, -aþ	**1SG** -æ **Plural** -ath
Preterite indicative	
	1SG -dæ **3SG** -dae, -dæ, -de, -tæ, -tae, te

[5] Quotations, references, and abbreviations follow the editions given in the Dictionary of Old English Corpus (DOEC henceforth).

Plural -un, -u	
Subjunctive	
Present singular -ae	
Imperative	
Plural -æþ, -æd, -æs, -aþ	
Participles	
Present -endu **Past** -en	**Past** -id, -ad

Table 1. Early Northumbrian verbal paradigm

Already from the data provided above, it is possible to identify certain linguistic processes which are characteristically Northumbrian. First of all, the incipient loss of /n/ in final position, a phenomenon which was already noticed by Sweet (1876: 555). Loss of /n/ was also present in other Old English dialects, but it is not attested until later (Campbell 1959: 302). Its importance for the history of the language lies in the fact that the unstressed vowels preceding the final /n/ became exposed and, therefore, more prone to the phonological weakening process whereby inflectional endings ultimately disappeared (Campbell 1959: 302). This process of phonological weakening of unstressed vowels in final position triggered the appearance of diverse spellings for inflectional endings, for example *-de* and *-dæ* for the third person singular preterite indicative of weak verbs, for example *arærde* 'he raised' in the Thornhill III inscription or *astelidæ* 'he established' in Cædmon's Hymn (CædN 4). Finally, it is worth noting the early instances of *-s* ending for the imperative plural (*gebidæs* in the Great Urswick inscription), which appear alongside the etymological *-ð*.

When it comes to late Northumbrian, the characterising features are (according to Fernández Cuesta et al. 2008: 138-139):

1. Proto-Germanic */æ:[1]/ > late Northumbrian /e:/ which tends to be spelled <e>. As in eNb, there are also spellings with <æ>
2. Proto-Germanic */a/ > late Northumbrian <o> when followed by a nasal consonant; <a> spellings are extremely rare (in contrast to early Northumbrian), except in the preterite singular of strong verbs class 3
3. Germanic */eu, au/ > late Northumbrian <ea> in Lindisfarne and <eo> in Rushworth[2] (Ru[2])

4. Breaking of primitive Old English vowels is still not very frequent, although there are some instances where it happens despite the presence of a labial consonant. Labial consonants are known to have caused retraction of front vowels in Anglian in most cases rather than breaking (Campbell 1959: 56)
5. Retraction and Anglian Smoothing are more frequent than breaking, as in early Northumbrian
6. Palatal diphthongisation occurs quite frequently in Lindisfarne but not at all in Rushworth[2]
7. Back mutation occurs more often than in early Northumbrian, especially in Lindisfarne and Rushworth[2]
8. Epenthesis in late Northumbrian also happens very frequently in final consonant clusters containing a liquid consonant, a velar fricative and another consonant
9. Loss of /n/ in final position is very frequent in the glosses, although the process is not complete, since the consonant still appears in the inflectional endings of the plural preterite indicative and past participle of strong verbs. Late Northumbrian inscriptions, however, do display a few past participles, infinitives and adverbs which retain the final *-n*, for example: *tobrocan* 'ruined'*, tofalan* 'collapsed'*, macan* 'make' and *newan* 'new' in the Kirkdale inscription (eleventh century)[6]
10. Unstressed vowels of the inflectional endings show more variation than the early Northumbrian data, especially in Lindisfarne, where, for instance, the endings for the accusative/genitive singular of the *n*-stem nouns vary between *-a*, *-o* and *-e*. Note for example feminine accusative singular *cyrice* 'church' on the Aldbrough inscription. Late Northumbrian inscriptions also evidence confusion in the spelling of final unstressed vowels, which shows the early decay of the grammatical system in this dialect, hence *-an* as the ending of strong past participles (*tobrocan* 'ruined' and *tofalan* 'collapsed' in the Kirkdale

[6] Middle English data suggest that the early loss of final /n/ in past participles as attested in late Northumbrian texts should be treated separately. This is because, in contrast to late Northumbrian tendencies, northern Middle English dialects were, in fact, more conservative than southern ones when it came to the retention of final /n/ in the past participle of strong verbs (Jordan 1974: 160). Therefore, there does not seem to be a continuation of this feature in northern Middle English.

inscription of the eleventh century, as opposed to the etymologically expected *tobrocen* or *tofeallen*). As in early Northumbrian, such variation has been attributed to a weakening of the quality of these unstressed vowels, which was represented in a variety of spellings

11. Verbal inflectional endings:
    I. 3ps. pres. indic. *-ð*/*-s* endings: *losað* alongside *gelosas* ‘he loses/shall lose’ in MtGl (Li) 16.25
    II. Pres. indic. pl. *-ð*/*-s* endings: *lufiað* alongside *lufias* ‘you love’ in MtGl (Li) 5.46
    III. Pret. indic. pl. *-on*, *-un*, *-o*, *-e*, *-en* endings: *leornade* in MtGl (Li) 12.3, *leornadon* ‘you read’ in MtGl (Li) 19.4
    IV. Imper. pl. *-þ*/*-s* endings: *lufaþ* in MtGl (Li) 23.6, *lufas* ‘love’ in MtGl (Li) 5.44
    V. Pres. part. *-ende*/*-ande* endings: *bifigende* ‘shaking’ in MtGl (Li) 8.14, *fulwuande* ‘baptising’ in MtGl (Li) 28.19
    VI. Past part. *-an* ending: *forebodan* ‘preached’ in MtGl (Li) 24.14
    VII. *Bēon* ‘to be’ forms: pres. indic. pl. *bīað* as well as *aron*

The late Northumbrian dialect, as the features above suggest, shows several developments which are of paramount importance for the history of English. The loss of *-n* in final position is very frequent in the glosses, much more so than in early Northumbrian data, although the process is not complete: its presence seems to be grammatically confined to the inflectional endings of the plural preterite indicative and past participle of strong verbs. Loss of final *-n* further spread southwards during the Middle English period and can be found in texts up until the end of the fourteenth century (Lass 1992a: 65; Moore 1927: 232). The weakening of vowels in unstressed inflectional endings led to the appearance of different spellings for the same reduced vowel. This was caused by the early merging of the case system in this dialect. Further loss of inflectionally marked grammatical distinctions is evident in the extension of *-ð*/*-s* endings to several morphosyntactic categories, namely third person singular present indicative, plural present indicative and imperative plural. Further developments within the verbal system include the early attestations of innovative third person singular present indicative *-s* endings (Campbell 1959: 301), which also occur alongside the etymologically expected *-ð* endings. This feature also spread to the rest of English

dialects, a process which was completed by the end of the Early Modern English period (Lass, 1992b: 162-166), and is now a feature of Standard English. Another innovative verbal form which makes its appearance in the late Northumbrian dialect for the first time, in so far as written records allow us to see, is the plural present indicative for *bēon*, that is, *aron* (Campbell 1959: 350). The use of this form, much like the third person singular present indicative *-s* ending, also extended during Middle English and is now part of Standard English (Lass 1992a: 140).

Finally, it is worth noting another characteristic feature of late Northumbrian, namely, the collapse of the grammatical gender system, a system characteristic of all Germanic languages. The collapse is evidenced particularly in Lindisfarne where demonstrative pronouns are not always inflected as etymologically expected, that is, in agreement with the following noun. Millar (2016: 154-156) provides instances of such gender confusion or disagreement, for example *of ðæm byrgen* 'from the sepulchre' (MkGl (Li) 16.8), where *ðæm* in the dative singular (expected to appear in agreement with etymological masculine and neuter nouns) agrees here with the etymologically feminine noun *byrgen* 'sepulchre'. The same confusion is presented by the following example in LkGl (Li) 17.34: *ðæm næht* 'in that night', where *ðæm* in the dative singular agrees with a feminine noun again. Hence, in light of these examples, *ðæm* can be seen to have been analogically extended to all the gender environments. Diachronically, however, it is the etymological masculine paradigm which emerges as the more robust one and extends to the other environments starting from the late Old English period, hence ironing out interparadigmatic variation in the nominal (and by extension pronominal) systems (Adamczyk 2018: 224-228). These early instances of unetymological gender agreement are highly revealing, for they anticipate the collapse of the grammatical gender system during the Middle English period (Jones 1967; Dolberg 2012; Millar 2016).[7]

[7] These instances of innovative gender agreement could perhaps be conditioned by the grammar of the Latin text they gloss, although it is not possible to establish from the two examples quoted above. On the one hand, *of ðæm byrgen* (MkGl (Li) 16.8) glosses Latin *de monumento*, where no demonstrative pronoun is given. Admittedly, however, *monumento* is a neuter noun in Latin, therefore it could have triggered the neuter form of the demonstrative pronoun in Old English. On the other hand, *ðæm næht* in LkGl (Li) 17.34 glosses Latin *illa nocte*, where the inflected form of the demonstrative pronoun *illa* agrees in gender with the feminine Latin noun *nocte*.

Based on existing scholarship, the above section has outlined the major features of the Northumbrian dialect, from its early texts to the late tenth century sets of glosses. As research has shown, this dialect was rather innovative, and many of its features paved the way for further linguistic advancement and simplification in the later periods of the language. As demonstrated later in chapters 5 and 6, the situation with regard to the development and simplification of the morphology of weak class 2 verbs in the Northumbrian dialect is comparable: in this respect, too, the Northumbrian dialect was also ahead of the other tenth century Old English dialects.

2.3. Late Northumbrian textual evidence

It was mentioned in section 2.2. that there are three major extant texts which attest the late Northumbrian variety of Old English. These are the tenth century Old English glosses added to the Lindisfarne Gospels, the Rushworth Gospels and Durham, Cathedral Library, MS A.iv.19, three bilingual manuscripts whose main bodies were originally written in Latin at earlier dates. In an attempt to better understand the language of the texts under study, namely Lindisfarne and Rushworth^2, it is crucial to take into consideration the circumstances which brought about the production of these manuscripts and their subsequent glossing. The following section is devoted to the historical background underpinning the creation of these codices. When presenting their history – or rather, what scholars believe to know or have inferred about their history – several contentious issues relevant to the purposes of the present thesis are addressed. The first such issue surrounds the authorship of the two sets of glosses. The motivation behind discussing the authorship of the glosses lies in the fact that they share both linguistic similarities and discrepancies which are problematic to account for if one is to endorse the traditional view. The traditional approach claims that the scribe Aldred glossed Lindisfarne and Durham (Skeat 1871: xi; Ross 1970: 363; Jolly 2012: 60), while the scribes who glossed Rushworth^1 and Rushworth^2, namely Farman and Owun, did so heavily relying on Aldred's translation of the Gospels (Skeat 1871: xii-xiii).[8] Based on the findings of my pilot study of the language of St Matthew's Gospel in both Lindisfarne and Rushworth^1 (Ramírez Pérez 2017), I

[8] It should be remembered that data from Durham are not included for the purposes of this thesis for the reasons outlined in the Introduction (section 1.1.).

anticipate that the data and results obtained by the present thesis will also show similarities and discrepancies when comparing the language of Lindisfarne and Rushworth^2 (see chapter 5 for a detailed comparison of these two texts). As previous scholarship has identified a correlation between the shared and non-shared linguistic properties of these texts and authorship of the glosses, section 2.3. covers this topic in detail.

The discussion concerning the authorship debate, in turn, reveals another contentious topic which has a bearing on my project, namely, the place where it is believed that Rushworth^2 was glossed. This aspect informs the debate regarding the authorship of this text, and whether its scribe, Owun, copied the translation found in Lindisfarne. This topic is of relevance because, if one follows the traditional view, in order for Owun to have based Rushworth^2 on the Lindisfarne translation, both manuscripts must have been at the same place for a period of time. It would be expected that this unknown location was important enough in Anglo-Saxon times for it to have housed, albeit for a short period of time, either two highly valuable codices, or even more likely in light of Kotake's recent findings (2008a, 2008b, 2012, 2016), other previous translations of the Gospels that were available to both Aldred and Owun and which informed their own translations. This section starts with a discussion about the Lindisfarne Gospels followed by the Rushworth Gospels.

2.3.1. The Lindisfarne Gospels

The Lindisfarne Gospels, also known as the Book of Lindisfarne (British Library, Cotton MS Nero D.iv), is a large, beautifully designed and illuminated manuscript likely to have been originally produced around the year 715 AD at the monastery of Lindisfarne in Holy Island, a territory off the north coast of Britain which used to belong to the Anglo-Saxon kingdom of Northumbria. The main body of the book is written in Latin, possibly copied from the Latin version by St Jerome commissioned by Pope Damasus in the fourth century (Brown 2011: 35). The Latin writing and illumination of the book were probably the work of Bishop Eadfrith, bishop of Lindisfarne from approximately 698 to 721 AD. Being fully committed to promoting the cult of their patron saint Cuthbert – a former bishop of Lindisfarne –, Bishop Eadfrith is known to have asked the Venerable Bede – the most renowned monk and scholar from the neighbouring, twin monasteries of Monkwearmouth and Jarrow – to write the Life of

St Cuthbert (Brown 2011: 36). It is in connection with this desire to promote the cult of St Cuthbert, which in time became one of the most popular cults in Anglo-Saxon England, that the creation of such a precious manuscript as the Lindisfarne Gospels can be understood. The *Anglo-Saxon Chronicle* records that in the year 787 the Vikings raided the kingdom of Northumbria for the first time, but it was not until 793 that they attacked Lindisfarne in Holy Island (Whitelock et al., 1961). Fleeing these attacks, the community of St Cuthbert abandoned Holy Island, taking their treasured Book of Lindisfarne along with them. The religious community eventually settled in Chester-le-Street, in today's County Durham (Brown 2016: 21), where it is thought that around the year 950 the monk and priest Aldred provided interlinear glosses to the Latin text of the Lindisfarne Gospels. These glosses were written in the late Northumbrian dialect of Old English (Skeat 1871: iii; Ross 1937: 17). In so doing, Aldred provided us with the oldest surviving translation of the Gospels into the English language (Brown 2011: 36).

2.3.1.a. The authorship debate

The most direct evidence regarding the production and history of the Lindisfarne Gospels comes from a side note called colophon which Aldred added in red ink on a blank space on the final page of St John's Gospel on folio 259r. In addition to the colophon, Aldred also wrote six Latin hexameters, placed in the margin next to the Explicit and introduced by the sign of the cross, alongside the so called 'five sentences' below the Explicit, each introduced by crosses (see Brown 2011: 66 for a transcription and translation of the Latin note and the 'five sentences'). The colophon itself and the additional two elements are generally referred to as the colophon group. The colophon proper may be transcribed and translated as follows (adapted from Brown 2011: 66-67)[9]:

+ *Eadfrið biscop/'b' lindisfearnensis æcclesiæ he ðis boc avrat æt frvma gode 7 s(an)c(t)e cvðberhte 7 allum ðæm*[10] *halgvm. ða. ðe / 'gimænelice' in eolonde sint. 7 eðilvald lindisfearneolondinga 'bisc(op)' hit vta giðryde 7 gibelde sva he vel cuðe. 7*

[9] The forward slash symbol / indicates a multiple gloss in the Lindisfarne manuscript, letters in brackets extend abbreviations, and single inverted commas 'x' introduce superscript glosses.
[10] Brown's transcription has *æm*.

billfrið se oncre he gismioðade ða gihrino ðaðe vtan on sint 7 hit gi hrinade mið golde 7 mið gimmvm ec mið svlfre of(er) gylded faconleas feh:, 7 (ic) Aldred p(re)'s'b(yte)r indignus 7 misserrim(us)[11]? mið godes fvltv(m)me 7 s(an)c(t)i cuðberhtes hit of(er) gloesade on englisc. 7 hine gihamadi:.[12] mið ðæm ðrum dælv'm'. Matheus dæl gode 7 s(an)c(t)e cuðberhti. Marc dæl ðæm bisc(ope/um?). 7 lvcas dæl ðæm[13] hiorode 7 æht'v'ora seo'v'lfres mið to inlade.:- 7 s(an)c(t)i ioh(annes) dæl f(er) hine seolfne / 'i(d est) f(or)e his savle' 7 feover ora seo'v'lfres mið gode 7 s(an)c(t)i cuðberhti. Þ(et)te he hæbbe ondfong ðerh godes milsæ[14] on heofnv(m). seel 7 sibb on eorðo forðgeong 7 giðyngo visdom 7 snyttro ðerh s(an)c(t)i cuðberhtes earnvnga:,
+Eadfrið. Oeðilvald. Billfrið. Aldred.
Hoc evange(lium) Deo 7 Cuðberhto constrvxer(vn)t;,
ł ornavervnt

'Eadfrith, Bishop of the Lindisfarne church, originally wrote this book for God and for St Cuthbert and – jointly – for all the saints whose relics are in the island. And Ethilуald, bishop of the Lindisfarne islanders, impressed it on the outside and covered it – as he well knew how to do. And Billfrith, the anchorite, forged the ornaments which are on it on the outside and adorned it with gold and with gems and also with gilded-over silver – pure metal. And (I) Aldred, unworthy and most miserable priest? [He] 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[/s], the section of Luke for the members of the community (in addition, eight ores of silver for his induction) and the section of St John was for himself (in addition, four ores of silver for God and St Cuthbert) so that, through the grace of God, he may gain acceptance into heaven; happiness and peace, and through the merits of St Cuthbert, advancement and honour, wisdom and sagacity on earth.

[11] Brown has *misserim(us)*.
[12] The *signe de renvoi* (:.) following *gihamadi* connects a Latin rhyming verse written on the margin of the page concerning Aldred's own parentage which reads as follows: ":. Ælfredi natus aldredus vocor: bon' mulieris filius eximius loquor", "Aldred, born of Alfred, is my name: a good woman's son, of distinguished fame". *Bon mulieris* is glossed by Aldred as "i(d est) tilw", where *tilw* is an abbreviation for *til wif* "who is a good woman" (Brown 2011: 67).
[13] Brown has *æm*.
[14] Brown has *miltsæ*.

+ Eadfrith, Oethiluald, Billfrith, Aldred made, or as the case may be adorned/embellished, this Gospel-book for God and Cuthbert.' (Translation from Brown 2011: 66-67).

The colophon, therefore, seems to present the history of the Book of Lindisfarne in so far as the community of St Cuthbert recalled it, for it should be stressed that the book itself was made some 250 years before the glosses and colophon were apparently added by Aldred. According to the colophon, the writing of the Latin text (and by extension possibly the illumination) seems to be the work of Bishop Eadfrith (698-721), the binding and covering that of Bishop Aethilwald (721-740), the anchorite Billfrith is believed to have produced the metal cover or book-shrine, while Aldred attributed to himself the glossing of the Latin text into Old English.

The validity of the colophon as 'biography' of the Lindisfarne Gospels, especially its provenance and dating, has been called into question, however. One of the most vehement critiques came from Macalister (1913), who argued that neither the time nor the place stated on the colophon could be accurate. Macalister based his arguments on the "pronounced 'Celticity' of the art of the MS [manuscript]" (Macalister 1913: 300). When compared to other contemporary Celtic manuscripts and their art, all of Irish provenance, such as the Books of Kells, Armagh, Dimma or Mulling, it becomes difficult to justify the artistry and ornamentation of the Lindisfarne Gospels, which is far superior to those found in any of these contemporary codices (Macalister 1913: 300). The pronounced Celticity of the Lindisfarne manuscript, with its case resembling the typical Irish *cumdach* or ornamental book-casket, is also difficult to account for, according to Macalister (1913: 302). Particularly if it is to be assumed that Anglo-Saxon bishops and anchorites living decades after the Celtic monks left Lindisfarne following the Synod of Whitby (664) were so skilful in Celtic motives. Macalister, therefore, strongly refutes the information provided on the colophon and suggests an Irish provenance to the codex which, mainly on the basis of its art, must be dated to the ninth century (Macalister 1913: 303).[15]

[15] Macalister (1913: 303) hypothesizes that the Lindisfarne codex arrived in Holy Island (or at least Anglo-Saxon England) "by some means, no doubt nefarious", asserting on the same passage that the codex must have been stolen: "in the case of the Lindisfarne book, besides stealing and scribbling in it the Saxons asserted that they wrote it themselves!".

More recently, Nees (2003) expressed further scepticism on the validity of the colophon as an authentic and reliable historical source. He highlights that there is no other evidence outside the Lindisfarne colophon which directly links Bishop Eadfrith, Bishop Aethilwald and the anchorite Billfrith to their tasks. However, these figures must have been very well known not only in Northumbria but also to the community of St Cuthbert. Nees (2003: 354-357) notes that both Bishop Eadfrith and Bishop Aethilwald are mentioned in Bede's Ecclesiastical History and Life of St Cuthbert, the former being the person to whom Bede dedicated his prose rendering of the Life of St Cuthbert. Billfrith, on the other hand, appears listed in Durham Liber Vitae (British Library, MS Cotton Domitian A.vii) amongst the names of other highly regarded anchorites, a book which is believed Aldred had access to. Nees (2003: 361), therefore, argues that the details Aldred included on the colophon regarding the other three men credited with the production of the Lindisfarne Gospels were not veridical but rather drawn from textual works which praised these well-known figures, and which were available to Aldred.[16] As for the motivation for writing the colophon, it has been suggested that Aldred was trying to link the manuscript, its creation and its glossing to key figures of the community of St Cuthbert. Aldred names himself as the glossator of the gospels, thus being the fourth contributor to the completion of the Lindisfarne manuscript. In religious terms, the number four is highly symbolic and features numerous times in the Bible, thus the four Gospels, the four rivers of Paradise (Genesis 2.10-2.14), the four golden rings placed on the four corners of the Ark of the Covenants where Moses' tablets were kept (Exodus 25.12-25.16), or the four creatures in the vision of Ezekiel (1.4-2.1), each with four faces and four wings, which carried the Lord in a square-shaped throne (i.e. four sides) with four wheels. By adding himself as part of the four creators and contributors to the Lindisfarne manuscript, Aldred provides yet another 'foursome' (Nees 2003: 345-356). Nees (2003: 346, fn36) further notes how Aldred also added 'foursomes' in his gloss to Durham, Cathedral Library, MS A.iv.19, and states that "Aldred manifestly had a fixation on foursomes'. Much like Macalister (1913), Nees also compares Lindisfarne to Irish codices such as the Books of Dimma (late eighth century) and Mulling (mid to late eighth century),

[16] A similar conclusion is found in Macalister (1913: 304-305), who also noted that the names of the bishops and anchorite might seem obscure to modern readers of the colophon but that "they may have been of the highest importance in the Monastery in Aldred's time".

because these codices, along with the Book of Armagh (ninth century) and the Rushworth Gospels (ninth century), were noted by Brown (1989: 156) as including contemporary examples of colophons. However, Nees stressed that both the Books of Dimma and Mulling contained false colophons whose information was historically inaccurate. Nees (2003: 362), therefore, concludes that "the tenth century colophon added by Aldred was likely false, designed like the false colophons of the Books of Dimma and Mulling to emphasize a connection with important early figures in the monastery".

Brown (2003: 92-93) also stresses the importance of questioning the validity of an inscription added around 250 years after the manufacturing of the codex, but further stresses that, "contextual, historical, palaeographical and archaeological evidence [support] a Lindisfarne origin". Brown (2016: 16-20) does not disregard the possibility that Aldred did draw upon earlier sources to compose the colophon, either – which would account for inconsistencies such as the differing spelling of Bishop Aethilwald's name, namely <Ethiluald> and <Oethiluald> –, but the historical and contextual circumstances surrounding the production of the gospel book indicate that it was likely made in the monastery at Lindisfarne during the period of activity of the bishops named in the colophon.[17]

Also questioned by scholars is the assertion in the colophon that Aldred glossed the whole of the gospels himself. The basis underpinning the authorship debate rests mainly upon two facts. Firstly, there is disagreement as to how to understand the line in the colophon where Aldred associates himself with the glossing of the gospels. Secondly, there are considerable linguistic discrepancies throughout the four gospels which are incompatible with the notion of a sole glossator.

The notion of a sole glossator, however, is fully supported on palaeographical grounds, as Ross et al.'s (1960) study demonstrated. Their conclusion of just one hand is reached, in fact, notwithstanding several inconsistencies. They perceived a difference in intensity in the handwriting of different sections, with some sections being written in a smaller, weaker manner, such as the beginning of the glosses to Mark and the whole of Luke in contrast with the more vigorous handwriting in Matthew. They

[17] See Brown (2011: 66) for further supporting evidence in the form of material artefacts which suggests that the community of St Cuthbert had a strong tradition of preserving and transmitting their history.

also noted how the glossing of John seems to have been a complete separate exercise, coinciding with the assertion in the colophon regarding the distinct nature of the glossing of John. This change in writing is visible from the very first page of John, when the hand becomes neater and tidier when compared to previous pages, and when the letter <v> almost completely replaces both <u> and wynn <p>.[18] It is also in the gloss to John that the colour of the ink changes from brownish black to red, specifically in fol. 220v, which is then used for the remaining of the gospel as well as for the colophon group (Ross et al. 1960: 23-24). Supplements and corrections to John are also given in red ink, except for very few on fol. 228v given in black (Beeby et al. 2017: 200 fn3). Additional red glosses are found outside of John, albeit in smaller numbers: in most of the *Novum Opus* (starting fol. 3r), in all the Prefaces until the *Plures fuisse*, some glosses in Matthew and in Luke 1 (Brown 2016: 30; Beeby et al. 2017: 200 fn6). Notwithstanding all these inconsistencies, Ross et al. (1960) concluded that the letterforms of the glosses were similar enough throughout the four gospels to support the idea of one single hand. In order to account for the linguistic variation manifest in the text which problematises their hypothesis, Ross et al. (1960: 11) proposed that Aldred must have relied on other sources or translations to the Gospels whose contents (and spellings) he incorporated in his own rendering of the Latin text.

The palaeographical evidence, therefore, seems to confirm what is stated on the colophon, that is, that Aldred himself translated the gospels into English. Nevertheless, some scholars question the correct meaning of the section where Aldred claims authorship. For ease of the subsequent discussion, the aforementioned section is given below again. It reads as follows:

7 (ic) Aldred p(re) ‘s’b(yte)r indignus 7 misserrim(us)?
mið godes fvltv(m)me 7 s(an)c(t)i cuðberhtes
hit of(er) gloesade on englisc. 7 hine gihamadi:.

[18] Brookes (2016: 107 fn4) notes that forms with <u> can still be found in John, for instance *suindriga* ‘sunder’ in fol. 204ra10, *fvluande* ‘baptizing’ in fol. 204rb20-21, or *ðvruuardæ* ‘door-keeper’ in fol. 251va4. In the last two examples, alternation between <u> and the more common <v> in John can be seen. Forms with <v> can also be found in earlier sections of the Gospels, indicating that these forms must have been added by Aldred in a latter glossing exercise. Note *gisomnvng* ‘congregation’ before the *Plures fuisse* in fol. 5va6, glossed in red ink.

mið ðæm ðrum dælv‘m’

The sentence at the crux of the authorship debate is “*7 hine gihamadi:. mið ðæm ðrum dælv‘m*” which was translated above as: “by means of the three sections, he made a home for himself”. The underlying sense this translation provides is that Aldred found a home within the community of St Cuthbert in exchange for his work as glossator of the Lindisfarne Gospels.[19] By listing himself as one of the contributors in the making of the book – a treasure to the community of St Cuthbert whose glossing must have taken Aldred several years to complete – he positions himself amongst the renowned figures of the community and, in turn, writes himself into history. It is important to mention, however, that the term *gihamadi* is only ever attested in the colophon to the Lindisfarne Gospels (DOE 2007-: s.v. *ge-hāmian*). Precisely because of the rarity of this word, there has been some debate regarding how to understand the sentence. General consensus, however, seems to favour Skeat’s (1878: ix) rendering: “[Aldred] made himself at home with the three parts”, meaning that he made himself familiar with the first three synoptic gospels. This rendering, however, seems to imply that the three synoptic gospels, unlike John, had not been glossed by Aldred, but perhaps by other glossator(s), a hypothesis which, however, does not tally with the aforementioned palaeographical evidence gleaned by Ross et al. (1960). Skeat’s suggestion is, however, compatible with Ross et al.’s (1960) hypothesis which posited that Aldred may have relied on other sources or translations to the Gospels when glossing Lindisfarne, hence providing a plausible explanation for the marked linguistic inconsistencies manifest in the text. Roberts (2016: 46) also seems to accept Skeat’s interpretation and opts for the rendering “made himself at home with these three divisions”; however, she does not see reason to call upon several glossators.[20]

[19] Pace Brown (2011: 67), who proposes instead that the glossing of the gospels was Aldred’s way of contributing to the community that had recently welcomed him.

[20] A less plausible interpretation for *7 hine gihamadi:. mið ðæm ðrum dælv‘m* is provided by Newton et al. (2012: 109), namely: “[Aldred] homed him with the [other] three parts”. Their suggestion takes *hine* ‘him’ as referring not to Aldred but to St John. Their rendering, therefore, maintains that by translating John into English, Aldred homed St John in Anglo-Saxon England, along with the word of the other three Evangelists (Newton et al. 2009: 120-121). Cole (2014: 10-11), however, is more inclined to think that *hine gihamadi* does refer to Aldred himself and not to St John given the fact that – unlike Aldred’s case – there is no explicit reference to the Saint prior to the use of the anaphoric pronoun *hine*.

The problems posed by the difficulty in interpreting the meaning of the colophon as well as by ascertaining its validity as a record of the early history of the Lindisfarne Gospels have led scholars to the study of the linguistic properties of Lindisfarne in an attempt to shed some light on the vexed question of authorship. The pioneering study is Brunner's (1947-1948) analysis of the distribution of variant forms in Lindisfarne – for example, *ðy* and *ðyu* versus *ðio* and *ðiu* for the feminine nominative/accusative singular of the demonstrative pronoun, or the stems *cueð-* versus *cuoeð-* for the strong verb *cweþan* 'say'. Brunner's study revealed that some of these variant forms, for example the use of *ðy* and *ðyu*, were more dominant throughout the whole of Matthew and the first five chapters of Mark (roughly Mark 5.40) than in Luke and John (Brunner 1947-1948: 35). This division led her to believe that either Lindisfarne had been glossed by two or more scribes (a hypothesis that has been proved unlikely on palaeographical grounds), or that one scribe had glossed all the Gospels, but relying on different exemplars, now lost, which contained different spellings for the demonstrative pronoun and for the verb *cweþan* 'say' (Brunner 1947-1948: 52).

The results of van Bergen's (2008) examination of the variation in frequency regarding the occurrence of uncontracted negative forms (*ne is* 'is not', *ne wolde* 'did not want', *ne wallas* 'do not want') versus contracted negative forms (*nis*, *nolde*, *nallas*) in Lindisfarne, also supports the belief that Aldred's translation was informed by more than one single source (van Bergen 2008: 291). Much like Brunner (1947- 1948) and Cole (2016) below, van Bergen also identified a break in the language starting from MkGl (Li) 5.40. Hence, from this point to the end of Luke, she encountered a clear increase in uncontracted negative forms, as opposed to higher rates of contracted forms of *willan* 'want' and *witan* 'know' in Matthew and John (van Bergen 2008: 284). This demarcation clearly tallies with the division identified by Ross et al. (1960) based on palaeographical evidence (see discussion above).

Similarly, Cole's (2016) findings regarding the varied distribution of *-s*/*-ð* in the third person singular present indicative and plural present indicative verbal forms indicate that the glossing of Matthew and mostly the whole of Mark (commencing approximately at Mk 5.40) are strikingly similar, insofar as these sections display higher rates of *-s* endings (Cole 2016: 184-185). Hence, Cole's results seem to parallel Brunner's demarcations. Cole's analysis, unlike the other studies focusing of the variant forms in Lindisfarne, also identifies a decrease in the appearance of *-s* endings around the beginning of John (Cole 2016: 184). In her view, this break highlights the

linguistic uniqueness of this gospel which seems to indicate that its glossing might indeed have been a separate exercise. This finding parallels Aldred's assertion in the colophon above as well as Ross et al.'s (1960) aforementioned division of the Gospels on palaeographical grounds. Overall, the linguistic variation between *-s*/*-ð* endings in the marking of present indicative morphology in Lindisfarne indicated that it was highly probable that Aldred was relying on pre-existing translations of the Gospels (now lost) while compiling his own version (Cole 2016: 187).

More recently, Costa Rivas (2020) studied the appearance of innovative weak preterite forms in original strong verbs, a phenomenon which seem to have been first attested in the Northumbrian glosses. Her data support the traditional view which establishes John as the most conservative gospel, since very few innovative weak forms are found here (only two). In contrast, Luke emerges as the most innovative gospel with a total of twenty-nine innovative forms, followed by Matthew with sixteen forms, and Mark with twelve (Costa Rivas 2020: 157-158). She (Costa Rivas 2020: 158) puts forward a number of interpretations for such varied data, including the idea that John could possibly be the only gospel which was solely glossed by Aldred. This suggestion acknowledges the now common hypothesis which argues that the general variation in the data is due to the existence of various sources which Aldred consulted (and whose language he incorporated in) for his own rendering of the Latin text.

The above discussion has attempted to contextualise the scholarship surrounding the contentious topics of the origins of the Lindisfarne Gospels and the authorship of its glosses. While it has been shown that scholars disagree with regard to the extent to which they consider that the colophon – and the information there presented – can be taken as either sufficient or acceptable proof for the origin of the manufacturing and the glossing of the Lindisfarne Gospels, analyses of the language of the glosses have provided more solid evidence. The detailed studies mentioned on the previous pages (pace Costa Rivas 2020) coincide in noting a marked change in the language of the gloss to Mark (from Mk 5.40 onwards) and, to a lesser degree, in the language of John. In providing an explanation for such demarcations, Brunner (1947-1948), van Bergen (2008) and Cole (2016) agree that the degree of linguistic variation manifest in Lindisfarne is consistent with the hypothesis that Aldred's translation is not entirely his own and must have made use of earlier sources at times. This hypothesis is also acknowledged by Costa Rivas (2020).

In light of these studies, the analysis which the present thesis proposes also engages with and contributes to the authorship debate. Hence, when examining the loss of the -i- formative in weak class 2 verbs, this thesis discusses whether the distribution of the formative coincides with the demarcations noted by previous studies or not (see further section 5.2.), and considers what the results of this distribution can tell us regarding the identity or circumstances of the glossator of the Lindisfarne Gospels (see further section 7.3.).

2.3.2. The Rushworth Gospels

The Rushworth Gospels (Oxford, Bodleian Library MS Auctarium D.ii.ixi), also known as the Macregol Gospels, is another text associated with the Anglo-Saxon kingdom of Northumbria. Like the Lindisfarne Gospels, the Rushworth manuscript also contains a bilingual copy of the Gospels, where the main text was written in Latin but later glossed into Old English by the scribes Farman (Rushworth^{1}) and Owun (Rushworth^{2}) in the tenth century.

Three colophons provide direct evidence about the manuscript's history, which can be divided into two stages. The first colophon is written in Latin and is concerned with both the original production of the codex and the writing of the Latin text. The other two colophons, on the other hand, are written in Old English and relate the later stage where the Latin Gospels were given Old English glosses by Farman and Owun. The three colophons will now be discussed separately. The Latin colophon on f.169v reads as follows (from Tamoto 2013: 22): "*Macregol dipincxit hoc euangelium. Quicum(que) legerit & intellegerit istam narrationem, orat pro Macreguil Scriptori*" 'Macregol painted this gospelbook. Whoever shall have read or understood that story prays for Macreguil the scribe' (translation from Brown 2006: 296). Although the colophon describes Macregol's role in the production of the codex as illuminator (*dipincxit* is possibly a variant of classical Latin *depinxit*, from *depingere* 'to depict, paint or draw' according to Kenney 1968: 642), many scholars have argued that Macregol not only illuminated the manuscript but also wrote the Latin script (see Kenney 1968: 642, Fox 1990: 287 or Rogers 1991: 150). Thus, the production of the Rushworth codex would parallel that of Lindisfarne since Bishop Eadfrith was traditionally credited with its writing and illumination (see discussion above in section 2.3.1.). Brown (2006: 296) is less accepting of this view, however, and points out that

Latin *depinxit* referred to two separate activities, namely writing and illuminating, likely to have been performed by two separate individuals. Noting that it was unusual for illuminated manuscripts to be the product of a single scribe-illuminator, Brown (2006: 296) proposed that at least two scribes must be responsible for the writing and illumination of the Rushworth codex, with the colophon being "written by the main scribe".

Admittedly, the Latin colophon does not mention much regarding the provenance and dating of the codex. Up until the eighteenth century, it was believed that it had been produced in Anglo-Saxon England by the Venerable Bede himself. The Oxford catalogue *Catalogi Librorum Manuscriptorum Angliae et Hiberniae in Unum Collecti, cum Indice Alphabetico* (Bernard 1697: 181) lists MS Auctarium D.ii.ixi thus: "3946.14. Evangelia 4. Latine, cum interlineari versione Saxonica, pyxide inclusa. This was given by Mr. Rushworth, and is thought to be Bede's own work".[21] At the close of the eighteenth century, however, the Anglo-Saxon provenance of the manuscript was refuted when an Irish antiquarian identified the Macregol in the Latin colophon as Mac Riagoil, a scribe and Abbott from Birr (Ireland) who died around 820 AD (Tamoto 2013: xxiii). The provenance and date of the manuscript (Birr, Ireland ca. 800 AD) are now unanimously accepted. The connection of this manuscript with Anglo-Saxon England, therefore, lies in its Old English interlinear gloss. It is generally held that this gloss was the work of two separate scribes (identified as Farman and Owun on the basis of palaeographical and colophonic grounds), and that the glossing happened in Northumbria during the latter half of the tenth century. Some historians have proposed that the Rushworth codex must have been brought to England possibly in the second half of the tenth century as part of the contact between Irish and Anglo-Saxon religious communities (Carley and Dooley 1991: 151).

Regarding the later production stage when the Old English glosses were added, the two Old English colophons provide some information. The first colophon found on f.50v (final page of Matthew) is partially written in Latin and states this (from Tamoto 2013: xciv): "*Far(man) p(res)b(yte)r þas boc þus gleosede dimittet et d(omi)n(us) omnia peccata sua si fieri po(test) ap(ud) d(eu)m*" 'Farman the priest thus glossed this

[21] Translation of the Latin text: "4 Gospels. Latin, with interlinear version in Saxon (i.e. English), casket included." Link to digitised catalogue: https://archive.org/details/CatalogiLibrorumManuscriptorumAngliae1/page/n225

book; may the Lord forgive him all his sins, if it can be so with God'. As in Macregol's colophon, Farman's colophon credits himself with the writing of the gloss but does not say much about where or when his glossing took place. The second Old English colophon found on f.168v and f.169r (after the conclusion of John) is slightly more informative (original and translation from Tamoto 2013: xciv):

Đe min bruche gibidde fore owun, đe đas boc gloesde. færmen đæm preoste æt harawuda. hæfe nu boc awritne bruca mið willa symle mið soðum gileofa sib is eghwæm leofost

'Let him that makes use of me [i.e. of the manuscript] pray for Owun who glossed this book for Farman the priest at Harewood. Have now a written book, use it with good will ever, with true faith; peace is dearest to every man'.

Based on what is stated in the colophon concerning Owun, the glossing of Rushworth happened at a place called *harawuda*. Throughout the years, scholars have speculated about the possible whereabouts of *harawuda*. Skeat (1871: xii) locates *harawuda* or Harewood in the West Riding of Yorkshire, near the river Wharfe, a location later endorsed by the scholars from the Palaeographical Society. Bibire and Ross (1981: 98) identify up to eight different places by the name Harewood/Harwood in England, although they note that only two of them could possibly refer to the *harawuda* mentioned in Owun's colophon, namely the one in Herefordshire and the one in Leeds. Based on an analysis of the language of Aldred, Farman and Owun – the latter two scribes having already been identified by Skeat (1878: xii-xiii) as speakers of Old Mercian and Northumbrian dialects, respectively – Bibire and Ross (1981: 98-99) conclude that the linguistic traits which characterised Owun best fit the Harewood near Leeds. However, they are not unaware of the fact that this location is problematic: the Harewood they propose had at best a rather small parish church, which is not likely to have housed a scriptorium where the glossing of the Rushworth manuscript could have taken place. Equally as problematic is Bibire and Ross's suggestion that the Lindisfarne Gospels, a treasured codex for the St Cuthbert community, must have been taken to the small parish church in Harewood (Leeds) where they argue Owun glossed Rushworth^2. This suggestion follows their belief that Owun heavily based Rushworth^2 on the Lindisfarne translation, hence the many

similarities between these two texts. The linguistic similarities are covered below in sections 2.4.1. and 2.4.2. Nonetheless, it is important to mention at this stage that new linguistic evidence, which is presented below, has convincingly demonstrated that Owun is unlikely to have copied from Aldred's gloss. Given these difficulties, the explanation of the *harawuda* debate provided by Coates (1997) seems more likely. Coates proposed that *harawuda*/Har(e)wood in fact referred to the area of Wall in current Staffordshire County. Coates (1997: 454-455) argued that English *harawuda*, which meant hoar or grey wood and most likely referred to a path of ancient woodland or 'wildwood', was a translation from a previous Brittonic term, namely *Letoceto* (as attested in written sources, possibly stemming from the compound **lētocaiton*, literally 'grey-wood'). *Letoceto* was, in turn, identified as Lichfield by Coates, guided by the fact that this area had in Anglian times an open space – or *feld* – nearby (Coates 1997: 454-455). All in all, Coates's proposal argued that *harawuda* was a location near Lichfield, once the ecclesiastical capital of Mercia. Thus, if, as Coates also believes, Owun consulted the Lindisfarne translation when glossing Rushworth^2, it would not be impossible to imagine that the Rushworth Gospels were in Lichfield, Mercia, where Farman glossed his share (Rushworth^1), and that the Lindisfarne Gospels were taken to Mercia around 950 AD in order to protect the precious codex from a new wave of Viking attacks. It could perhaps have been brought down from Chester-le-Street by Owun himself who, once in Mercia, contributed to the glossing of Rushworth^2 (Coates 1997: 458-459).

Recent research has shown, however, that the relationship between the Lindisfarne and Rushworth glosses was probably more indirect than mere copying suggests. Following an examination of the word order of Lindisfarne, Rushworth^2 and the Latin texts they glossed, Kotake (2008a) demonstrated that the syntax of Lindisfarne and Rushworth^2 considerably deviated from one another on the one hand, and from the Latin syntax on the other hand; accordingly, he concluded that the traditional view could not be upheld. Let us consider a few examples (in Kotake 2008a: 66-72):[22]

[22] All quotations from Lindisfarne and Rushworth follow Skeat's (1871-1887) edition. References and abbreviations follow the DOEC referencing system, and Present-Day English translations are taken from the Douay-Rheims Bible and, therefore, follow the Latin text.

[1] Jn 9.35

Latin	*audiuit iesus quia eiecerunt eum foras*
JnGl (Li) 9.35	*geherde se hælend forðon hine auorpon ut*
JnGl (Ru) 9.35	*giherde ðe hælend þte awurpon hine utt*
Translation	Jesus heard that they had cast him out

[2] Jn 15.21

L	Quia nesciunt eum qui misit me
JnGl (Li) 15.21	*foreðon nuutton hinne ł ðone seðe mec sende*
JnGl (Ru) 15.21	*forðon nutun hine seðe sende mec*
Trans	because they know not him who sent me

These two examples show that, while Latin word order was VO, Aldred deviates from this word order rather frequently and chooses OV instead. This contrasts with Owun's glossing which follows Latin syntax more faithfully. Kotake (2008a: 70) also noted that all the instances where Aldred suddenly deviates from the Latin text occur exclusively in John, hence this change in glossing practice highlights the special character of this Gospel. Example [3] below is remarkable in so far as Latin influence cannot account for the differences in word order between Lindisfarne and Rushworth[2]. This is because the one-word Latin passive form *traditur* 'be betrayed' has to be expanded into a periphrastic form in Old English. Thus, while Aldred prefers a *bēon*-form followed by a past participle, Owun opts for the past participle to be followed by the *bēon*-form.

[3] Mk 14.41

L	*ecce traditur filius hominis in manus peccatorum*
MkGl (Li) 14.41	*heono bið gesald sunu monnes in hond synnfullra*
MkGl (Ru) 14.41	*heonu gisald bið sunu monnes in honda synn-fullum*
Trans.	the Son of man shall be betrayed into the hands of sinners

Thus, the evidence provided by Kotake demonstrates that the syntax of Rushworth^2 is considerably different from that of Lindisfarne. So much so that it is problematic to assume that Owun copied from Aldred's Lindisfarne (Kotake 2008a: 76).

Such a conclusion is also arrived at if the discrepancies in terms of lexical choices between these two texts are considered. Kotake (2008b) examined the distribution of Old English verbs *andswarian* and *andwyrdan* rendering Latin *respondere* 'answer' and discovered that Aldred showed a preference for *andwyrdan* while Owun's preferred choice was *andswarian* (Kotake 2008b: 36). Closer examination to the distribution of *andswarian* and *andwyrdan* revealed marked differences between Lindisfarne and Rushworth^2, for example Aldred's change to *andswarian* from the latter part of Mark (starting from MkGl (Li) 11) to the end of Luke, only to return to his preferred *andwyrdan* in John, and very consistently. As section 2.3.1. showed, linguistic discrepancies and irregularities are abundant in Lindisfarne, thus Aldred's sudden regularity in choosing *andwyrdan* throughout John is striking. The sudden and strikingly regular nature of this change was interpreted by Kotake as (most likely) not internally motivated, but rather the result of linguistic interference, in the sense that Aldred was probably consulting other translation(s) of the Gospel where *andwyrdan* was used (Kotake 2008: 38).[23] In stark contrast, Owun's glossing practice was much more regular, preferring *andswarian* almost exclusively. Even when Owun's choice changed to *andwyrdan* (from MkGl (Ru) 11 until nearly the end of the gospel), he did not once follow the instances in Lindisfarne where Aldred provided *andswarian* in the corresponding section. These differences in glossing behaviour once again lend support to the argument that Owun did not copy from the Lindisfarne manuscript. In turn, the similarities between both glosses – for instance, the equal distribution in Lindisfarne and Rushworth^2 of *andwyrdan* in the second half of Mark as opposed to *andswarian* at the very end of that gospel – suggest that the source for them, once having ruled out the option of direct copying, must lie in the fact that both Aldred and Owun consulted a shared or common translation of the gospels while glossing Lindisfarne and Rushworth (Kotake 2008b: 38-39).

Further supporting evidence for this hypothesis was later provided by Kotake (2016), who analysed Owun's glosses and corrections which corresponded to Latin

[23] Brown (2011: 68) toys with the idea that Aldred's gloss to John could perhaps have been informed by an earlier translation of this Gospel which Bede worked on before passing away.

text not found in either the Lindisfarne or the Rushworth manuscripts (labelled 'non R-Y readings'). One such example is given under [4] below (found in Kotake 2016: 388):

[4] LkGl 10.41

L	*martha martha sollicita es et turbaris circa plurima*
LkGl (Li) 10.41	*geornfull ł arð 7 ðu bist astyred ymb ða menigo*
LkGl (Ru) 10.41	*geornfull is 7 ðu bist astyred forðon monige*
Trans	Martha, Martha, thou art careful, and art troubled about many things[24]

What is interesting about the Rushworth^2 rendering of the Latin text is the insertion of the adverb *forðon* 'therefore', translating Latin *circa* 'about'. Other than interpreting this as a scribal error, Kotake (2016: 388) noticed that other Latin gospels which are known to have circulated in Anglo-Saxon Britain had *erga* 'in respect to' instead of *circa*.[25] *Erga* and *ergo* 'therefore' are very similar words, sometimes mistaken in Latin manuscripts (Fischer 1988-1991: iii, 299). It could, therefore, be argued that Owun's *forðon* 'therefore' does not represent a scribal error. Owun generally glossed Latin *ergo* with *forðon* (Kotake 2016: 387), hence this form probably reflects Latin *ergo*, a common mistake in Latin manuscripts for *erga*.

The question of the relationship between Lindisfarne and Rushworth^2 needs further study in order to provide more solid data on which to test the hypotheses outlined above. Thus, the data and results of my thesis (chapters 5, 6 and 7) shed more light on the glossing preferences of Aldred and Owun. Although variation is very much present in both Lindisfarne and Rushworth^2 in terms of the incidence of the -i- formative, my data do not immediately support the notion of scribal copying – see further chapter 7.

2.4. The language of Lindisfarne and Rushworth^2

[24] Kotake (2016: 388) notes that *martha* appears only once in manuscript R, that is, in the Rushworth manuscript. Neither in Lindisfarne nor in Rushworth^2 is this name glossed. The translation provided from the Douay-Rheims Bible follows the Latin text, hence why the name Martha is given.

[25] See Kotake (2016: 388) for references to the twelve known Latin manuscripts which contained *erga* for *circa* in this verse.

This section presents a detailed account of the most characteristic features of the language of Lindisfarne and Rushworth^2. The expression of nominal morphology in Northumbrian is covered first in section 2.4.1., whereas section 2.4.2. is devoted exclusively to verbal morphology. As a result of outlining features most characteristic to each text, this section aims to highlight, too, how these late Northumbrian texts relate to one another. Thus, it will become clear that the language of Lindisfarne and Rushworth^2 have a lot in common, so much so that for a considerable amount of time scholars believed Rushworth^2 to be a mere copy of Lindisfarne (cf. section 2.3.2.). As shown in the previous section, this notion has been discredited by more recent scholarship. Finally, the more conservative nature of Rushworth^2, especially when compared to Lindisfarne, is referred throughout this section.

2.4.1. Nominal morphology in late Northumbrian

2.4.1.a. Lindisfarne Gospels

As mentioned in section 2.2., the loss of grammatical gender in English and its replacement by a natural gender system seem to have been first evidenced in Lindisfarne (Ross 1936: 321; Millar 2016: 153). The grammatical gender system operative in Old English evolved from the Germanic system whereby nouns referring to an animate entity could either be grammatically masculine or feminine whereas inanimate nouns were largely grammatically neuter (Ringe and Taylor 2014: 126). The linguistic manifestation of grammatical gender was also aided by distinct inflectional endings for nouns, adjectives, determiners and pronouns. For instance, the declension of the strong masculine *a*-stem nouns differed from that of the strong feminine *ō*-stem nouns. Similarly, weak *n*-stem nouns varied their inflectional endings depending on the grammatical gender of the noun (Campbell 1959: 223-248). Within the noun phrase, adjectives, determiners and pronouns had to grammatically agree with the gender of the noun they complemented.

However, Lindisfarne demonstrates that the inherited case system proper to Old English was starting to disappear due to the loss of distinct inflectional endings, which eventually led to the decay of the grammatical gender system. With regard to nominal declension, for instance, this structural reduction was the result of several processes. Firstly, the loss of phonological distinction of final unstressed vowels and inflectional endings, leading to subsequent analogical extension of salient, productive markers,

such as the strong masculine and neuter -*es* genitive and masculine -*as* plural endings to the feminine paradigms. Secondly, these analogical processes could lead to case syncretism, for example the use of the nominative and accusative singular case in place of the dative singular (Ross 1936: 321-322; Ross 1937: 54-103; Fernández Cuesta and Rodríguez Ledesma 2020; Rodríguez Ledesma 2022).[26]

With regard to the extension of the -*es* genitive, it has been noted that the ending proper to the masculine and neuter *a*-stems had been adopted by practically all other classes of nouns and, therefore, it became the regular marker for the genitive (Ross 1937: 99; Rodríguez Ledesma 2016: 215; Rodríguez Ledesma 2022). Examples include genitive singular *ō*-stem *lufes* 'faith's' (MtArgGl (Li) 13.1), i-stem *brydes* 'bride's garment (wedding garment)' (MtGl (Li) 22.11), *r*-stem *fadores* 'his father' (MtGl (Li) 16.27) and *n*-stem *oxes* 'cow [of the Pharisees]' (LkHeadGl (Li) 8.58). Similarly, as far as the plural ending is concerned, the language of Lindisfarne seems to indicate that the nominative/accusative plural -*as* ending characteristic of the masculine *a*-stem nouns was also being extended to other nouns. Although Ross claims that this ending "was extended to almost all classes in Lind[isfarne]", he also acknowledges the fact that such ending is not found in *u*-stems and neuter *n*-stems (Ross 1937: 100). A more recent and detailed study has demonstrated that the process of analogical extension of the -*as* plural ending is scantly attested in Lindisfarne, hence suggesting an initial stage of the analogical process (Rodríguez Ledesma 2022: 23). Note for example the neuter *a*-stem *suordas* 'swords' in LkGl (Li) 22.38 versus the etymologically expected -*ø* ending *suord*, or *n*-stem *witgas* 'prophets' in MtGl (Li) 7.12 versus expected *witgan*. Similar examples are found for other declensional classes such as original deverbal *ō*-stem nouns ending in -*ung*, kinship *r*-stems (restricted to the lemma *fæder* 'father' only), and *steorra* 'star' (Rodríguez Ledesma 2022: 23).[27] All these instances where

[26] By the Old English period, the nominative and accusative cases had different morphological realisations only in the *jō*-stems and *n*-stems. In all other classes of nouns, the difference in flexion between nominative and accusative forms was no longer distinguishable (Ross 1937: 120; Campbell 1959: 234, 248).

[27] It should be remembered that, when quoting directly from Lindisfarne and Rushworth[2] (or when referring to particular words found in these gospels), vowel length is not marked in this thesis in line with Skeat's (1871-1887) and Tamoto's (2013) editions of the gospels, where vowel length is not marked because they follow the spelling found in the manuscripts. Examples include the genitive singular form *brydes* or the nominative plural form *witgas* discussed in the previous lines and which have /ȳ/ and /ī/ in their root respectively. When addressing words generically, the form of the word as found in dictionaries and grammars is

the *-es* genitive and *-as* plural endings were being used outside their expected linguistic categories by means of interparadigmatic analogical extension merely anticipated the state found later in Middle English (Ross 1937: 99-100; Rodríguez Ledesma 2022: 24).[28]

It should be noted that the presence of innovative gender associations can also be found in the other elements of the noun phrase, for instance in terms of the agreement between a noun and a determiner. Consider *ðios wif* 'the woman' in LkGl (Li) 7.44, which shows the feminine form of the determiner *ðios* preceding the etymological neuter noun *wīf*. An example of this scenario is given in [5]:

[5] Matthew 9.22

L	*Et salva facta est mulier ex illa hora*
MtGl (Li) 9.22	*7 hal geworden wæs wif of ðæm ł ðær tid*
Trans.	and the woman was made whole from that hour.

What is remarkable in example [5] is that Aldred provided two demonstrative pronouns preceding the etymologically feminine noun *tīd* 'time'. The first one, *ðæm*, would have been the inflected form of the pronoun expected for any masculine or neuter noun, and therefore, it constitutes here an innovative gender association. On the other hand, the second pronoun, *ðær/e*, is the etymologically correct form given the Old English inherited gender system. The presence of the innovative *ðæm* within a feminine context, however, suggests that in the late Northumbrian dialect the marking of gender by distinctly inflected forms of the pronoun was becoming less rigid, with one form potentially being used in all three gender environments.

When it comes to the intraparadigmatic extension of the nominative/accusative singular case for the dative singular, it seems that this analogical process – which is

provided and, thus, vowel length is marked. Examples include the discussion below on nouns *wīf* 'wife' and *tīd* 'time'.

[28] By early Middle English, the genitive marker for strong masculine and neuter *a*-stem nouns, namely *-(e)s* (< OE *-es*), was very regularly being used for most nouns, irrespective of their etymological class (Allen 2003: 3, 13). In late Middle English, however, some examples of irregular genitives could still be found (Allen 2003:14). Similarly, as far as the marking of the plural is concerned, *-(e)s* ending spread from Northern dialects during the Middle English period and became the general marker for all classes of nouns by the end of the fourteenth century – with the exception of some nouns in southern dialects (Newman 1999: 82).

fairly common in Middle English (Ross 1937: 122) – is also first observed in Lindisfarne. Consider the following example:

[6] John 20.2

L	*At illae exeuntes fugerunt de monumento*
JnGl (Li) 20.2	*soð ða ilco ðona foerdo flugon of ðæm byrgen*
Trans.	But they, going out, fled from the sepulchre

Example [6] above shows the Old English noun *byrgen* 'sepulchre, tomb' in the dative singular grammatically (note the determiner *ðæm* inflected for the dative singular), although the noun is not inflected in the expected manner, that is, with final *-e*, thus *byrgene*. Rather *byrgen* seems to have the ending expected for the nominative or accusative singular, namely *-ø*. With three out of the four cases in the singular losing their inflectional endings, namely nominative, accusative and dative and, as a consequence, adopting the exact same spelling, example [6] suggests that the inflectional differences natural to the Germanic case system were beginning to be ironed out by the tenth century in the Northumbrian dialect.

Finally, it is worth mentioning another feature which is only attested in Lindisfarne (although exclusively in Matthew and the first five chapters of Mark (Brunner 1947-1948: 35)) and which is testament to the innovative nature of its language. This is the analogical development of a new feminine form of the demonstrative pronoun, namely, *ðȳ*, which was historically representative of the instrumental case (Hogg and Fulk 2011: 194-195):[29]

[7] Matthew 9.24

L	*Non est enim mortua puella*
MtGl (Li) 9.24	*Ne is forðon dead ðy mæiden*

[29] The origin of *ðȳ* (and its variant form *ðon*) as an instrumental demonstrative pronoun is obscure (Campbell 1959: 290) and does not correspond to alternative forms found in other Germanic languages (Hogg and Fulk 2011: 194). The origin of the feminine *ðȳ* pronoun found in Lindisfarne is also described as "obscure" by Ross (1937: 115), who also claims that the form cannot be the result of borrowing from Old Norse (Ross 1937: 116). Although no explicit mention as to the origin of the feminine *ðȳ* pronoun is made by Campbell, he does state that "new forms [such as nominative singular masculine] *ðe* [and nominative singular feminine] *ðīo, ðīu, ðȳ* are developed" (Campbell 1959: 291). Given the already existing instrumental pronoun *ðȳ*, the analogical formation of the feminine *ðȳ* pronoun could be posited.

Trans. The girl is not dead

[8] Matthew 9.25

L *Et cum ejecta esset turba*

MtGl (Li) 9.25 *7 mið ðy fordrifen wæs ðy ðreat / ðy menigo*

Trans. And when the multitude was put forth.

The Germanic-inherited case and gender systems were highly interrelated, in so far as the expression of nominal inflection tended to differ depending on the gender of a given noun. Thus, the discussion above has shown, for example, that the *-as* ending was the characteristic marker for plurality for masculine *a*-stem nouns in the nominative and accusative environments. Once this *-as* ending was analogically extended to other genders and stem classes (for instance to the neuter *a*-stem nouns or to the weak *n*-stem nouns, whose etymological plural markers were *-ø* and *-n*, respectively), the inherent inflectional variation within the nominative/accusative plural markers was beginning to be ironed out in all the aforementioned environments. Hence, Lindisfarne presents a rather complex scenario where etymological instances of case and gender agreement appear alongside innovative gender agreements, as illustrated by examples [5] to [8] above. Such a mixture was indicative of a system at the brink of collapse. The subsequent structural reduction leading to paradigmatic simplification resulted in a system where grammatical gender was eventually lost and function was by and large no longer dependent on form or case marking, but rather it was expressed by the positioning of syntactic elements within clauses, which, in turn, became much more rigid (Millar 2016: 166). It is worth stressing that such level of reduction was not paralleled in any other contemporary Old English dialect.

So far, the above discussion has revealed that, by and large, the language of Lindisfarne, in so far as nominal morphology is concerned, seems to reflect a more advanced grammatical system, rendering this particular text more similar to the Middle English declensional system than to the Old English one. A great deal of inflectional variation is found in Lindisfarne, with etymological gender and case agreement appearing alongside innovative formations. Such variation renders the system more complex but, paradoxically, it heralds imminent structural reduction and simplification. In other words, what this high level of variation demonstrates is that the language of Lindisfarne is far from homogeneous, a clear sign of a linguistic system undergoing

change. It is important to consider, however, that intratextual variation could also be attributed to different authorship of the glosses (see further section 7.3.). As has been previously discussed in section 2.3.1.a., it is highly likely that Aldred relied on various copies of the gospels (now lost) while glossing Lindisfarne, which could explain the striking linguistic variations found within this text. As such, it would be difficult to reach any firm conclusions, for instance, on whether the innovative feminine form of the definite article *ðȳ* was truly part of Aldred's active repertoire or not. Finally, to conclude this discussion, it must be noted that specific preferences which are part of the idiolect of individual scribes must not be counted as evidence of a given dialectal variant (Benskin et al. 2013: General Introduction). It, therefore, could be the case that some of the linguistic features of Lindisfarne are not fully representative of the Northumbrian dialect itself, but rather of the idiolect of the glossator, like the use of innovative feminine definite article *ðȳ*. Nonetheless, given the paucity of evidence at our disposal, it is challenging to determine whether this is indeed the case, thus why discussions regarding the linguistic properties of Lindisfarne and Rushworth must remain speculative.

2.4.1.b. Rushworth Gospels

Scholarship on the Old English glosses to the other major late Northumbrian text, namely Rushworth^2, has traditionally focused on the many similarities shared between Lindisfarne and Rushworth^2. The traditional explanation for such high degree of similarity consisted in assuming that Owun had access to Aldred's version of Lindisfarne, on which Owun based his own version, an assumption discredited by more recent scholarship as discussed in section 2.3.2. Such similarities include the inflexion of the noun *eorþ* 'earth', where Rushworth^2 attests accusative singular *eorðu* (MkGl (Ru) 6.53; MkGl (Ru) 9.3); genitive singular *eorðo* (MkGl (Ru) 4.5; LkGl (Ru) 11.31); dative singular *eorðo* (JnGl (Ru) 6.21) alongside *eorðu* (MkGl (Ru) 9.20). It is common to find nominative and accusative singular forms ending in *-o*/*-u* in Lindisfarne, too (Ross 1937: 64-65) – for example nominative singular *eorðo* in MkGl (Li) 4.28 or accusative singular *eorðu* in MkGl (Li) 4.5). Similarly, the noun *sunu* 'son' presents a very similar distribution of inflectional endings in both Rushworth^2 and Lindisfarne: nominative/accusative singular *suno* 'son' (LkGl (Ru) 1.32) alongside *suna* (LkGl (Ru) 18.39); genitive singular *suno* (LkGl (Ru) 17.26); dative singular *suno*

(LkGl (Ru) 18.31; JnGl (Ru) 4.5); nominative/accusative plural *sunu* (MkGl (Ru) 2.19; 10.30) and *suno* (MKGl (Ru) 13.12). Where Rushworth^2 has -*o* as the inflectional vowel, Lindisfarne tends to have -*u*, hence nominative/accusative singular *sunu* (Jn (Li) 1.51) alongside fewer instances of *sune* (JnGl (Li) 8.35); genitive singular *sunu*; dative singular *sunu* and some instances of *sune*; nominative/accusative plural *suno*, *sunu* and *suna* (Ross 1937: 79-81). Additionally, it is worth mentioning an instance of interparadigmatic analogical extension, a phenomenon also attested in Lindisfarne. Interestingly in the case of Rushworth^2, however, it involves the extension of the weak genitive plural ending, namely -*ena*/-*ana*, to strong nouns. Some examples include *fiscana* 'of fish' (JnGl (Ru) 21.8), *swordana* 'of the swords' (LkGl (Ru) 21.24), *hlafana* 'of loaves' (MtGl (Li) 16.9) or *wifana* 'of women' (LkGl (Li) 23.27) (Ross 1937:101; Ross 1977: 303).[30] Nevertheless, processes of analogical extension in the morphology of nouns are not nearly as common in Rushworth^2 as they are in Lindisfarne. One notable discrepancy between these texts is the maintenance in Rushworth^2 of distinct inflectional endings (depending on grammatical gender and stem class) to mark possessiveness and plurality (Ross 1977: 303), as opposed to the extension in Lindisfarne of the -*es* and -*as* endings proper to masculine *a*-stem nouns to the great majority of noun classes – cf. section 2.4.1.a.

As it was the case with the few instances of weak genitive plural endings being attested in strong nouns, Rushworth^2 also displays some instances of analogical extension of case endings. However, this phenomenon is by far much rarer in this text than it is in Lindisfarne (Ross 1977: 304). When these analogical extensions do occur, they takes the form of a nominative/accusative ending being used in the place of a dative one. Note for example *from wif broðer his* 'for his brother's wife' from LkGl (Ru)

[30] Within the wider scope of the restructuring of Old English nominal morphology, it is clear that the dominant analogical processes involve extension of features original to the more productive declensional classes, namely the masculine and neuter *a*-stems and feminine *ō*-stems to minor declensions such as the *i*-stems, *u*-stems, *nd*-stems, root nouns or *n*-stems (the latter known as weak nouns) However, minor shifts are also attested involving the extension of features proper to the *n*-stems even onto the paradigms of the more dominant *a*-stems and *ō*-stems, a scenario which suggests that a competition between two different productive patterns was taking place (Adamczyk 2018: 24-25). As theoretically expected in processes of analogical change (see section 3.2.), instances of *n*-stems inflections are also found in minor declensions such as the *i*-stems or the *u*-stems (Adamczyk 2018: 134; 156-159), thus providing further supporting evidence of the pseudo productive status that weak nouns must have enjoyed in the Old English period.

3.19, where the noun *wīf* in the dative singular should have triggered the ending *-e* as opposed to the nominative/accusative *-ø* ending.

Finally, one last striking peculiarity which distinguishes the language of Rushworth^2 from that of Lindisfarne is the fact that it seems to retain the inherited Old English gender system in full (Bibire and Ross 1981: 99). Consider the examples below:

[9] Mark 13.11

L:	*Et cum duxerint uos tradentes nolite praecogitare quid loquamini sed quod datum uobis fuerit in illa hora id loquimini non enim estis uos loquentes sed spiritus sanctus*
MkGl (Ru) 13.11	*mið ðy gilædes iowih to sellane nallas gebodiga ł ðenca hwæt ge sprece ah ðætte sald bið iow on ðær tide ðætte gisprece ne forðon iow bioðon sprecende ah gas halga.*
MkGl (Li) 13.11	*miððy hia gelædas iuih sellende nælle gie foreðence huæt gie spreca ah ł hwoeðre þæt gesald iuh bið on ðæm tid þæt gie sprecca ne forðon biðon iuih spreccendo ah gaas halig*
Trans:	And when they shall lead you and deliver you up, be not thoughtful beforehand what you shall speak; but whatsoever shall be given you in that hour, that speak ye. For it is not you that speak, but the Holy Ghost'

As can be seen in example [9], while Rushworth^2 has the expected dative singular form for the determiner (*ðǣr*) preceding the feminine noun *tīd* 'time', Lindisfarne attests the innovative use of the determiner *ðǣm* which is expected to be triggered by masculine or neuter nouns only, according to the inherited Old English gender system – cf. also section 2.4.1.a.

Overall, in terms of nominal morphology, the similarities between Rushworth^2 and Lindisfarne outweigh the differences, although, grosso modo, it is accurate to

claim that Rushworth^2 is linguistically more conservative than Lindisfarne.[31] It was previously mentioned that the traditional approach to account for such linguistic similarities maintained that Owun, the glossator of Rushworth^2, must have copied from Aldred's translation of the gospels. However, as demonstrated by Kotake (2008a, 2008b), the syntactical and lexical discrepancies between Rushworth^2 and Lindisfarne are so marked that this could not possibly be the case. The same is true in the case of the additional glosses and corrections found in Rushworth^2 which have no corresponding Latin text in either the Lindisfarne or the Rushworth manuscripts (Kotake 2016). Kotake's evidence therefore suggests that the origin for the shared similarities between Lindisfarne and Rushworth^2 must lie in the existence of common sources, that is, previous translations of the gospels on which Aldred and Owun must have both guided their own translations.[32] Data from the present thesis also provide an insight into this topic. There are similarities in both texts in relation to the morphology of weak class 2 verbs, and these similarities are explored in detail in chapters 5 to 7. My data also indicate, however, that there are numerous differences in the language of these two texts, hence challenging the traditional account suggesting Owun copied Lindisfarne (cf. Kotake 2008a, 2008b, 2016). See further chapter 7.

As the present thesis is mainly concerned with changes to the verbal morphology of Old English, and more specifically, with determining the level of structural reduction that the verbal paradigm of weak class 2 verbs had undergone by the tenth century in the late Northumbrian dialect of Old English, the following section focuses on some developments to the verbal system as witnessed in Lindisfarne and Rushworth^2 which are of relevance to the overall purpose of this thesis.

2.4.2. Verbal morphology in late Northumbrian

[31] This scenario refutes claims made by previous scholars such as Lindelöf (1901 §1) who argued that the differences were considerable enough for Northumbrian texts to be subdivided into North-Northumbrian and South-Northumbrian. Based on this division, Owun's Rushworth^2 would represent the South-Northumbrian variety, whereas Aldred's Lindisfarne would attest North-Northumbrian. For a discussion against this division, see Hogg (2004).

[32] A similar conclusion is reached by Kotake (2012: 17) in relation to the similarities that exist between Rushworth^1 and Lindisfarne, particularly in chapters 26 and 27 in Matthew.

In line with the discussion on nominal morphology presented above, the aim of the current section is to provide an account of the most relevant developments in terms of verbal morphology in both Lindisfarne and Rushworth[2].

As noted in section 2.2., one of the most distinguishable features of Old Northumbrian is the early loss of final /n/ in unstressed inflectional endings in environments such as infinitives, present plural subjunctives or preterite plurals of all classes of verbs (Fernández Cuesta et al. 2008: 138). Loss of final <n> also represents a change in progress in Northumbrian, just like changes on nominal inflection discussed in section 2.4.1., since verbal forms with final <n> can still be found in the preterite plural category. Note *gehrindon* 'they touched' in MtGl (Li) 25.7 and MkGl (Li) 3.10; *astigedon* 'they ascended' in MkGl (Li) 6.32 or *locadun ł boheoldun* 'they looked ł they beheld' in JnGl (Ru) 1.36. In the context of the data collected for the present thesis, neither infinitival nor plural present subjunctive forms were found with final <n>, indicating that the loss of final <n> had been completed in these two categories by the tenth century, but not in the preterites. In any case, once this consonant was lost, the unstressed vowels of the inflectional endings became more exposed and, therefore, more prone to phonological weakening. This accounts for the variation in realisation of these vowels, where <e> was the prevailing spelling alongside <a, æ, o> (Ross 1937: 127; Ross 1971: 62-63). Examples of this phenomenon found in my datasets include infinitives *losige* 'lose, die' (MtGl (Li) 5.28, 39), *giendiga* 'end' (LkGl (Ru) 14.29), *gehorogæ* 'spit' (MkGl (Li) 14.65), *giowigo* 'ask for' (MkGl (Ru) 6.24); preterite plural *reordade* 'you read' (MtGl (Ru) 19.4); *cumpadi* 'they fought' (JnGl (Li) 18.36), and plural present subjunctive *gegearwiga* and *georwige* (MkGl (Li & Ru) 14.12, respectively).

Another morphological development worth mentioning is the appearance of the innovative *-s* ending for the third person singular, plural present indicative and imperative plural in Northumbrian texts alongside the expected *-að*/*-eð* (see section 2.2.). The first such instance is attested in the early Northumbrian runic inscription on the Urswick stone, where the imperative plural *gebidæs* 'pray' occurs:

[10]
Tunwini setæ æfter Toroitredæ bekun æfter his bæurnæ gebidæs þer saulæ
Turniwi set up a monument after Torthtred his son. Pray for his soul.
(in Fernández Cuesta et al. 2008: 146-147)

This incipient use of *-s* inflection can be seen spreading during the late Northumbrian period in these three categories. However, at this early stage of linguistic change, the innovative form coexists with the inherited *-ð* endings. In addition to the *-ð*/*-s* alteration, it should be remembered that the unstressed vowels of the inflectional endings were in the process of being reduced due to phonological weakening, hence losing its inflectional distinctiveness. As a consequence of the phonological weakening of unstressed vowels, the orthographical representation of inflectional vowels became more varied, although <e> and <a> were the most frequent ones (Ross 1937: 128). Table 2 below (in Cole 2014: 24, based on Ross 1960: 39) highlights the loss of inflectional distinctiveness and subsequent orthographic variation particularly attested in the third person singular, plural present indicative, and imperative plural categories in the late Northumbrian dialect:

	Strong / Weak 1	**Weak 2**
1SG **2SG** **3SG**	-o, -a -as, -es -að, -as, -eð, -es	-iga, -igo -as, -igas, -es, -iges -að, -as, -eð, -es, -igas, -iges, -igeð, -igað
Plural	-að, -as, -eð, -es	-að, -as, -eð, -es, -igas, -iges, -igeð, -igað
Imperative plural	-að, -as, -eð, -es	-að, -as, -eð, -es, -igas, -iges, -igeð, -igað

Table 2. Late Northumbrian present-tense marking

Despite the fact that a great deal of variation can still be seen in the marking of the present indicative tense system, it is remarkable that virtually the exact same inflectional endings are being used for the aforementioned categories.[33] As with the

[33] A further category not included in Table 2 but which shows similar inflectional endings is the subjunctive. In the context of my data alone (50 tokens), the endings for both the singular and plural subjunctive categories are *-iga* (x28) and *-ige* (x22). Due to the loss of final /n/ discussed above which affected these and other categories (i.e. infinitives), inflectional endings *-iga* and *-ige* are found in the infinitives, subjunctives and first person singular present indicative categories.

innovations within the nominal declensional system discussed in section 2.4.1., the extension of these verbal endings demonstrates a shift towards a more structurally reduced and simplified verbal paradigm, typical, as in the case of nominal morphology, of the Middle English period (Roseborough 1970: 72; Fulk 2012: 81-86).

However, it is important to mention that the extent to which *-s* is attested in these three categories differs in Lindisfarne and Rushworth^2. Basing his analysis on Holmqvist 1922's book on the history of the English present inflections, Ross (1934: 68) presented the following distribution of *-s*, summarised in Table 3 below.[34]

	3SG pres. indic.	**PL pres. indic. / imper.**
Lindisfarne	1350 (40%)	1534 (59%)
Rushworth^2	700 (21%)	660 (54%)

Table 3. *-s* ending present-tense marking in Lindisfarne and Rushworth^2

As Table 3 indicates, Lindisfarne has the highest incidence of *-s* inflection in all three categories, with nearly 60% of innovative forms ending in *-s* (as opposed to *-ð*) in the plural present categories. Rushworth^2 seems to be lagging slightly (note the 54% of innovative *-s* verbs in the plural categories), even though fewer overall tokens are reported for Rushworth^2 than for Lindisfarne. Based on these figures, Rushworth^2 emerges as a slightly more conservative text, a characteristic which was already mentioned in section 2.4.1.b. in relation to the expression of nominal morphology in this text. Regarding Lindisfarne, Cole (2014) identified that the distribution of the *-ð*/*-s* endings as marker of plural present indicative inflexion was conditioned by morphosyntactic constraints similar to those of the Northern Subject Rule.

The Northern Subject Rule was a grammatical constraint that conditioned verbal morphology according to the type (pronominal or non-pronominal) and position (adjacent or non-adjacent) of the subject. Thus, in early northern Middle English, the verbal morphology of the plural present indicative category varied depending on the type of subject and on its position in relation to the verb. If a personal pronoun subject did not immediately precede a verb, *-s* ending would be triggered, for example *ye þat sais* 'you that say'. On the other hand, if the pronoun did precede the verb, the preferred ending would be *-e*/*-ø*: *þai sai* 'they say' (Cole 2014: 35). Other Middle

[34] Legend: approximate number of occurrences followed by rough percentages.

English dialectal areas realised the Northern Subject Rule by means of different endings, for instance in the north-west and east Midlands, *-th* occurred as a variant of *-s* and *-n* as a variant of *-e*/*-ø* (Cole 2014: 38). In addition, the type of pronoun, that is, pronominal or non-pronominal subject, also conditioned the occurrence of *-ð*/*-s* in northern Middle English. Interestingly, under this Type-of-Pronoun condition, adjacency had no effect on the plural marker, as the following examples from de Haas (2011: 102) demonstrate: *thay droupun and daren* 'they droop and tremble' as opposed to *byernes bannes the tyme* 'nobles curse the time'. The first example features the pronominal subject *thay* directly preceding the verbs *droupun* and *daren*, hence the expected *-n* ending. In the second example, because the subject is the noun *byernes* as opposed to a personal pronoun, the verb takes the *-s* ending instead (*bannes*), notwithstanding the fact that the subject immediately precedes the verb. These examples prove that the Type-of-Subject constraint was more robust than the Adjacency constraint (Cole 2014: 41).

As mentioned above, the morphosyntactic constraints behind the Northern Subject Rule were already operative in late Northumbrian – yet another feature which anticipates the typical (northern) Middle English grammar – although this process differed in terms of the consonants which were triggered, namely *-s* and *-ð*. Consider the examples below:

[11] MkGl 16.18

L	*serpents tollent*
MkGl (Li) 16.18	*nedro hia niomas*
Trans	They shall take up serpents

[12] MkGl 2.18

L	*tui autem discipuli non ieiunant*
MkGl (Li) 2.18	*ðine uut(edlice) ðegnas na fæstað*
Trans	But your disciples do not fast

[13] JnGl 10.26

L	*vos non creditis*
JnGl (Li) 10.26	*giene gelefeð*
Trans	You do not believe

These examples demonstrate that *-s* was triggered by pronominal subjects directly adjacent to the verb [11], while non-pronominal subjects [12] and non-adjacent pronominal subjects [13] triggered *-ð*. The data presented by Cole (2014), therefore, demonstrated that the distribution of competing present-tense markings in Lindisfarne was governed by the morphosyntactic constraints at the crux of the Northern Subject Rule. As previously mentioned on the discussion of the authorship of Lindisfarne (section 2.3.1.a.), Cole's analysis also demonstrated that the occurrence of *-ð*/*-s* as present tense marker varied across gospels. Hence, the whole of Matthew, as well as nearly the whole of Mark (commencing approximately at 5.40) and John (commencing at 3.14) present higher rates of *-s* ending, while Luke and the first two chapters of John show higher rates of *-ð* (Cole 2014: 113).

With regard to Rushworth^2, alternation between *-s*/*-ð* endings in the present indicative paradigm is also attested. As indicated in Table 3 above, Rushworth^2 has adopted the innovative *-s* form to a considerable extent (e.g. approximately 600 instances attested in the plural present indicative and imperative). In this regard, the language of Rushworth^2 is less innovative than that of Lindisfarne, in so far as it displays lower percentage of tokens ending in *-s*.

Rushworth^2 also emerges as a more conservative text when analysing another innovative feature attested in Northumbrian, namely the regularisation of original strong verbs. Such process, recently studied in detail by Costa Rivas (2020), consisted in the analogical creation of weak preterite forms featuring a dental suffix to original strong preterite forms.[35] The fact that strong verbs are first attested developing preterite forms according to the weak conjugation in the late Northumbrian dialect – a morphological simplification which is also characteristic of Middle English grammar (Roseborough 1970: 74; Barber 2000: 165) and later periods in the history of English (Krygier 1994; Branchaw 2010) – seems to support the idea that this dialect was more linguistically advanced than its Old English contemporaries, hence its many similarities to Middle English.[36] Note, for instance, OE *gieldan* 'yield', an original strong class 3

[35] I would like to express my gratitude to Dr Costa Rivas for kindly sharing her doctoral thesis with me.

[36] Interestingly, Barber (2000: 165) states that the verb *sleep* (OE strong class 7 verb *slǣpan*) is one of the many verbs which changed from the strong to the weak conjugation during Middle

verb which is now inflected as a weak, regular verb, hence *yielded*. This Northumbrian development was already noted by earlier studies (Ross 1937: 153-154; Ross 1977: 304). Examples include class 1 *gehrinadon* 'they touched' in MtGl (Li) 14.36, class 7 *slepde* 'he slept' in Lk (Li) 8.23 and class 2 *worpadun* 'they threw' in Jn (Ru) 8.59.

Costa Rivas's (2020) study aimed to identify all innovative weak preterites in Lindisfarne, Rushworth^2 and Durham, and to compare this Northumbrian development to other Old English dialects. To this end, she also analysed the language of Mercian Rushworth^1 as well as the Anglo-Saxon Gospels, glossed in the pseudo-standard West-Saxon dialect. Costa Rivas's (2020) dataset consisted of twenty-three different Old Northumbrian originally strong verbs attested over 700 times in their preterite form in the glosses. The dataset contained verbs inflecting both according to the strong and weak conjugations, as well as hybrid instances where both change of root vowel and the addition of a dental suffix are present. Out of the three sets of glosses analysed by Costa Rivas (2020), it is Lindisfarne that displays a more advanced stage of the regularizing phenomenon, in the sense that it contains more preterite forms of etymological strong verbs inflecting on the basis of the weak conjugation. For example, strong class 3 verb *onginnan* 'begin' is attested as strong *ongann* and *ongannon* in the preterite (JnGl (Li) 4.47 and LkGl (Li) 14.25, respectively), alongside weak *ongindo* in Lindisfarne (LkPrlg), whereas in Rushworth^2 there is no evidence of this strong verb being inflected as weak in the preterite. The same applies to *ðringan* 'thring', another strong class 3 verb attested as both strong *geðrungen* and weak *geðringed* and *geðrigdon* in Lindisfarne (in LkGl (Li) 8.42 and MkGl (Li) 5.24, respectively), but as strong *onðrungun* and *giðrungun* in Rushworth^2 (in MkGl (Ru) 5.24 and LkGl (Ru) 8.42, respectively).

The overall numbers in Costa Rivas (2020: 174-175) indicate that the language of Rushworth^2 is indeed more conservative and, therefore, displays less variation. Out of the twenty-three different Old Northumbrian (etymologically strong) lexemes analysed by Costa Rivas, only sixteen occur in Rushworth^2 a total of 271 times. And in only twelve of all these instances is an innovative weak preterite form found, that is, in 4.4% of the instances. Therefore, the majority of strong preterite forms found in Rushworth^2 follow the expected etymological conjugation. For example, for strong

English, noting how Chaucer has forms such as *he slepte* alongside the historically derived *he sleep* (OE *slēp* 'he slept'). However, note *slepde* 'he slept' in Lk (Li) 8.23.

class 3 *onginnan* 'begin', Rushworth^2 attests a total of forty-six instances in the preterite all following the expected conjugation, whereas for strong class 1 *stīgan* 'ascend', there are forty-one strong preterite forms as opposed to a single weak form (Costa 2020: 174-175). Lindisfarne, on the other hand, presents a more innovative language. The twenty-three verbs under study appeared over 400 times in Costa Rivas's data in Lindisfarne (2020: 90). All these twenty-three verbs present weak preterite forms in Lindisfarne, resulting in a 5,7% rate of innovative forms (Costa 2020: 130). These data, therefore, indicate that the gradual regularisation progress is slightly better attested in Lindisfarne than in Rushworth^2, leading to the more innovative nature of the former text and more conservative nature of the latter text. The data also indicate that Lindisfarne displays greater morphological variation, since both the etymological strong and innovative weak variants of the preterite inflection occur simultaneously and much more frequently than in Rushworth^2 (although see chapter 7 for a more nuanced discussion on morphological variation in Lindisfarne and Rushworth^2 and its implications). Finally, it is worth noting how, once again, the analogical formation of weak preterite forms to original strong verbs is a change in progress in Northumbrian. For example, only twenty-three original strong verbs (out of a reported total of 399 strong verbs appearing in Lindisfarne – see Cook 1894) were affected by this change in Lindisfarne, while in Rushworth^2 it is just sixteen (Costa Rivas 2020: 130, 174-175).

Another feature explored by Costa Rivas (2020), and which features in both Rushworth^2 and Lindisfarne, is the analogical extension of root vowels in the preterite. This is yet another characteristic first recorded in Northumbrian which is associated with the Middle English period (Branchaw 2010: 108). The more general direction of analogical change is for the vowel in the preterite singular to be extended to the preterite plural category. The motivation behind this direction of change is twofold. Firstly, it is related to type frequency, for the preterite plural was less frequent than the singular, and was, therefore, more prone to be analogically replaced (see section 3.2.1. for the role of type and token frequency in analogical change). Secondly, such vowel replacement led to structural reduction and further paradigmatic simplification, leading to greater regularity (Branchaw 2010: 108-109).[37] As the following paragraph

[37] The vowel of the preterite plural also featured in the second person singular preterite. Thus, its replacement by the vowel present in the singular resulted in paradigmatic regularity, since only one vowel (present singular vowel) featured in the preterite as a result (cf. *I spoke*, *we spoke*).

demonstrates, vocalic extension from the preterite plural to the singular is also attested in Northumbrian, although it is admittedly a much rarer process – see also fn33. Lindisfarne examples evincing vowel transference in the preterite plural include: strong class 3 verb *ongannon* 'they began' in LkGl (Li) 15.24, with *ongunnon* being the expected form; strong class 2 verb *gecēason* 'you chose' in LkGl (Li) 14.7 and *gecēaso* in JnGl (Li) 15.16, where *curon* would be the expected form (Costa Rivas 2020: 184-187).[38] In Rushworth^2, only one clear instance of vowel transference from the singular to the plural preterite category is attested: *gifeasan*, a plural preterite variant form of the strong class 2 verb *cēosan* 'choose' (see DOE 2007-: s.v. *ge-cēosan*) found in LkGl (Ru) 14.7 (Costa Rivas 2020: 192). Here, the diphthong proper to the singular preterite, that is <ea> (representing /e:a/) is found. Much like the corresponding Lindisfarne form, *gifeasan* also shows regularisation of the effects of Verner's Law and rhotacism. Overall, very few instances of vowel transference from the singular to the preterite plural are present in the Northumbrian gospels. Data from Lindisfarne and Rushworth^2 nonetheless indicate that the latter is a more conservative text, since only one clear example of vowel transference was found.

Interestingly, Ross (1977: 305) reports the opposite direction of analogical change in Rushworth^2, that is, the root vowel proper to the preterite plural (<e> in Anglian – (Hogg and Fulk 2011: 247)) being transferred to the preterite singular, although this process seems to be restricted to strong class 5 verbs, where <æ> should be expected. Note *ic cweðo* 'I said' in LkGl (Ru) 4.24 and LkGl (Ru) 4.25; *gisette* 'he sat' in MkGl (Ru) 4.1 and MkGl (Ru) 9.36; *giett* and *ett* 'he ate' in JnGl (Ru) 2.17 and MkGl (Ru) 2.16; or *onget* 'he knew' in MkGl (Ru) 2.8. It has been noted that this direction of change was also typical in Middle English (Roseborough 1970: 72; Ross 1977: 305). More specifically, the extension of the singular preterite vowel to the plural

[38] The replacement of *curon* by *gecēaso* also shows the regularisation of consonantal variation brought about by Verner's Law and subsequent rhotacism in the paradigm of *cēosan* 'choose' (see further section 3.2.), thus further contributing to the regularisation of the paradigm of this particular verb. One more possible example of vocalic extension is mentioned by Costa Rivas (2020: 185-186), although she noticed that its classification was problematic. It involves the strong class 1 verb *arīsa* happening in a double gloss alongside the expected preterite singular *arās* 'he rose'. While *arīsa* could be an infinitival form, Costa Rivas (2020: 186) also hypothesizes that it could be an alternative preterite singular form featuring the vowel proper to the plural preterite in the class of strong verbs. Admittedly, this direction of change is less common than singular to plural extension.

was typical of Northern Middle English texts, while the extension of the plural vowel to the preterite singular was typical of Midlands and Southern Middle English texts (Roseborough 1970: 74-75; Branchaw 2010b: 120).

Analogical processes where both directions of change are attested are not rare in the Northumbrian gospels. Section 2.4. mentioned the rarer case – in the context of the overall restructuring process of nominal morphology in Old English– of strong nouns adopting inflections proper to weak nouns (*n*-stems), hence *fiscana* 'fish'. In terms of verbal morphology, section 6.3. discusses in detail a particular kind of analogical change, namely paradigm levelling, affecting weak class 2 verbs in two opposite directions (section 3.2. below explains paradigm levelling and other typical analogical processes). On the one hand, the stem variant carrying no -i- formative is being extended to categories where the -i- formative would be expected. This process is the most widely attested in my data. On the other hand, the stem variant carrying the -i- formative is generalised to categories where no -i- formative should be present. This latter analogical process is rarely attested in my data (for specific figures and examples, see section 6.3.). However, the consistency with which this process happens, being restricted to two particular morphosyntactic categories, rules out scribal error as its source.

The similarities shared between the Lindisfarne gloss and Rushworth^2 have long been noted and commented on (for an overview, see sections 2.3. and 2.4.). The general consensus amongst scholars until very recently posited that these similarities stemmed from the fact that the scribe who glossed Rushworth^2, namely Owun, had had access to the Lindisfarne manuscript glossed by Aldred, on which he had based his own rendering of the Latin text. However, Kotake (2008a, 2008b) refuted this hypothesis on the grounds that the linguistic similarities shared between Lindisfarne and Rushworth^2 suggest the existence of other facsimiles, now lost, containing a translation or translations of the Gospels to which both Aldred and Owun may have had access and on which they probably based their own translations (section 2.3.2.). Despite the many similarities, this chapter has demonstrated that, in many respects, Rushworth^2 differs from Lindisfarne in its degree of linguistic conservatism. My data as presented and discussed in detail in chapters 5 and 6, respectively, bear out the same conclusion: Rushworth^2 is the more conversative of the two texts under study. Chapters 6 and 7 discuss the peculiarities of Lindisfarne and Rushworth^2, and provide a number of justifications for them.

2.5. The Old English weak verbal system

The focus of the present thesis is the synchronic status of weak class 2 verbs in late Northumbrian, with a special interest on the incidence of the -i- formative. With this focus in mind, the previous section introduced the most characteristic late Northumbrian verbal features, where it was demonstrated that the language of Northumbrian texts presented a fairly advanced morphology, in the sense that many innovations and developments traditionally ascribed to the Middle English period were already visible in those texts. This is true even after admitting that Rushworth[2] is slightly more conservative than Lindisfarne when it comes to the attestation of these developments in verbal morphology. The present section continues with the theme of verbal morphology, but with a particular focus on weak verbs, due to the fact that these form the basis of this thesis. This section aims to provide a brief summary of the Old English weak verbal system as a whole, hoping that such an account helps to contextualise and explain the number of innovations attested in the paradigm of weak class 2 verbs (detailed in chapters 5 and 6). The present overview also reveals that these innovations and changes did not happen in isolation, but are congruent with a number of other developments taking place in the other classes of weak verbs. As a result, the processes discussed in chapter 6 are to be understood as being part of a larger trend of phonological and morphological developments resulting in structural reduction and simplification, and affecting the whole weak verbal system of Old English.

General Grammars and histories of Old English agree that, by the historic period (that is, the period for which written records survive), there used to be three different classes of weak verbs. These classes are generally simply labelled classes 1, 2, and 3. The traditional classification of weak verbs into individual classes was based on their phonological and morphological make-up, particularly the presence of stem formants (or formatives) which emerged in prehistoric (Germanic) times. Thus, weak class 1 verbs featured formatives *-*(ō)ja*-, -*ji*- and -*i*-, weak class 2 verbs had formative *-*ō*-, and weak class 3 had -*ai*- and -*ē*- (Skeat 1982: 5-6). All these formatives developed and resurfaced differently by the historic period (detailed information in the following paragraphs), giving rise to the conjugational differences found in the paradigms of Old English weak verbs. Examples include the variation between geminated and non-geminated stems in weak class 1 verbs, the presence of

gemination in the four extant weak class 3 verbs, and the presence of the -i- formative in weak class 2 verbs.

In this division of weak verbs, there is a correlation between class membership and frequency counts, more specifically type frequency (see section 3.2.1.a.), in the sense that weak class 1 verbs were originally the most frequently occurring, and weak class 3 verbs the least frequently occurring. Such great number of weak class 1 verbs was a direct result of the morphological productivity which this class of verbs had in Germanic times (see section 3.2.1.a., too, for a definition of morphological productivity). By the historic Old English period, however, this class of verbs was no longer the productive conjugation, "since the phonological processes involved in the production of class I forms had grown opaque" (Hogg and Fulk 2011: 258). These processes involved the addition of the causative *-*ōja*- formative in Germanic, surfacing in Old English as non-syllabic <i>. This fact is one in a number of developments which greatly influenced the fate of the weak verbal system in OE, as the discussion below demonstrates. The main consequence arising from these changes is the transferral of verbs from one conjugation to another. By the ninth century, considerable changes had taken place in class membership, mainly due to the transferral of original weak class 1 verbs into the second weak conjugation. Such state of affairs was the result of weak class 2 verbs becoming the most productive conjugation type for reasons covered below, and, therefore, comprising the largest number of weak verbs in Old English (Stark 1982: 11). Most importantly, weak class 2 was the only weak conjugation type to which new verbs were added during the historic period (Hogg and Fulk 2011: 279), not just by means of transferral of verbs from other classes, but by language internal means such as the creation (derivation) of new verbs on the basis of nouns (OE *lufu* 'love' giving *lufian* 'love) and other sources such as adjectives (OE *hālig* 'holy' giving *hālgian* 'hollow') or prepositions (OE *ūt* 'out' giving *ūtian* 'expel').

It is important to consider the synchronic status of each of these conjugations because it explains the direction of the transfer of weak verbs and, consequently, the fate of the weak verbal system as a whole. Weak class 1 conjugation did not constitute one homogeneous class; instead, at least three major sub-classes are recognised: short stem verbs with gemination of the stem-final consonant due to Germanic *-*ōja*- formative (for example *fremman* 'do'); short stem verbs ending in -r and, therefore, lacking gemination (e.g. *nerian* 'save'); and verbs with a long root vowel, such as

dēman ‘deem’. Other important sub-classes include irregular weak class 1 verbs which added a dental suffix in the preterite and past participle directly after the stem, since they lacked a connecting vowel (for example *sēcan* ‘seek’, *sohte* ‘sought’, *gesoht* ‘sought’, or *sellan* ‘give’, *sealde* ‘gave’ and *geseald* ‘given’), as well as verbs whose stems ended in <w> (for instance, *gierwan/gyrwan* ‘prepare’ or *hierwan* ‘despise’), where the <w> corresponds to the geminated consonants typical of many weak class 1 verbs (Stark 1982: 11-13; Campbell 1959: 321-329).[39] The weak class 3 conjugation was “highly irregular and non-productive” (Stark 1982: 20); only four high token frequency verbs remained as members of this conjugation type by the historic period: *habban* ‘have’, *libban* ‘live’, *seċġan* ‘say’ and *hyċġan* ‘think’, “the others having most likely passed into class II” in the prehistoric period (Stark 1982: 20). It is important to note a parallel with other Ingveonic languages in this respect, since Old Frisian and Old Saxon also underwent similar morphological innovations during the prehistoric period resulting in the “almost complete absorption of the third weak conjugation into the second” (Cowgill 1959: 7). It should be noted that the four weak class 3 verbs attest rather distinct inflectional patterns, some verbs mainly following weak class 1 conjugation (*hyċġan* following *byċġan* ‘buy’) and others weak class 2 (*libban*) and, therefore, sharing very few common conjugational markers. Thus, from a synchronic perspective, it is increasingly difficult to regard these four verbs as belonging to the same conjugation type, as noted for instance by Stark (1982: 82) and Krygier (1998: 125). Analogical forces already affected the paradigm of weak class 3 verbs in Germanic - see section 3.2. for an in-depth treatment of analogy. All four weak class 3 verbs attest gemination of the final stem consonant (*habban, libban*, *hyċġan* and *seċġan*, where <ċġ> represents gemination (Stark 1982: 14)), a feature which is thought to have arisen on analogy with weak class 1 verbs with gemination (cf. *fremman* ‘do’). The same applies to the presence of an umlauted root vowel in the present paradigm, only attested for *hyċġan* and *seċġan* (Stark 1982: 24-25), another characteristic feature of weak class 1 verbs.

From a synchronic perspective, weak class 2 conjugation was the most uniform and stable class, consisting of one main inflectional type alongside some contracted

[39] The PDE reflex of *sellan, sealde* and *seald* is *sell, sold, sold*, although the original meaning in Old English is ‘give’, hence the above translations. PDE forms *give, gave* and *given* are derived from a different Old English verb, namely OE strong verb *giefan* ‘give’.

verbs of the *smēaġan* ‘consider’ type. This conjugation type was already very productive in Germanic times, mainly as a denominative and deverbative class. It was also the most productive weak conjugation in other Germanic languages as well, such as Old High German and Old Saxon, where similar restructuring processes are attested to those seen in OE, that is, original members of the weak class 1 being transferred to the productive weak class 2 conjugation (Stark 1982: 16).

Unlike weak class 3 verbs, the majority of weak class 1 verbs were not restructured on the basis of weak class 2 verbs, although verbs which shared a number of features were particularly prone to the change. First of all, verbs with an original short root syllable have a tendency to join the weak class 2 conjugation even in early Old English, for example, *lemian* ‘lame’, *aðenian* ‘strech out’ (Campbell 1959: 325). These types of verbs are also attested with geminated final consonants, hence *aðennan*, and it has been noted that weak class 1 verbs with gemination also tended to acquire class 2 inflections in the present and preterite, giving *aðenian, trymian* ‘construct’ (from *trymman*) or *fylian* ‘follow’ (from *fyllan*) (Hogg and Fulk 2011: 265). This restructuring process must have happened rather early, because texts such as Alfred’s translation of Pope Gregory’s *Cura Pastoralis* (ninth century) only attests this kind of verbs inflecting as weak class 2 verbs, hence *gremian* ‘anger’, *lemian* ‘lame’, *temian* ‘tame’ or *behelian* ‘cover’, verbs which originally had an etymological geminate. Weak class 1 verbs of the *nerian*-type also acquire weak class 2 inflections, as attested in late Old English. Note the third person singular present indicative form *nerað* ‘saves’ or preterite singular *nerode* ‘saved’, attesting the back inflectional vowels proper of weak class 2 verbs (Campbell 1959: 325). Secondly, verbs with both short and long closed syllable before a liquid or a nasal tend to transfer to the second weak conjugation. Note *timbran* ‘build’ resurfacing as *timbrian*, *hyngran* ‘hunger’ as *hyngrian*, *frēfran* ‘comfort’ as *frēfrian*, *efnan* ‘liken’ as **efnian* (on the basis of past part *geefnade* attested in Lindisfarne) or *bīcnan* ‘beckon’ as *bīcnian*, appearing alongside non-mutated *bēacnian*.[40] Finally, weak class 1 verbs ending in /w/ also attest transference to the second weak conjugation, hence *hierwan* ‘despise’ appearing as

[40] Besides the presence of a back inflectional vowel in the present and preterite paradigms, weak class 2 verbs were also characterised by having a non-mutated root vowel, since the stem formative *-iġ-* (previously *-ōja-* in Germanic) did no longer cause *i*-mutation of the root vowel (Hogg and Fulk 2011: 279).

hyrwian in late Old English, *smirwan* ‘anoint’ as *smirian*, *gierwan/gyrwan* ‘prepare’ as *gearwian* or *rǣswan* ‘think, consider’ as *rǣswian* or *rǣsian*.

An important detail about this last type of verbs should be mentioned, since it further explains the transference process. The /w/ in these verbs appeared in the categories or environments where a geminate would appear in the *fremman* sub-class of weak class 1 verbs, or the -i- in the *nerian*-type of verbs. These verbs, therefore, presented stem allomorphy. However, instances of these verbs are found where analogically levelled forms with or without /w/ appear throughout the paradigm, hence the existence of alternative forms for verbs such as *rǣswian* or *rǣsian* ‘think, consider’ (Hogg and Fulk 2011: 270). Stem alternation varies from verb to verb. Some verbs such as *smirian* ‘anoint’ (former *smirwan*) or *wylian* ‘roll’ (from **wylwan*) levelled the stem variant without the final /w/, whereas *gierwan*/*gyrwan* ‘prepare’ or *frætwan* ‘adorn’ retained the /w/. *Rǣswan* ‘think’ represents an intermediate case, with forms displaying analogical generalisation of the /w/ to categories where it was not expected, like the preterites or third person singular present indicative (hence *rǣswedest* and *rǣsweð*), as well as reformation on analogy with weak class 2 verbs, hence preterite *rǣswodan* and infinitives *rǣswian* or *rǣsian*, the latter form evincing both loss of /w/ and reconstruction as a weak class 2 verb (Hogg and Fulk 2011: 271). Where the latter happens, that is, when the /w/ is completely lost from the paradigm (for example *smirian* ‘anoint’ for *smirwan*, as the verb always appears in my dataset), then these verbs start inflecting like *nerian*-type of weak class 1 verbs, a sub-class particularly prone to the creation of forms on analogy with weak class 2 verbs; consider the inflected infinitive *smirianne* and *smiranne* (with back inflectional vowels typical of weak class 2 verbs) attested in MkGl (Li, Ru) 14.8.[41]

In terms of the restructuring of the *nerian* sub-class, Stark (1982) repeatedly acknowledges the importance which the structural similarity between these verbs and weak class 2 verbs (cf. *lufian* ‘love’) had in the analogical reformation, especially in

[41] *Gyrwan/gerwan* ‘prepare’ is one of the verbs ending in /w/ which resist transference to the second weak conjugation for the most part, while numerous reconstructed forms are attested for *nyrwan* ‘make narrow’ (Hogg and Fulk 2011: 270). Dialectally speaking, *smirwan* ‘anoint’ is widely attested inflecting as a weak class 2 verb in Northumbrian, as demonstrated by my data. The same is true for *gyrwan/gerwan* ‘prepare’, exclusively attested as *gearwian* in my data.

late Old English.[42] The main differences found in the paradigms of these two classes of weak verbs include the presence of an i-mutated root vowel in weak class 1 verbs, orthographic (i.e. non-syllabic) -i- in weak class 1 verbs (as opposed to syllabic -i-/-iġ- in weak class 2 verbs), the inflectional vowel in the second and third person singular present indicative (<e> in weak class 1 and <a> in weak class 2 verbs) and, finally, both the presence and nature of the connecting vowel between root and inflectional endings in the preterite and past participles: always back <o> or <a> in weak class 2 verbs, <e> for two of the three main sub-classes of weak class 1 verbs (Stark 1982: 21).[43] Outside these similarities, the paradigms of weak class 1 and class 2 verbs were identical. The structural similarities between these verbs grew stronger by the late Old English period, given that inflectional vowels and connecting vowels are unstressed vowels and, by the late Old English period, these vowels are unlikely to have retained their full qualities and are probably moving towards a more central position (i.e. schwa). Further, by the late Old English period, certain original weak class 1 verbs ending in *-rian*, such as *nerian* 'save', start appearing with medial vowel <ig> (representing the glide /ij), like many original weak class 2 verbs (Stark 1982: 30). It then follows that, given these circumstances, the paradigms of weak class 1 and class 2 verbs are virtually identical by the late Old English period (Stark 1982: 21).[44] The main theoretical difference between the two would be the presence of an unmutated root vowel in weak class 2 verbs. However, as demonstrated above, this characteristic is no longer a sine qua non from a synchronic perspective, since verbs with mutated

[42] Although a characteristic of morphological change by means of analogy is that it does not affect all the possible pool of tokens, even if these tokens share structural similarity. Fertig (2013: 2) notes how the regularisation underwent by the verb *bake*, a strong verb developing a weak preterite form, was not replicated in other structurally similar verbs such as *wake*, *forsake* or *shake*, whose preterite and past participle forms are still formed by means of vocalic change in the verbal root. See Costa Rivas (2020) for the development of weak preterite forms in original strong verbs in Northumbrian data.

[43] Weak class 1 verbs with long root vowel (heavy-stemmed verbs of the *dēman* type) syncopated the inflectional vowels, so only geminated verbs (*fremman*) and verbs with orthographic connecting -i- (*nerian*) attested <e> inflectional endings in these categories (Campbell 1959: 321-322).

[44] One additional development in the *nerian*-type of verbs which brought this sub-class even closer to weak class 2 verbs was the development of a connecting glide, spelt <ig> and representing /ij/. Consider infinitives *neriġan* and *neriġean*. According to Stark (1982: 30), such spelling constitutes evidence that these verbs were at that stage trisyllabic, just like original weak class 2 verbs.

root vowels (i.e. original weak class 1 verbs) happened alongside unmutated verbs. Compare *bīcnian* and *bēacnian* 'beckon' from original *bīcnan*, or *gerwian* and *gearwian* 'prepare' from original *gierwan*/*gyrwan*.

The transference of weak class 3 verbs into the second conjugation type occurred almost exclusively in the prehistoric period, as mentioned at the beginning of this sub-section. However, the four attested weak class 3 verbs, namely *habban* 'have', *libban* 'live', *seċġan* 'say' and *hyċġan* 'think', also show continued contamination of forms on analogy with weak class 2 verbs. Examples include the extension of the second and third person singular present indicative endings *-ast* and *-aþ*, hence *hafast* 'have'*, hafaþ* 'has'*, hogað* 'thinks' and *sagas* 'says' even in early West-Saxon; or extension of the past ending with a back inflectional vowel, hence preterite singular *hogode* 'thought' and past participle *hogod* 'thought'. These vocalic extensions are later widely attested in Anglian texts (Campbell 1959: 338). Of particular significance is the reformation of *libban* 'live', which resurfaces as *lifian* (also as *leofian* with back mutation of the root vowel) already in early OE, cf. innovative present participles *lifiende* and *lifġende* 'living' already attested in the *Cura Pastoralis* (Campbell 1959: 337; Stark 1982: 82). My dataset includes numerous forms of *lifian* and *leofian*, but no instances of original *libban*, as would be expected from late Old English texts. As part of the aims of the present thesis, the loss of the -i- formative in verbs inflecting like weak class 2 verbs but which originally belonged to the third weak conjugation type was also analysed. In order to establish which verbs were historically weak class 3, Old English dictionaries and grammars were consulted. Conveniently, Campbell (1959: 339-341) and Hogg and Fulk (2011: 296-298) list a variety of verbs which are regarded as once belonging to the third weak conjugation, due to some peculiar characteristics, such as appearance of forms with and without i-umlaut, with or without gemination, with or without non-syllabic -i- (spelt <g> and representing /j/) or with or without syllabic -i- (mainly spelt <i> or <ig>, the latter representing /ij/). The list below includes these verbs, and it will become apparent that the great majority of them are attested in the historic Old English period as weak class 2 verbs, for, as Campbell (1959: 342) put it: "in verbs other than the basic four the analogy of Class II has eliminated practically all Class III forms":

bifian 'tremble', *bismerian* 'disgrace', *būan* 'settle', *ċēapian* 'bargain', *drūgian* 'become dry', *fetian* 'fetch', *folgian* 'follow', *gefēoġan* 'hate', *giowiġe/giwian* 'desire, ask for',

hatian ‘hate’, *hlinian* ‘lean, sit at a table’, *īewan/ ȳwan* ‘show’, *lēoran* ‘go’, *leornian* ‘learn’, *losian* ‘die’, *murnan* ‘mourn’, *plagian* ‘play’, *plegian* ‘move rapidly’, *onsċunian* ‘dread, shun’, *rūmian* ‘become clear of obstructions’, *sorgian* ‘sorrow’, *sparian* ‘spare’, *and-spurnian* ‘offend’, *swiġian* ‘be silent’, *tilian* ‘strive for’, *ġetrēwa* ‘trust’, *twuwian/trugian* ‘trust’, *þeowian* ‘serve’, *þolian* ‘suffer’, *un-trumian* ‘ail’, *wacian* ‘be awake’, *wīsian* ‘guide’ and *wunian* ‘dwell’.

Accounting for the direction of the analogical restructuring of the weak verbal system in Old English seems to be straightforward. It has been shown that the weak class 2 conjugation was used as model upon which the restructuring was based due to a number of significant reasons. First of all, it was a highly productive class, already in Germanic, and even more so in the historic Old English period. The productivity was due to its high type frequency, attracting verbs from the other two conjugations, starting from the prehistoric period and continuing in the historic one. The transference of weak class 1 and weak class 3 verbs into the second conjugation continued to increase the type frequency of this verbal class, which resulted in an ever growing number of verbs being formed according to this conjugation type. The previous paragraphs also highlighted the paradigmatic stability which characterised the weak class 2 conjugation, since it lacked major sub-classes, and the inflections were for the most part highly regular. This paradigmatic stability contrasts with the lack thereof in weak class 1 verbs, with its three main sub-categories and inflectional types, and, most notably, with weak class 3 verbs, whose intrinsic irregularities are the only feature they have in common. Due to the late Old English reduction of inflectional vowels and subsequent vocalic confusion, further structural similarities emerged which further advanced the analogical transferral of weak class 1 verbs into the second conjugation. As a result, by the late Old English period, the weak class 2 conjugation was the most frequently occurring (both in terms of type and token frequency), and it continued to analogically attract verbs to its verbal class.[45]

[45] Middle English data also support this claim, especially early Middle English, where the conflation of verbal paradigms was not in a very advanced stage. In terms of borrowings, Laing (2009: 260) notes how the small number of verbs loaned from French present in early Middle English texts inflected according to the weak class 2 paradigm. Fulk (2012: 82-84) provides a similar account, but covering the whole period. Traditionally, it has been claimed that, by the Middle English period, two main classes of weak verbs existed: those which retained a vocalic element before the inflectional ending in the preterite and past participle (most of the original

It should be briefly mentioned that, in his study of the language of the Lindisfarne glosses, Ross (1937) appears to be quite dismissive of the role played by analogy in the transference of weak class 1 verbs to the class 2 conjugation. His position when encountering ambiguous forms was to postulate two verbs: one belonging to the first and the other to the second weak class. When addressing the appearance of etymological weak class 1 verbs with back inflectional vowels in Lindisfarne (cf. *gebēcnade* 'beckoned' in JnGl (Li) 13.24, *getimbradon* 'built' in Mk (Li) 12.10, or *geefnade* 'compared' in MtHeadGl (Li) 79), Ross (1937: 138-139) claims

> we cannot say with certainty that there are any forms of this type [weak class 1 verbs with a long stem ending in a stop followed by a liquid or a nasal] with a preterite formed on the analogy of those of the second class in Lind[isfarne]. For although such analogical forms are common in other dialects, forms such as *bēcnade* [beckoned] in Lind[isfarne] might equally well be derived from original verbs of the second weak class. Moreover, the present flexion of *bēcniga* [beckon] shows that this verb is rightly ascribed to the second class of weak verbs and not to the first.

Forms for *bīcnan, bīcnian* and *bēacnian* 'beckon' are all included under the same entry in the DOE (DOE 2007-: s.v. *bīcnan*, v.). Whether the weak class 2 verbs were etymological or created on analogy with an original weak class 2 verb is not specified by the dictionary. However, given the wider synchronic creation of weak class 2 verbs from original weak class 1 verbs, the latter scenario, generally discarded by Ross, is

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light-stemmed weak class 1 verbs and all weak class 2 verbs, for example, *wreðede* 'supported' and *louede* 'loved', from weak class 1 *wreþþan* and weak class 2 *lufian*) and those which had syncopated the connecting inflectional vowel, corresponding to original heavy-stemmed weak class 1 verbs: *hērde* 'heard' and *dēmde* 'deemed', from OE *hieran* and *dēman*, respectively. Middle English verbs more commonly inflected according to the first type, i.e. the model based on Old English weak class 2 verbs and light-stemmed weak class 1 verbs (Fulk 2012: 81-84). It is important to remember that, as mentioned earlier in this section, the latter type of verb was very commonly found inflecting on analogy with weak class 2 verbs already in Old English due to their structural similarities and the higher type frequency (and associated morphological productivity) of the weak class 2 conjugation. Thus, the trend of weak verbs shifting to the weak class 2 conjugation continues to be visible in Middle English, hence validating the claim that this verbal class remained the most productive one diachronically. At least while characteristic features such as the presence of the reflex of the -i- formative and inflectional vowels in the preterite and past participle were present.

actually a very plausible possibility. As chapter 4 demonstrates in the context of the data collected for this thesis, it is in fact very difficult (if not impossible) to classify certain forms as either weak class 1 or weak class 2, especially in the late Old English period, when syncretism of forms is very common, as are analogical processes which obscure etymological features which identify forms as proper to any given category or conjugation type. Ross (1937: 139) accepts this difficulty. He also eventually accepts the fact that at least some of the innovative preterite forms with a back inflectional vowel must have been created on analogy with weak class 2 verbs (Ross 1937: 139). Ross also noted how the analogical transferral of back inflectional vowels was not restricted to weak verbs, but is also widely attested in original strong verbs (Ross 1937: 152-153).[46]

The above discussion has demonstrated that a number of phonological and morphological developments are well underway in the Old English weak verbal system, especially in the late Old English period. Some of the more consequential developments worth highlighting include the loss of phonological distinction of unstressed vowels, leading to structural similarities across paradigms; analogical processes levelling out allomorphic variation in the paradigm of weak verbs, particularly in weak class 1 and class 2 verbs (for the latter, see section 6.3.); and, finally, changes in class membership due to the shift in morphological productivity

[46] Throughout the data collection process for this thesis, numerous such innovative strong forms with transferred back inflectional vowels typical of weak class 2 verbs were encountered, as well as forms attesting an original weak class 1 verb: first person singular present indicative *geonga* (strong class 7 verb *gangan* 'go') in LkGl (Li) 14.18 and JnGl (Li) 16.10, *ic ahoa* (strong class 7 verb *a-hōn* 'hang') in JnGl (Li) 19.15, as well as numerous other forms ending in *-o*, another very typical inflectional ending in this category in Northumbrian (Campbell 1959: 333), for example *ic fæsto* 'I fast', *ic sello* 'I give' in LkGl (Li) 18.12 or *ic cymo* 'I come' in LkGl (Li) 19.13 (cf. weak class 1 verbs *fæstan*, *sellan* and strong class 4 verb *cuman*); second person singular present indicative *for-letas* 'you permit' in JnGl (Li) 19.12 and *cuedað* 'you say' in JnGl (Li) 19.35 (cf. strong class 7 verb *for-lǣtan* and strong class 5 verb *cweþan*); third person singular present indicative *heras* MkGl (Li) 4.24, and *herað* 'he hears' in MkGl (Li) 4.23 (cf. weak class 1 verb *hieran*); subjunctives ending in *-a* such as second plural present subjunctive *gie gebrenga* 'you should bring' (cf. weak class 1 verb *brengan*) in JnGl (Li) 15.16, or third person singular present subjunctive *læcga* 'overtake' (cf. weak class 1 verb *læċċan*) in JnGl (Li) 12.35; present participles in *-ande*: *gebiddande* 'demanding' (cf. strong class 3 verb *biddan*) in MtGl (Li) 26.39, *fallande* 'falling' (cf. strong class 7 verb *feallan*) in LkGl (Li) 4.7 or *gestiorande* 'agitating' (cf. weak class 1 verb *stirian*) in MkGl (Li) 9.25; and past participles in *-ad*: *geseldad* 'given' (cf. weak class 1 verb *sellan*) in MtGl (Li) 5.29 or *gerehtad* 'made right' (cf. weak class 1 verb *rihtan*) in LkGl (Li) 13.13.

undergone by weak class 1 and class 2 verbs, the latter becoming the productive category in Old English and analogically attracting verbs from the other two weak categories as a result. All these innovations are crucial for the contextualisation and understanding of the main change treated by this thesis and visible in the paradigm of weak class 2 verbs: the loss of the -i- formative. Chapter 6 argues that such loss is the result of a process of paradigm levelling. As mentioned in this section, such analogical processes are also evinced in other classes of weak verbs, most notably weak class 1 verbs (cf. verbs whose stems ended in a geminate or /w/). Another important development treated in this thesis is the synchronic status and fate of transferred verbs (see section 6.2.2.). As the results obtained by this thesis demonstrate, transferred verbs behave similarly to etymological weak class 2 verbs, in the sense that they too evince loss of the -i- formative (but see section 4.3.1.b. for the methodological approach employed in the identification of transferred verbs in my data). Such statement is unsurprising, since these verbs qualify as transferred precisely because they show features typical of weak class 2 verbs. A surprising detail my data reveal is that these verbs are much more conservative than etymological weak class 2 verbs, where conservatism equates to retention of the -i- formative. Such characterising conservatism is addressed in sections 5.3. and 6.2.2., and justified mainly in section 6.3. (but see also chapter 7).

2.6. Summary

The Northumbrian dialect is a fascinating source evincing many processes of linguistic innovation and change which have traditionally been labelled Middle English developments. As a result, this dialect is closer to Middle English than any other contemporary Old English dialect. This chapter has demonstrated that innovations abound both in terms of nominal and verbal morphology, resulting in a linguistic system rich in variation. Due to the gradual nature of language change, some of these innovations are more robustly attested than others. This is true, for instance, for the analogical extension of the *-as* plural marker typical of strong masculine *a*-stem nouns to other minor declensions, vastly attested in late Northumbrian, as opposed to the extension of the genitive singular *-es* ending typical of strong masculine and neuter nouns, which is not as solidly attested.

A similar scenario is seen on the verbal morphological plane, where the replacement of etymological *-ð* ending in the third person singular and plural present indicative, and imperative plural by the innovative *-s* is much better attested than other innovative processes, for example, the analogical reformation of strong preterite forms on the basis of weak preterites. A related and revealing development in this category concerns the transference of the root vowels proper to the preterite singular paradigm onto the preterite plural. Although such development is not extremely well attested in late Northumbrian, it is slightly better attested than a competing analogical process which was levelling the preterite plural root vowel onto the preterite singular system. Diachronically, it is the former process which eventually won out, resulting in a more structurally simplified system. Very similar processes are visible in the weak verbal system in Old English, also leading to structural reformation, reduction, and simplification. Some of the most consequential innovations discussed in this chapter include analogical processes such as levelling and extension affecting the paradigms of weak class 1 and class 3 verbs and, most notably, changes in class membership. The latter change was a direct result of a system-internal shift in productivity rates, where it is the second weak conjugation that emerged as morphologically productive by the historic period due to a number of formal reasons discussed in section 2.5., hence attracting verbs from the other two weak conjugations which had much lower type frequencies. With regard to the data collected and analysed for this thesis, all the aforementioned verbal innovations are of relevance, since they help to contextualise and understand the main innovation treated by this thesis, namely the loss of the -i- formative in weak class 2 verbs. For it is argued in chapter 6 that the loss of the -i- formative is the result of yet another analogical process affecting weak class 2 verbs, namely paradigm levelling. As demonstrated in this chapter, the analogical process of paradigm levelling is also attested in the category of weak class 1 verbs, although on a minor scale. This fact demonstrates that the competing analogical pressures affecting weak class 2 verbs are part of a bigger, systemic restructuring process affecting the whole weak verbal system.

The observations made in relation to the linguistic nature of the Northumbrian dialect are based on the surviving textual evidence. A brief discussion about early Northumbrian textual witnesses was provided in section 2.2. Late Northumbrian has taken prime position in this chapter because of the aims of this thesis. Out of the three texts attesting late Northumbrian in the form of interlinear glosses, namely the

Lindisfarne Gospels, the Rushworth Gospels and Durham, Cathedral Library, MS A.iv.19, the first two texts informed the present thesis (see section 1.2. for a justification). Section 2.3. highlighted some important facts about these texts, the most crucial ones for the purpose of this thesis being the Lindisfarne authorship debate and the discussion regarding the source accounting for the variation found in Rushworth^2, a text which at times follows Lindisfarne very closely, and at other times deviates significantly. My interpretation regarding the linguistic peculiarities evinced in Rushworth^2, particularly its conservatism when compared to Lindisfarne, is found in section 6.3., although this section should be read in conjunction with chapter 7 for a more comprehensive view on the linguistic variation which characterises both texts.

Chapter 3

The study of morphological change

3.1. Introduction

The effects of the linguistic changes undergone by weak class 2 verbs in the Northumbrian dialect of Old English contributed to the ultimate reduction and simplification of the whole weak verbal paradigm, as explained in sections 2.5., 6.2., and 6.3.1. As established in the previous chapter (section 2.5.), the trend towards morphological reduction and simplification started in the prehistoric period. But it is in late Old English that the effects and results of the restructuring processes which brought about such simplification are plainly visible. And as also established in sections 2.3. and 2.4., the late Northumbrian dialect proves a very informative witness, since many linguistic innovations arising as a result of the aforementioned restructuring processes are well attested. This is indeed the case when it comes to the changes undergone by weak class 2 verbs. As part of the aims of this thesis, a very detailed account of the state of weak class 2 verbs in late Northumbrian is provided in chapters 5 and 6. Embedded in these chapters is an in-depth discussion regarding why the deletion of the class formative vowel happened in the first place, and how it happened.

In Labovian terms, these questions are linked to specific phases of linguistic change: the actuation phase and the implementation phase, respectively. According to Labov, a theory of linguistic change had to attempt to address four main key issues:

1. The actuation problem: “why do changes in a structural feature take place in a particular language at a given time, but not in other languages with the same feature, or in the same language at other times?”

2. The transition problem: “which intervening stages can be observed, or must be posited, between any two forms of a language defined for a language community at different times?”

3. The embedding problem: “how are the observed changes embedded in the matrix of linguistic and extralinguistic concomitants of the forms in question? (…)

What other changes are associated with the given changes in a manner that cannot be attributed to chance?"

4. The evaluation problem: "how can observed changes be evaluated – in terms of their effects upon linguistic structure, upon communicative efficiency (…) and on the wide range of nonrepresentational factors involved in speaking?" (Weinreich et al. 1968: 101-102).

In an earlier (and single-authored) version of a paper on the mechanisms of linguistic change, Labov did not explicitly mention the 'actuation problem' but hinted at it by pondering "[w]hat are the causes of the continual origination of new linguistic changes", later referred to as the "inciting causes of change" (Labov 1965: 91-92). The same is true for the implementation of the change, a phase Labov describes by means of the following question: "By what mechanisms do changes proceed?" (Labov 1965: 92; Labov 1994: 2-3). Later, Chen and Wang (1975) more clearly defined actuation as the step which answers the "why", or the phase of emergence of a change, and implementation as the "how", or manner of propagation of change. Such terminology is adopted by the present thesis, and these questions are dealt with in chapter 6 in the context of my data, and in the subsequent discussion in a more general and theoretical fashion.

The immediate section aims to provide a theoretical framework with which to analyse and explain the different restructuring processes visible in weak class 2 verbs, with an emphasis on the loss of the -i- formative. To this end, this chapter considers how the study of morphological change has been pursued in historical linguistics. The first part of the chapter (section 3.2.) covers the actuation phase of morphological change. Due to its importance both in general processes of morphological change and in the specific context of the present thesis, section 3.2. is mainly devoted to the phenomenon of analogy, and it covers why analogical changes occur in languages, and which factors condition both its operation and outcome. The discussion on analogy reveals in turn that this phenomenon is deeply connected to other linguistic areas such as phonology, syntax and semantics, and, on a wider scale, with processes of language acquisition, language processing and grammar building. The final section of this chapter (section 3.3.) is devoted to the implementation phase, where the

theoretical basis for the process responsible for the implementation of linguistic change, known as lexical diffusion, is introduced.

3.2. Analogy

Section 2.4.1. touched briefly on the notion of analogy when referring to the gradual spread of the plural *-as* inflection from the Old English strong masculine *a*-stem nouns to minor nominal declensions, eventually becoming the generalised marker for plurality in English nouns. Analogy is defined thus by the *Cambridge Dictionary of Linguistics* (2013: s.v. *analogy*):

> The process whereby a form is altered so as to make it more like another form. Most usually irregular forms are adjusted to make them more like regular forms. Thus, the irregular older English *brethren* gives way to *brothers* by analogy with other regular plurals.[47]

Analogy has been discussed in the context of language change for centuries. Already nineteenth century German linguist and Neogrammarian Hermann Paul treated the notion of analogy in detail in his *Prinzipien der Sprachgeschichte* (*Principles of Language History*) published between 1880 and 1920. Neogrammarians made constant recourse to analogy, which featured heavily as part of their linguistic theoretical underpinning, so much so that they were known as 'analogists' (Fertig 2013: 3). Interestingly, for Paul analogy was not a type of change, but rather "the basic principle underlying the normal productive operation of speaker's mental grammar" (Fertig 2013: 4). Thus, phenomena such as analogical formation and analogical innovation had slightly different meanings for Paul in particular, and Neogrammarians in general. Analogical formation could, therefore, be defined as a "form (word, phrase, clause, sentence, etc.) produced by a speaker, writer or signer on the basis of patterns discerned across other forms belonging to the same linguistic system" (Fertig 2013: 4). By extension, analogical innovation constituted an analogical formation "that deviates from current norms of usage" (Fertig 2013: 4). It has been noted in the literature that analogy is used to signify several concepts, which could lead to

[47] Analogical innovations can also lead to higher paradigmatic complexity, for which see below. See also Hogg (1980).

confusion about what analogy really is: analogy as a type of innovation or change (the most commonly occurring), analogy as a mechanism for change (and responsible for the actuation phase), or analogy as the very basic principle (cognitive-linguistic capacity) which rules language – cf. Paul's understanding of analogy given above. Anttila (1977: 12, 20; 2003) went as far as to claim that everything in language is analogical; all change is analogical. More recently, a broader definition of analogy has been proposed by Fertig (2013) which captures both the general (non-technical) meaning of the term, named analogy$_1$, and the specific, technical sense named analogy$_2$. Fertig (2013: 12) defines these and related terms as follows:

> **[A]nalogy$_1$** [general sense] is the cognitive capacity to reason about relationships among elements in one domain based on knowledge or beliefs about another domain. Specifically, this includes the ability to make predictions/ guesses about unknown properties of elements in one domain based on knowledge of one or more other elements in that domain and perceived parallels between those elements and sets of known elements in another domain.
>
> **[A]nalogy$_2$** [specific sense] is the capacity of speakers to produce meaningful linguistic forms that they may have never before encountered, based on patterns they discern across other forms belonging to the same linguistic system.
>
> [A]n **analogical formation** is a form (word, phrase, clause, sentence, etc.) produced by a speaker on the basis of *analogy$_2$*.
>
> **[A]ssociative interference** is an influence of one form on the phonetic make-up of another with which it is (perceived to be) semantically or grammatically related.
>
> [A]n **analogical innovation** is an analogical formation *and/or a product of associative interference* that deviates from current norms of usage.
>
> [A]n **analogical change** is a difference over time in prevailing usage within (a significant portion of) a speech community that corresponds to an analogical innovation or a set of related innovations. (Emphasis in the original).

The advantages of adopting a broader definition and understanding of analogy is that common processes such as folk etymology and, partially, paradigm levelling can be

accounted for and explained, because this broader view encompasses cases of both proportional and non-proportional formations and innovations, as covered below (Fertig 2013: 12).

The most common processes of analogical change are analogical extension and levelling. Analogical extension entails the interparadigmatic generalisation of a particular morpheme into new environments, whereas analogical levelling irons out variation produced by sound changes within a particular paradigm (intraparadigmatic variation) via the selection and generalisation of a given form amongst other competing forms (Millar 2015: 61-63). The spread of the *-as* ending as marker of nominal plurality in Old English constitutes a case of analogical extension, whereby the nominative and accusative plural ending of the masculine *a*-stem nouns was extended to other minor noun classes. This resulted in the generalisation of the *-as* (> ME *-es*) ending as plural marker at the expense of other inflectional endings (which varied according to declensional classes and grammatical gender), hence increasing interparadigmatic regularity.

The verbal paradigm of the Old English strong verb *cēosan* 'to choose' provides an example of analogical levelling. This verb presented alternation of two consonants in the root, namely /s/ and /r/, depending on the environment; for example, compare the infinitival form *cēosan* with the past participle *coren* 'chosen'. The /s/ versus /r/ consonantal variation was the product of two separate sound changes: firstly because of the effects of Verner's Law, a consonantal sound change which affected North-West Germanic languages in the prehistoric period, the voiceless fricative /s/ became voiced [z] in certain environments where the preceding syllable was unstressed. The voiced [z] resulting from Verner's Law underwent a subsequent sound change in the prehistoric period known as rhotacism, resulting in the presence of the /r/ in *coren* (Hogg 2011a: 67-68; 72). In addition to this consonantal variation, the paradigm of *cēosan* also displays allophonic variation, as /s/ was manifested through both the voiced and the unvoiced allophones, that is, [z] and [s], respectively. For instance, in the first person singular present indicative *cēose* 'I choose', we find the voiced allophone [z], as it is placed intervocalically, whereas in the preterite singular *cēas* 'chose' the <s> represents unvoiced [s], as it is placed in final position. In Present-Day English, the /s/ vs /r/ consonantal alternation has been lost, as the glossed forms in the previous lines demonstrate that /s/ has been generalised across the paradigm. The allophonic variation has also disappeared in the paradigm, for the voiced /z/

phoneme has been analogically generalised across, hence levelling out earlier [s] and [z] allophonic alternation.[48] The analogical generalisation of /z/ throughout the paradigm of the verb *choose* complies with the notion of iconicity, one of the factors conditioning the operation of analogy (see section 3.2.1.a. below), in that only one form represents one meaning, or, in other words, that the /z/ phoneme is now the only realisation possible for <s> in the paradigm of *choose*. In addition, the generalisation of this phoneme in the paradigm of *choose* illustrates that the outcome of intraparadigmatic analogy is conditioned by and sensitive to morphosyntactic hierarchies, insofar as "the process [of intraparadigmatic analogy resulting in a reduction of morphophonemic variation] is most successful if the alternations do not signal important morphological distinctions" (Hock 2003: 442). Hence, although during the Old English period /r/ was only present in the preterite plural forms and the past participle (*curon* and *coren*, respectively), the /s/ in the infinitival and present tense environments also featured in the preterite singular, namely first and third persons preterite singular *cēas* 'I chose, she chose'. Therefore, the analogical extension of /s/ at the expense of the original /r/ did not entail the loss of formal reference to important morphological distinctions such as present and preterite tense marking, since /s/ was also found etymologically in the preterite paradigm of *cēosan*.[49]

Such behaviour, where analogy seems to be sensitive to morphological hierarchies, is also evident in changes to the Old English nominal morphology. For instance, in Old English *nd*-stems and root nouns, the *i*-mutated vowel was eliminated in certain contexts in the singular paradigm and replaced by the unmutated counterpart (OE *frīend* changing to *frēonde* or *fēt* to *fōt* in the dative singular). While in the plural paradigm there were also signs of deletion of the *i*-mutated vowel, analogical levelling was more effective in the singular paradigm than in the plural. This was due to the fact that the presence of the *i*-mutated vowel in the plural paradigm served the morphological function of signalling and distinguishing plurality, particularly since the corresponding vowels were replaced by non-*i*-mutated vowels in the singular. Hence,

[48] The phonemic split whereby [s] and [z] became separate phonemes (/s/ and /z/) as opposed to being allophonic variants of /s/ (as was the case in Old English) occurred in the Middle English period (Minkova 2014: 158).

[49] Vocalic alternation in the root has also been partially maintained in the paradigm of *choose* (cf. OE /eo, ea, u, o/ > PDE /u, oʊ/), hence, in this respect, the morphological distinction between present and past marking is still evident.

as *i*-mutated vowels became iconic markers of plurality in these classes of nouns, their replacement by non-*i*-mutated vowels was less successful than in the singular paradigm, where the presence of a mutated vowel was a case marking device (dative vs nominative, accusative and genitive), and did not symbolise any major morphosyntactic category distinction such as singular vs plural (Adamczyk 2018: 34; 175-176).

So far throughout this discussion, paradigm levelling has been discussed and described as the generalisation of an already existing variant across a given paradigm at the expense of another variant. Such levelling irons out internal irregularities leading to greater intraparadigmatic regularity in the majority of cases (but see below for examples of analogical formations and innovations leading to greater intraparadigmatic irregularity). However, such a definition conflates the processes of analogical levelling and analogical extension (generalisation). Much like with the definition of analogy covered above, which is used both in a general and specific manner, paradigm levelling can also be defined generally and specifically. Generally, paradigm levelling equates to any regularisation which is not limited to the elimination of stem alternation. More narrowly, paradigm levelling is restricted to cases where the only observable change involves the partial or total elimination of stem alternation (Fertig 2013: 71). Thus, the change involving the comparative and superlative forms of the adjective *old* (*elder* and *eldest* analogically changing to *older* and *oldest*) does constitute a clear case of paradigm levelling, because this change in the paradigm has eliminated stem alternation. On the other hand, the regularisation of original strong verbs would not constitute a strict case of paradigm levelling because, in those instances, the change is not restricted to the regularisation of the vocalic alternation in the stem, but an additional dental suffix is added to the base form of the verb (consider *cleave* with its original preterite *clove* being replaced by the analogically created *cleaved*). This dental suffix has been analogically extended from the weak verbal paradigm. Once again, the link between analogical levelling and extension becomes apparent, a connection which has sparked debate in the literature. According to Fertig (2013: 72),

> the controversy that makes paradigm leveling a classificatory problem child concerns the question of whether it is proportional – in other words, whether it simply amounts to the extension of a pattern that happens to be non-alternating,

> or whether it must instead be attributed to some kind of general bias that favors non-alternating stems independently of any specific model. In the latter case, there would truly be an important distinction between leveling and extension.

In processes of analogical innovation and change, it has been noted that the preference cross-linguistically tends to be towards non alternation (Fertig 2013: 74). Thus, in his laws of analogy, Mańczak (1957: 301) claimed that stem alternation is generally eliminated (and not (re)introduced) as a result of analogy. In cases of paradigm levelling, therefore, speakers produce analogical, innovative formations where the stem alternation has been eliminated because they have deduced through experience that non-alternation is the preferred, dominant option in their language. As a result, stem variants are no longer considered identical representations of the same concept, and one of the options is partially or completely dropped from the system (Fertig 2013: 75).

Cases of complete elimination of stem alternation point to the fact that paradigm levelling is indeed proportional, since it involves "the imposition of an existing (uniform) pattern on a non-uniform paradigm" resulting in "the emergence of paradigm uniformity" (Garret 2008: 142). Partial cases of paradigm levelling, such as the elimination of vocalic alternation in the preterite of original strong verbs (cf. OE *sprecan* 'speak', preterites *spræc* and *sprǣcon* 'spoke' and past participle *sprecen* 'spoken' to PDE *speak, spoke* and *spoken*) are more challenging to justify, since the vocalic alternation has not completely disappeared in the paradigm of this verb, only in the preterite paradigm. In line with the topic discussed in the previous paragraph, namely the connection between the operation of analogy and the preservation of morphosyntactic categories, it could be argued that complete elimination of the vocalic alternation in the system of *speak* was disallowed precisely so that the distinction between present and past tense remained overtly marked and, therefore, morphologically maintained. The same can be argued for the vocalic alternation present in the paradigm of *choose*, discussed in the previous paragraph. Thus, it might be claimed that the preservation of important morphosyntactic categories (singular vs plural or present vs preterite) is a constraint on the operation of analogy. In any case, although these partial processes of levelling are not considered by many linguists as pure examples of levelling because of the fact that they are not proportional (that is, they do not lead to complete paradigmatic regularity), they do increase the overall

regularity of the paradigm. This is why linguists who adopt a more moderate view on the proportionality of paradigm levelling agree that "leveling is largely or partially or probably or sometimes proportional" (Fertig 2013: 72).

The *cēosan* and *sprecan* examples discussed above highlight the fact that analogy and phonology are inextricably connected. Compared to phonological changes, the operation of analogy tends to be more arbitrary (in terms of scope and directionality) and less regular, in so far as it does not necessarily affect all potential elements in the language (Fertig 2013: 2).[50] If we consider again the nominal markers of plurality in Present-Day English, it is clear that not all plural nouns end in *-s*, the dominant and productive marker. Consider irregular nouns such as *foot-feet* and *woman-women*, where plurality is expressed via the presence of *i*-mutated root vowels.[51] The residual, irregular forms are thought to be preserved in English because they are highly occurring words. Indeed, the role played by frequency in processes of analogical change has long been established, where frequently occurring elements or words (in terms of token frequency – see further section 3.2.1.a. for explanation of this terminology) are more resistant to analogical change (McMahon 1994: 73; see further section 3.2.1.b. below). This peculiar nature of analogy whereby not all possible candidates are affected by it was captured by Sturtevant: "Phonetic laws are regular but produce irregularities. Analogic creation is irregular but produces regularity" (1947:

[50] It is shown in section 3.3. that sound change can also be irregular, contradicting the Neogrammarian view. This is particularly true when concurrent, competing sound changes affect the same pool of items in a language (Wang 1969).

[51] The pairs *foot-feet* and *book-books* symbolise the arbitrariness of analogy. Whereas for the *foot* pair the *i*-mutated vowel is retained in the plural in Present-Day English (OE *fōt-fēt* > PDE *foot-feet*), the structurally similar OE noun *bōc* 'book' did lose its *i*-mutated vowel in favour of the generic *-s* plural marker due to analogical pressures, hence PDE *book-books*. A further detail perhaps conditioning the eventual restructuring of the *book* pair in line with the regular, default and unmarked means of plural formation is the fact that the etymological plural form *bēċ* 'books' featured a palatal final consonant (by assimilation with the preceding fronted vowel). This form would have developed into **beech* in Present-Day English had analogical pressures not affected this word. On the other hand, the final consonant in the singular form *bōc* was a velar /k/. Therefore, the singular-plural distinction in this pair of words was not restricted to the presence or absence of an *i*-mutated vowel, but also to the quality of the stem final consonant. As it will be seen in the following section, studies on morphological change by analogy have identified that formal or structural similarities tend to enhance the likelihood of analogy occurring, as does frequency of occurrence. However, due to the arbitrary nature of analogical change, such structural similarities do not always lead to complete paradigmatic regularisation, and exceptions remain.

109). In other words, sound change produces irregularities insofar as it introduces allophonic variation in the paradigms (remember the stem-final consonantal alternation present in the paradigm of *cēosan* 'choose', a result of two separate but related sound changes, namely Verner's Law and rhotacism), while analogy removes allomorphic variation within paradigms (intra- and interparadigmatic variation), hence producing regularity in the great majority of cases. Nonetheless, the scope of the so-called Sturtevant's Paradox has been recently called into question, precisely because such a straightforward correlation between phonology and analogy is no longer believed to be accurate. Thus, Hock (2003: 457) proposed a more nuanced description of such correlation:

> Sound change typically is regular, and morphologically or semantically motivated analogy (such as morphophonemic and rule extension) tends to be as regular as sound change, and changes such as dissimilation and metathesis require a general phonological motivation to become regular.

In the restructuring of Old English nominal morphology, this interaction between phonological developments and analogy is well captured, since "many of the analogical developments occurring in and across the paradigms can be considered a direct reaction to a range of phonological changes which affected final, unaccented vowels in inflectional syllables" (Adamczyk 2018: 35).

Before concluding the present discussion, it is important to address the question of regularity in analogy. As previously mentioned, it has generally been observed and claimed that the result of analogical processes is systemic regularity, which has a cognitive underpinning: "analogy is shorthand for the mind's craving for order, the instinctive need of people to find regularity in language" (Deutscher 2005: 62). However, while regularity is reported to be a much more common outcome than irregularity, there are examples from the history of English (and other languages) which demonstrate that this is not necessarily the case. The commonly cited example of the regularisation of original strong verbs developing weak preterite suffixes represents one of such cases. For there is evidence that the opposite direction and outcome of analogy is possible, albeit rare, that is, the reintroduction of irregularities back into the system. Hence, consider OE weak class 1 verb *werian* 'wear' with preterites *werede*, (-*ode*), *weredon*, (-*odon*) and past participle *wered,* which started

appearing from the fourteenth century with preterite forms following the strong conjugation (change of root vowel, hence *wore*) on analogy with structurally similar verbs such as *swear*, *bear* or *tear* (OED 2000-: s.v. *wear*, v.1). Similarly, originally strong verb *heave* (OE *hæbban*) had preterite form *hove* (from earlier *hof* and *hōfon*). A regular, weak preterite form was developed analogically, and the forms *hefde* or *hevede* appear from the late Old English period. However, a further analogical process has taken place in this particular verb, introducing a slight level of irregularity back into its paradigm. On analogy with structurally similar (and original weak) verbs such as *leave* (with preterites and past participle *left*), *heave* analogically developed a similar preterite form attested from the fifteenth century, hence *heft* (OED 2000-: s.v. *heave*, v.; Fertig 2013: 80-83). Similar analogical irregularities have been introduced into the paradigms of structurally similar verbs such as *cleave* (with attested preterites *cleaved* and the analogically reformed *cleft*) or *bereave* (attesting both *bereaved* and *bereft*) (Fertig 2013: 82-83); (OED 2000-: s.v. *cleave*, v.1.; *cleave* v.2.; *bereave*, v.). It will be noted that all these innovative, analogical forms introduce vocalic alternation back into the stem by featuring a short vowel in the preterite, as opposed to the long vowel of the present paradigm. Such an innovation seems to be in line with one of the well-established rules of paradigmatic regularity and stability, namely the maintenance of distinct present and preterite marking. Thus, as stated by Fertig (2013: 83),

> present-day morphological variation, by itself, reveals nothing about the direction of analogical change. Regularization may be more common historically than irregularization, but irregularizations occur much more often than many linguists seem to realize, and it may be that – at least at some points in a language's history – attested variation is just as likely to reflect irregularization as regularization.

So far in the above discussion, frequency and iconicity have been referred to a number of times as factors conditioning the process of analogical change. In addition to these, there are other factors which have been identified as conditioning the operation of analogy, such as morphological productivity, paradigmatic asymmetries, formal and semantic similarities across paradigms, and markedness. The role played by all these factors will be discussed in detail in the following section.

3.2.1. Factors conditioning processes of analogical change

3.2.1.a. Operation of analogy

Scholarship on morphological change as the result of analogical pressures has identified a number of factors which trigger the operation of analogy in diverse ways. The following section introduces such factors and discusses how they are influential in processes of analogical change:

a) declensional asymmetries: a primary pre-requisite for the operation of analogy is the existence of asymmetries among declensional classes (Coleman 1991: 199), since without them, the regularising effects of analogy would not be triggered. In the restructuring of the nominal inflexion in Old English, for example, these paradigmatic asymmetries were the result of formal syncretisms (Adamczyk 2018: 33), which, as explained in the ensuing lines, also affected the workings of analogy since they served as the trigger for paradigmatic restructuring. More directly linked to the purposes of the present thesis, similar conjugational asymmetries are also found within the paradigm of weak class 2 verbs. Thus, as explained in more detail in section 6.3., the paradigm of weak class 2 verbs displayed stem allomorphy. This allomorphy entailed the existence of a stem variant which carried the -i- formative etymologically in certain morphosyntactic categories alongside a formativeless stem variant present in other categories. Such internal asymmetry and irregularity brought about by prehistoric analogical innovations (see section 6.3. for more details) paved the way for analogical restructuring, mainly in the form of paradigm levelling.

b) similarity across paradigms: analogy can be facilitated by paradigmatic similarity both on a formal and a semantic level. The similarities existing among forms belonging to different paradigms or declensional classes facilitate interparadigmatic analogical processes. For instance, in terms of the development of nominal morphology in Old English, these formal similarities stemmed from inflectional syncretisms in many cases, such as the syncretism of the genitive singular and genitive plural in the masculine and feminine *u*-stems (resulting in *-a* inflectional endings), syncretism of the accusative, genitive and dative singular in the *ō*-stems (*-e* ending) or the syncretism of the nominative and accusative singular in all masculine declensions

(except the *n*-stems), which rendered these environments formally indistinguishable (Hogg and Fulk 2011: 14-54). As these case syncretisms, among others, reduced the transparency of the nominal declensional systems (in the sense that one particular ending no longer corresponded to a particular declensional class), these declensional systems became less stable and more prone to processes of analogical reformulation. A case in point involves the analogical spread of the genitive singular *-es* ending characteristic of the *a*-stems to other minor declensions, whose inflectional markings were easily reformulated due to the fact that they lacked distinctive inflectional endings (Adamczyk 2018: 32).

In terms of verbal morphology, Fischer (2015) has demonstrated that in the auxiliation of HAVE-*to* in English, beside word order changes and the subsequent fixed adjacency of *have* to the *to*-infinitive, concrete and abstract patterns such as structural and semantic similarities between the HAVE-*to* construction and other neighbouring constructions played a role in its auxiliation via analogy. Traditionally, the auxiliation of HAVE-*to* had been explained as a textbook case of grammaticalization, where the adjacency of *have* and the *to*-infinitive becomes obligatory and the original possessive meaning of *have* is gradually bleached and acquires semantic deontic colouring (cf. Łęcki 2010). Upon analysis of 493 instances combining *have*, *to*-infinitives and an object, Fischer (2015: 125) concluded that there was no evidence signalling towards a gradual semantic change of *have* from 'posses' via an intermediate stage of bleached possessive meaning to a deontic sense ('obligative' in Fischer 2015), a conclusion which is strengthened by the fact that both bleached and deontic senses of *have* are attested in Old English texts (Fischer 2015: 126). Thus, Fischer (2015: 132) proposed that the auxiliation of HAVE-*to* was triggered by a number of factors ranging from fixation of adjacency between *have* and the *to*-infinitive, great increase of *to*-infinitives in Middle English replacing *þæt*-clauses, syntactic developments whereby the *to*-infinitives became full verbal complements, and formal and semantic properties shared with other similar constructions such as HAVE + *to do* and HAVE + *nede*. In terms of the HAVE + *to do* construction, Fischer's study revealed that these two elements were adjacent rather frequently, possibly further promoting the adjacency of the HAVE-*to* construction being followed by an infinitive. Interestingly, when both *have* and *to do* had different grammatical objects, the only possible reading of *have* was the original possessive one, as in example [14], whereas when the

grammatical object was shared, as in example [15], the new deontic meaning became possible, too:

[14] (ME Corpus *The dethe of James Kynge of Scotis*)[52]
ME: *That thay had no lawe to do hym to death*
Trans: That they had no law (i.e. it was against the law) to put him to death

[15] (ME Corpus, *The Three Kings Sons*)
ME: *To take auise of suche besynesse as he had to do*
Trans: To take advise of such business as he had (in hand) to do

As mentioned earlier, however, the deontic reading of *have* was also already possible in Old English, which leads Fischer to conclude that the auxiliation of HAVE-*to* was not a case of grammaticalization. Rather, Fischer claimed that the HAVE-*to* construction obtained its later and strong deontic meaning mainly from a similar construction involving *have*, the noun *nede* 'need' and a *to*-infinitive (Fischer 2015: 140), for example:

[16] (ME Corpus, *Laud Troy Book*)
ME: *And ȝe ȝoure-selff to reste haue nede*
Trans: And you yourself have a need to rest/have to rest

Therefore, having ruled out grammaticalization, the construction HAVE + *nede* + *to*-infinitive, along with other highly frequent and similar constructions such as MUST + *nede* + infinitive or BE + *nede* + *to*-infinitive, could well have contributed to the analogical development of a deontic sense to the HAVE-*to* construction on the basis that all these constructions were both formally and semantically similar, hence facilitating the operation of analogy.

With regard to the overall restructuring of the weak verbal system in general and the system of weak class 2 verbs in particular, a final example is worth mentioning, because it illustrates the crucial role which structural similarity across paradigms plays in analogical and morphological developments. It entails the similarity that existed

[52] Examples and textual references taken from Fischer (2015).

between weak class 2 verbs and those belonging to the *nerian* sub-group of weak class 1 verbs. It should be remembered that these verbs featured a medial <i> between the root and the inflectional endings. Weak class 2 verbs also featured a medial <i>, that is, the -i- formative, hence *lofian* 'praise'. As a result, from a synchronic perspective, the presence of a medial <i> was not the iconic marker of a single class of weak verbs, but was a shared feature of two distinct classes. This and other shared structural similarities between this particular sub-category of weak class 1 verbs and weak class 2 verbs had major repercussions for the fate of the weak verbal system, as already noted by Stark (1982). As covered in detail in section 2.5., verbs of the *nerian* type gradually developed forms reshaped on analogy with weak class 2 verbs, the conjugation type which was the most dominant and, therefore, the most morphologically productive of the three weak classes in Old English times. The basis for such restructuring was rooted in the structural similarity shared by these verbs brought about by phonological developments, and the direction of analogical restructuring was dictated by the dominant and productive status of the weak class 2 conjugation.

c) frequency of occurrence: it has long been established by scholars that frequency of occurrence of a given linguistic item is one of the main determinants of its fate in diachronic change. Nineteenth-century German linguist Hugo Schuchardt (1885 [1972]: 26-28 [57-59]) already noted how, by and large, high frequency words behaved differently than low frequency words in phonological change, where highly frequent words "hurry ahead" and low frequency words "drag behind" (although exceptions occur). Paradoxically, it was also noted that, in terms of morphological change, specifically analogical change, the opposite was true, since low frequency words succumbed to analogical pressures much faster than high frequency words (see next section). These observations led more recent generations of linguists to propose a novel conception of grammar as determined in part by language use. This new approach to grammatical structure and linguistic change is known as usage-based models (Bybee 1985; Bybee 2007: 9). The idea that linguistic structure emerges due to frequency is reminiscent of the notion of markedness, another explicatory factor behind the emergence of linguistic structure. In fact, it is generally the case that unmarked features in language are those more frequently occurring, whereas marked features tend to be less frequently occurring (Bybee 2007: 6). From a cognitive

perspective, it has been shown that the repetition (i.e. frequency) of instances and experiences leads to generalisations. And the repetition of these experiences and the similarity of and to other comparable experiences determine the nature of categories. Since the mind is sensitive to repetition – a reality which is not constrained to linguistic cognitive capacities only – there are multiple cognitive effects of repetition, depending on the degree and extent of this repetition. From a cognitive perspective, however, language emerges as a complex system constantly displaying variation and change, where repetition brings about the formation and emergence of organized structures (Bybee 2007: 8).

When discussing category formation, reformation and subsequent linguistic change with an emphasis on frequency, it is crucial to distinguish between token frequency and type frequency. Both types of frequencies play a significant role, but the nature of their effects is very different, as it is exemplified here and in section 3.2.1.b. Token frequency, also known as text frequency, refers to the number of times a unit appears in running text, such as a specific consonant, syllable, word, phrase or even a sentence. Type frequency, on the other hand, refers to the frequency of a specific pattern, such as a sequence of consonants, a prefix, inflectional endings, stem plus affix combination, and so on. Thus, type frequency is understood as a property of segments and patterns, and it is closely linked to the productivity of any given pattern (Bybee 2007: 9-10 - see further d)). A pattern can be a specific consonantal cluster, an inflectional ending, or a specific manner of marking a grammatical category, for instance, the different ways of marking the plural in English nouns. As already established, type frequency is closely linked to morphological productivity, specifically in analogical processes. The higher the type frequency of a given pattern, the higher its productivity. Productivity in morphological terms refers to the capacity of a given pattern to serve as a morphological basis and be analogically extended outside its original scope, eventually affecting more and more words (Bybee 2007:15-16).[53] For the purposes of the present discussion, that is, the operation of analogy, type

[53] This is not always necessarily the case, for Fertig (2013: 113) notes how, in certain cases, a particular low type frequency pattern has eventually extended to innovative morphological environments despite being initially restricted to a small number of items. For example, as Fertig explains, the Modern Czeck *u*-stem dative singular *-ovi* nominal ending has been extended to a large number of nouns despite this class originally only attesting a few masculine nouns in Old Church Slavonic.

frequency is dealt with first because it emerges as a crucial factor. Token frequency emerges as an important factor, too, but in the context of the outcome of analogy, and it is, therefore, discussed in detail in section 3.2.1.b.

With regard to type frequency, that is, the frequency of a specific pattern, its effects are exclusively morphological, and are closely related to productivity in analogical change. Once again, a very illustrative example of the effects of type frequency on morphological restructuring and change is the extension of the regular preterite marker (*-ed* or *-d*) to strong verbs which etymologically changed their root vowel to mark the preterite tense. Since the addition of a dental suffix was the pattern of preterite formation with higher type frequency (because it was the pattern used in the great majority of verbs in Old English), it was the more productive means of preterite formation.[54] As a result, it analogically extended outside its etymological pool of weak verbs and, from the late Old English period, original strong verbs are attested forming their past by adding a dental suffix, a process which has continued throughout the history of the English language (Krygier 1994; Costa Rivas 2020). Type frequency and its related morphological productivity not only applies to already existing words in the language, but also to new coinages. Note, for instance, the past form of the verb *to highlight*, which, unlike its related verb *to light*, forms its preterite form by adding the ending *-ed*, hence *highlighted* (as opposed to **highlit*). The reason why new verbs in Germanic languages tend to overwhelmingly form the past by adding a dental suffix as opposed to changing their root vowel is that this manner of preterite formation is more productive due to its higher type frequency, compared to the much lower type frequency of vowel change (ablaut). From a cognitive perspective, type frequency translates into mental representation and entrenchment by means of segment analysis,

> when a construction is experienced with different items occupying a position, it enables the parsing of the construction. If *happiness* is learned by someone who knows no related words, there is no way to infer that it has two morphemes. If *happy* is also learned, then the learner could hypothesize that *-ness* is a suffix,

[54] Strong verbs were no longer productive by the Old English period, while weak verbs were (Stark 1982: 8). This situation implies that weak verbs were more numerous than strong verbs in Old English (cf. section 2.5.), hence why the regular pattern of preterite formation, that is, the addition of a dental suffix, benefitted from a higher type frequency than ablaut did.

> but only if it occurs on other adjectives would its status as a suffix become established. Thus a certain degree of type frequency is needed to uncover the structure of words and phrases. In addition, a higher type frequency also gives a construction a stronger representation, making it more available or accessible for novel uses (Bybee 2007: 15).

Within the Old English weak verbal system, type frequency is a key factor conditioning its synchronic and diachronic status, as well as the associated restructuring processes which are covered in detail in sections 2.5. and 6.3.1. Thus, in the Old English period, weak class 2 verbs were clearly the most morphologically productive ones due to their higher type frequency. This higher type frequency was a result of a number of factors given in section 2.5., including a considerably transparent and stable paradigm. As mentioned earlier, high type frequency leads to morphological productivity, and this productivity leads, in turn, to a higher number of tokens adopting and displaying a particular, productive pattern. Thus, the higher type frequency of weak class 2 verbs and the associated higher morphological productivity of this conjugation class led to the transference of verbs which originally belonged to the other two main weak conjugations into the second weak one. As a result, these transferred verbs adopted the morphological features typical of weak class 2 verbs, including the medial -i- formative and back inflectional vowels. See further sections 6.2.2. and 6.3.1. for late Northumbrian evidence of these restructuring phenomena.

In the context of the present thesis, the notion of type frequency and its role in analogical change is addressed in detail in section 6.3.1. Such a discussion proves pertinent because the synchronic paradigm of weak class 2 verb presented stem allomorphy, that is, variation between a stem variant containing the -i- formative and one which did not. Consider the infinitival form *lufian* ‘love’, which carries the -i- formative, and the third person singular present indicative form *lufað* ‘loves’, which does not. My data reveal that these two stem variants were in competition in tenth century Northumbrian, since both the extension of the formativeless stem variant is found in categories where the -i- formative was etymologically expected and vice-versa, that is, the stem variant carrying the -i- formative is extended to categories which etymologically contained no -i- formative. However, the former process is attested much more robustly in my data than the latter, and it is argued in section 6.3.1.b. that this is the case because of the higher type frequency of the stem variant

carrying no -i- formative, hence leading to its higher morphological productivity and its extension to categories which originally carried the -i- formative.

d) morphological productivity: in cases of proportional analogy, the pattern which serves as the basis for analogical transference and is extended to new items or generalised across or within paradigms should be productive. Morphological productivity is inextricably linked to frequency of occurrence, particularly type frequency. As Bybee (2010: 66) puts it: “the higher the type frequency, the greater the productivity or the likelihood that a construction will be extended to new items”. In other words, it is expected and theoretically understandable that words which belong to less productive or minor classes may change their morphology on the structural basis of the more productive classes precisely because they are more frequently used and, therefore, more common. Wurzel (1987: 87-92) identified a number of characteristics a given inflectional class had to display in order to be productive, which include being extended to other inflectional classes through borrowing or through transferrals from other classes, and maintaining its word inventory, that is, not losing words to other inflectional classes. Importantly, in order for the more morphologically productive patterns to be analogically transferred either to new or already existing lexical material, there needs to be a pool of words onto which these patterns are extended. This pool tends to be formed by words belonging to minor or less productive declensional classes. Such patterns are observed in the analogical restructuring of Old English nominal inflexion, where the most productive declensional classes, namely the *a*-stems, *ō*-stem and, to an extent, *n*-stems, also happened to be rather frequent in the sense that they comprised many nouns. In turn, these productive classes provided the inflectional material which was analogically extended onto minor declensional classes, namely vocalic stems of all genders, consonantal classes and dental stems (Adamczyk 2018: 134). Similarly for the development of the weak verbal paradigm in Old English, it was the second class of weak verbs which provided the morphological basis the other two minor verbal conjugations, namely weak class 1 and 3 verbs, adhered to. The analogical transference of weak class 1 and 3 verbs to class 2 adheres to the theoretically expected patterns of analogical change, since verbs belonging to the second conjugation were highly frequent (type frequency) and, therefore, constituted the productive class (Stark 1982: 16; Hogg and Fulk 2011: 279). Its status as the morphologically productive class within the weak verbal paradigm is

strengthened by the fact that verbs borrowed from other languages such as Latin tended to inflect following the weak class 2 inflectional patterns, a process which is attested already in early Old English (Campbell 1959: 209-210), but becomes fully apparent during the Middle English period with French loanwords (Laing 2009: 243; Fulk 2012: 82-84).

e) iconicity: the notion of linguistic iconicity was briefly touched upon earlier in this chapter when discussing the analogical extension of /z/ in the paradigm of OE strong verb *cēosan* 'to choose'. Iconicity goes back to the notion of the icon developed by American philosopher Charles Peirce and defined as "a sign which refers to the Object that it denotes merely by virtue of characters of its own, and which it possesses, just the same, whether any such Object actually exists or not" (Peirce, 1931: II.143, §2.247), or, in other words, "a non-arbitrary intentional sign, that is, a designation which bears an intrinsic resemblance to the thing it designates" (Wescott 1971: 416). The idea of iconicity is particularly relevant in the context of morphological change resulting from analogy, and this is due to the fact that iconic isomorphism (referring to a unique, one-to-one association of form and meaning) can be understood as the default definition of linguistic iconicity (McMahon 1994: 86). In morphology, greater iconicity tends to correlate with greater length of forms, for example the positive, comparative and superlative forms of adjectives such as *great*, *greater* and *greatest*, or the -ø marking for nouns in the singular, as opposed to -*s* ending for plurals, such as *girl/girls*. Additionally, these markers uniquely correlate form with function, thus resulting in a highly iconic system. Morphological iconicity is clearly linked to the concept of markedness, although these two properties tend to be the result of (type) frequency (Haspelmath 2006: 58-60). That is, the more frequent a given item, the more iconic and unmarked it is in language. The opposite is true for low frequency items.

The above discussion has introduced the factors which have been identified by previous scholarship as triggering analogical change. Some of these are clearly related (for example frequency, markedness and iconicity), and any explanatory model will need to consider that the triggers are multiple, and that various factors may combine to facilitate or inhibit the process of analogical change. In the context of the data collected for this thesis, this is done in chapters 5 and 6.

As noted earlier in this chapter, the second aim of this chapter is to provide an account of the principles underlying the implementation of analogical changes in the language, and this is the focus of the following section.

3.2.1.b. Outcomes of analogy

This chapter has so far explored the various triggers for analogical change that have been identified by existing scholarship. The current section presents the factors that have been considered as relevant to the spread or implementation of analogical change in the language, namely (token) frequency, salience of markers and syllable structure.

a) frequency of occurrence: frequency of occurrence has already been alluded to in the context of the actuation of analogical change, but it is also a key factor when it comes to its implementation. Specifically, it is token frequency, also known as text frequency, which dictates the direction of analogical change. Token frequency was defined above as the number of times a unit appears in running text, where this unit could be a specific consonant, syllable, word, phrase or even a sentence. Token frequency has three distinct effects, one phonological and two morphological. The phonological effect of frequency, known as the reducing effect, demonstrates why frequently used expressions and words tend to be phonologically reduced and, eventually morphological condensed. Consider commonly occurring expressions such as *God be with you* eventually reducing to *goodbye* or simply *bye*. This observation has long been made, for Schuchardt (1885 [1972]: 27 [59]) already claimed that the reason why common expressions such as *guten Morgen* 'good morning' tended to be reduced and, therefore, produced as *g' Morgen* (where the adjective is barely articulated) was due to their "over-frequent use". The same phenomenon applies to grammatical elements: *do not* cliticizing into *don't*, *you are* into *you're* or *going* to into *gonna*. In these cases, it has been observed that reductive sound change affects high frequency items more rapidly and drastically than low frequency items. The rationale behind the reducing fffect of high frequency items is both physiological and cognitive. As Bybee (2007: 11) puts it:

> The reason for this trend [the phonological reduction of high frequency items] is that repetition of neuromotor sequences leads to greater overlap and reduction of the component articulatory gestures. As articulation becomes more efficient, the output appears more and more to have been affected by assimilation and reduction. What is the cause of such reduction? (…) [P]honetic reduction is directly tied to neuromotor processing: repeated sequences of neuromotor commands and actions tend to be processed as single units; at the same time, repeated sequences tend to become more efficient by the increased overlap and reduction of the gestures involved (…). This domain-general process is responsible both for the fact that general reductive sound change occurs earlier in high-frequency words and that special reduction occurs in very high-frequency words and phrases. Thus frequency of use is one factor in explaining sound change.

The overall result of these changes is that high frequency words and expressions tend to be shortened (cf. Zipf's Law on the correlation of high frequency with shorter expression – Zipf 1929: 3).

On the morphological plane, two main effects of high frequency are distinguished. The first effect, known as the conserving effect, is related to morphological reduction, particularly in analogical processes. This effect explains why morphological properties tend to be preserved in high frequency items despite analogical pressures, while low frequency items tend to succumb much faster and regularly to these pressures. Cognitively speaking, the conserving effect of high token frequency items is linked to the notions of accessibility and entrenchment:

> repetition strengthens memory representations for linguistic forms and makes them more accessible. Accessibility in this sense refers to the fact that in experiments where subjects are asked to say whether a string of letters or sounds is a word of their language, they respond much more quickly to high-frequency words than to low-frequency words. This greater accessibility suggests that each token of use strengthens the memory representation for a word or phrase (Bybee 1985; this volume, chapters 2, 3, 4, 5, and 8 [i.e. Bybee 2007]). The strength of representation of higher frequency forms explains why

they resist reformation on the basis of analogy with other forms (Bybee 2007: 10).

Within the study of verbal morphology, a very commonly cited example is the restructuring in the preterite of original strong (irregular) verbs on the basis of original weak (regular) verbs (see Costa Rivas 2020 for a detailed study of this analogical restructuring in late Northumbrian). It has been demonstrated that high token frequency verbs tend to resist analogical restructuring and, therefore, they eventually retain their original ablaut pattern. Cognitively speaking, the high frequency of these verbs results in the easy accessing (through repetition) of the original ablauted variant of the preterite. For less frequent verbs, the base form of the verb is accessed and the most productive preterite marker, that is, a dental suffix, is added on analogy with weak (regular) verbs.

Another interesting aspect of these analogical reformations and their interactions with frequency effects is the fact that, within paradigms, it is the most frequently occurring form that serves as the basis for analogical reformation (cf. Mańczak 1980: 284-285). In the previously mentioned case of strong verbs being restructured on the basis of weak verbs, it is the base form of the verb which is used as the model upon which a suffix is added. The reason for this form being selected and not the original preterite form (for example *dive* > *dived* and not **doved*) is explained by the fact that the base form of the verb is more frequently occurring within the paradigm than the preterite form. The conservation of etymological properties and features can still be seen in high frequency modals and auxiliaries. Consider, for example, the inversion of subject and verb order in interrogative sentences, not requiring a periphrastic marker for negation, but only being followed by a negative particle; taking an infinitive without 'to' as object; or not adding an *-s* inflectional ending in the third person singular present indicative category. These properties were shared by all verbs in Old English, but are now only retained in a number of high frequency modals and auxiliaries (Bybee 2007: 11).

The final effect of high token frequency on the morphology is considered an extreme case of the conserving effect. Extremely frequent words and phrases tend to acquire such a degree of autonomy that they are "represented in the speaker's lexicon as a whole and separate unit" (Bybee 2007: 13-14). Lexical autonomy is related to the notion of lexical strength, by which autonomy is a reflection of

frequency in experience. Highly autonomous words are accessed as whole units by language users and are less tightly connected to related words (in terms of paradigm, lexical category, semantic category, and so on). They are also less likely to be affected by analogical pressures, if at all. When these highly autonomous words are accessed, they are retrieved independently of the other related words, precisely because they are not as interconnected in the same lexical network. These items are, therefore, seen to behave differently than even high token frequency items. An often-cited example of morphological autonomy arising from high token frequency is the grammaticalization of high frequency verbs and periphrastic constructions such as *have* or *be going to*, where some of the original properties of these verbs have been lost. In both cases the original lexical meaning of the verb is lost, and in the case of lexical *have*, it is now optional to resort to *do*-support for negations and interrogatives. It is clear that these new properties acquired through grammaticalization set these highly autonomous verbs apart from other verbs.

It is worth noting that frequency of use is not the only factor contributing to linguistic autonomy, since semantic simplicity and morphophonemic regularity have also been proven as influential (Bybee 2007: 13). Just like it was revealed in the discussion surrounding type frequency, the effects of token frequency are also closely intertwined with cognitive and entrenchment processes:

> items of greater frequency become entrenched and are able to build up strong independent representations. The more entrenched a form is, the less likely it is to be replaced by some frequent pattern. On the other hand, items of a lesser frequency have weaker representations in memory and therefore are more likely to be replaced by more productive morphophonemic patterns. The mechanism by which this works is to be found in the storage of linguistic items and the retrieval of those items from storage (Bybee and Hopper 2001: 364-365).

Section 6.2. addresses the role of token frequency albeit in more specific detail, by embedding the discussion in the visible effects which frequency of occurrence has on my data.

b) salience of markers: the notion of salience has been used in diverse fields of linguistic research, and the scope of its definition varies depending on whether it is applied to cognitive linguistics or to phonology and morphology. In general terms, salience equates to prominence, as will be shown below. Two aspects of salience have been identified as relevant in processes of morphological change, namely phonological salience and morphological complexity (Adamczyk 2018: 53). Phonological salience is determined in terms of acoustic weight, a system where the least salient markers are zero endings, the most salient markers end in vocal followed by a consonant, and markers ending in a vowel constitute the intermediate step in the sonority and salience scale (Goldschneider and DeKeyser 2001: 22-23). When it comes to processes of morphological change, it is assumed that the more salient an element is, the more resistant it will be to analogical pressures. Thus, theoretically speaking, overt marking would be preferable in languages over zero marking (Adamczyk 2018: 54). Phonological salience, therefore, is closely linked to morphological complexity, in the sense that overt marking – as opposed to zero marking – involves the existence of more elements (such as inflectional endings and allomorphs) in the system (see further Dammel and Kürschner 2008). Another aspect of salience which is important to consider in the context of the study of morphological change is its close interaction with frequency: high frequency forms will tend to be more salient than low frequency forms (Adamczyk 2018: 57).

c) prosodic structure: syllable structure refers to the phonological makeup of a particular syllable in terms of its weight. Syllables can, thus, be either heavy or light depending on the elements which are contained in them. If a syllable is formed by either a long vowel or diphthong and a consonant (CVVC) it is a heavy syllable. On the other hand, a syllable consisting of a consonant followed by a short vowel and ending in one single consonant (CVC) constitutes a light syllable (Lass 1994: 36). It is important to consider syllable structure as a factor conditioning the implementation of analogical changes because of its implications within the broader context of phonological change and the impact of phonological change has on morphology. Thus, it is known that processes of phonological change in Old English such as syncope or apocope of vowels had divergent results depending on the weight of the preceding stem. For example, in the prehistoric process known as High Vowel Deletion, the fates of the high unstressed vowels */i, u/ were directly dependent on the

weight of the preceding syllable: the vowels were lost when preceded by a heavy syllable but retained when preceded by a light syllable (Lass 1994: 98). In light of these varying results produced phonologically in the prehistoric times, it is expected that the morphological makeup of different declensional classes will likely differ. And this is relevant to the study of morphological change by analogy because the paradigms emerging from the phonological changes affecting heavy and light stems incorporated analogical innovations at varying degrees (Adamczyk 2018: 60; Adamczyk and Versloot 2019).

For the aims of the present thesis, the aforementioned factors are very relevant. Firstly, the notion of frequency of occurrence and its impact on language change are specially interesting because, as already mentioned earlier in this chapter, weak class 2 verbs were a highly frequent class in the sense that this class comprised many verbs (Hogg and Fulk 2011: 279). Therefore, in terms of the innovative loss of the -i- formative in this class of verbs as attested in the late Northumbrian dialect of Old English, the present thesis investigates the effects which frequency might have had on the spread of formative-less weak class 2 verbs – see further chapter 6. Additionally, this thesis also studies the transference of weak classes 1 and 3 verbs into the second conjugation (section 6.2.2.), and there too frequency shall be considered as a potential factor driving the analogical transference. In terms of phonological salience and morphological complexity, the -i- formative in weak class 2 verbs was a considerably salient feature. In phonological terms, the -i- formative was salient due to the fact that being a vocalic sound it stood in the middle of the sonority and salience scale. Its phonological salience is also emphasised by the fact that the formative bore half stress (Campbell 1959: 34). Morphologically, it was also a salient feature by virtue of being the stem formative. On the other hand, the fact that the -i- formative linked the verbal stem to the inflectional endings in weak class 2 verbs evinces a paradigm of higher morphological complexity than that of the other two classes of weak verbs. The -i- formative also served another morphological function, namely that of contributing towards the transparency and iconicity of the verbal paradigms. Since no other class of verbs featured this formative (and indeed those weak class 1 verbs such as *nerian* ‘save’ or *werian* ‘wear, defend’ whose endings did resemble those of class 2 were gradually transferred to class 2 on analogy), the presence of the medial -i- was highly characteristic of weak class 2 verbs. The

combination of these features partly justifies the status of the second weak conjugation as the more morphologically productive.

This thesis also considers what the consequences of the loss of the -i- formative were when it comes to the overall morphological complexity and transparency of the emerging verbal paradigms. Finally, the possible impact which the weight of the verbal stem could have had on the disappearance of the -i- formative is also analysed by this thesis, and the results are presented in chapter 5. Following the discussion presented in section 3.2.1.b., it is expected that weak class 2 verbs will shed the formative more readily if they are heavy-stemmed. It should be mentioned at this stage, however, that recent research presents mixed findings. On the one hand, studies into the formation of the preterite and past participle inflectional forms in weak class 2 verbs have shown no correlation between the form of the inflection and the prosodic structure or weight of the preceding syllable, as both heavy stems and light stems behave identically in triggering *-ode* as opposed to *-ede*, hence *lōcode* 'looked' and *losode* 'lost' (Minkova 2011: 198). My earlier findings in Ramírez Pérez (2017) corroborate this claim, where I demonstrate that the -i- formative tends to be lost also when preceded by a light stem, and not only after a heavy stem. The findings presented in this thesis introduce a slight variation to my earlier findings. As shown in Figure 7 in section 5.3., stem weight has been identified as a (secondary) contributing factor in the loss of the -i- formative, but only in the context of the Lindisfarne dataset. These data indicate that the -i- formative is more readily lost when preceded by a heavy stem. Similar findings are reported for Middle English data, where the reflexes of weak class 2 verbs in the AB dialect tend to be conditioned by the phonological weight of the stem. Thus, heavy-stemmed verbs lead to syncope of the inflectional vowel following the ME reflex of the -i- formative, generally <e> (Goering 2021: 476).

3.3. Lexical diffusion

The model of lexical diffusion was first put forward by William S-Y Wang in 1969 in an attempt to explain the various dimensions (phonetic, lexical and chronological) along which sound change was implemented. For Wang, unlike for the Neogrammarians, sound change was a gradual process. To be exact, it was phonetically abrupt but lexically gradual, by which it was meant that many types of sound changes (that is, those which are physiologically motivated) are phonologically abrupt but require long

periods of time to spread in the lexicon.[55] By gradual, Wang (1969: 13) was referring to "imperceptible increments" which ultimately have a cumulative effect. Thus, it is clear that the model of lexical diffusion is concerned with the implementation phase of linguistic change. It should be noted that late nineteenth century American linguist Sturtevant (1917: 82) already defined such a means of implementation of a sound change, although he provided no explicit label for such process:

> we have seen that many sound changes are irregular when they first appear and gradually become more and more regular. The reason is that each person who substitutes the new sound for the old in his own pronunciation tends to carry it into new words. The two processes of spread from word to word and spread from speaker to speaker progress side by side until the new sound has extended to all the words of the language which contained the old sound in the same surroundings.

Sturtevant's quotation indicates that the implementation of a phonological change is visible on three separate, incremental levels, and works as follows:

> before the change, all speakers will use sound *X* in all relevant morphemes; after the change, all speakers will use *Y* in the same set of morphemes. The dimension of time may be studied in each of three relatively independent parameters (1) phonetic, i.e. from sound *X* to sound *Y*; (2) lexical, i.e. from

[55] Wang believed that certain sound changes, for example, metathesis, segment deletion or vowel reductions, could not spread in a gradual manner, since they did not operate on a phonetic level, but on a phonological one. Such changes are, therefore, phonetically non-gradual according to Wang's view. Wang discusses the change in pronunciation of the verb *acclimate* (from /əkl'ajmɪt/ to /'æklɪmejt/), where the changes to all three vowels were brought about by a sequence of factors, including a change in accent placement caused by the fixation of the stress on the root syllable and subsequent vowel reduction. In this particular case, "it is surely unrealistic to propose that there was a gradual and proportionate shift along all four phonetic dimensions" (Wang 1969: 14), where the four phonetic dimensions refer to the change in accent placement and the subsequent reductive changes to the three vowels. Later studies, however, have demonstrated that phonological processes such as vowel reduction or segment deletion can also gradually spread across the lexicon. Examples include Hooper 1976, Phillips 1984, or Bybee 2000.

morpheme to morpheme in the relevant part of an individual's vocabulary, and (3) social, i,e, from speaker to speaker in the same dialect (Wang 1969: 13).

Based on the above explanation, there are four possible ways in which a sound change implements itself (Wang 1969: 14):

1. Phonetically abrupt and lexically abrupt
2. Phonetically abrupt and lexically gradual
3. Phonetically gradual and lexically abrupt
4. Phonetically gradual and lexically gradual

Out of these four manners of implementation, only the one which views the change as phonetically abrupt but lexically gradual explains why changes take time in spreading in the lexicon, not only of an individual speaker but also of the wider speech community (cf. Sturtevant's quote above). Such a means of implementation was represented by Wang (1969: 18) as follows:[56]

	T_1	T_2	T_3	T_4	T_5
C_1	A	B	B	B	B
C_2	A	A	B	B	B
C_3	A	A	A	B	B
C_4	A	A	A	A	B

Table 4. Representation of the operation of lexical diffusion

The above representation implies a scenario whereby, in the beginning (T_1), all speakers have sound A in all contexts (C1 to C4). By T_2, sound A has changed into B in one particular context (whether phonological or morphological). C_1, according to this model, would represent the primary context. Once a change has appeared in the primary context, the phonological system presents alternation, where sound A is still present in the majority of context except for the primary one, where the change A to B has already taken place. Synchronically, therefore, the system presents both sound A and B, that is, allophony. The key chronological aspect of this model is represented by means of the different time spans (T_1 to T_n), where it can be seen that, as the

[56] Legend: T_n = time span; A and B = changing segments; C_n = contexts.

change spreads in the language (T_1 to T_5), more and more phonemes and morphemes become affected. This gradual process of implementation across the lexicon was labelled "snowball effect" by Wang (1969: 22). The sound change from A to B is not fully complete (that is, is not implemented in all possible contexts (C_4)) until T_5. The sound change is now unconditioned: "[f]ormally stated, this can be seen as a process of successive simplification in the diachronic rules that will ultimately have the effect of eliminating whatever alternation was caused by the primary context" (Wang 1969: 18).

A by-product of the chronological and gradual nature of this process is that, while a sound change is in the process of being implemented, synchronic variation exists. Alternation between the variants may be due to different factors, although Wang (1969: 15) also briefly toys with the idea that variation may be random. His later endorsement of Vogt's (1954) view on sound change, however, point to the assumption that what initially might seem free variation may in fact be the product of a complex web of contributing factors:

> at any moment, between initiation and the conclusion of these [sound] changes, we have a state characterised by the presence of more or less free variants, so that the speakers have the choice between alternative expressions. In each case the choice will be determined by an interplay of factors, some linguistic, some esthetic and social, an interplay so complex that most often the choice will appear as being due to pure chance (…) What therefore in the history of a linguistic system appears as a change will in a synchronic description appear as a more or less free variation between different forms of expression, equally admissible within the system (Vogt 1954: 367).

Since living languages are in constant evolution, such a reality implies that, at any given point it time, several sets of morphemes may present dual pronunciation (or 'doublets', as termed by Wang (1969: 15)). But the innovative pronunciation will gradually and eventually replace the original pronunciation in the majority of cases.[57]

[57] Wang (1969: 16) also refers to changes which are reverted before they run their full course (labelled 'retrogrades'). Once such example includes the initial lengthening of original short vowels before the consonant cluster /ng/ in Latin. However, for extra-linguistic reasons, the lengthening process stopped, and the short vowels were restored into the system, leaving it

Such an outcome of sound change would lead to systemic regularity. However, there are cases in which apparent irregularities crop up. Sometimes, these irregularities – labelled 'residue' by Wang (1969) – are not in reality irregularity, but only evidence of incomplete sound changes, that is, those changes which have not yet affected the potential pool of applicable phonemes and morphemes in its entirety. In terms of English verbal morphology, an example would be the alternation of both originally strong preterites and innovative weak ones in the paradigm of ME *helpen* 'help', where the apparent irregularity in the system is simply the product of an unfinished change, since the latter, weak variant (*helped*) in time replaces the original, strong one (*healp*, *halp, holpen*) (MED 2018: s.v. *helpen*, v.). In many other cases, such irregularities are, in fact, the product of competing sound changes intersecting synchronically and diachronically, for the longer a sound change takes to run its course, the more likely it is to encounter competing sound changes affecting the same pool of phonemes and morphemes (Wang 1969: 9-11). These irregularities constitute "true residue", and "are the direct consequences of sound changes that were prevented from running their full course" (Wang 1969: 10).

The results obtained by this thesis clearly illustrate the notion of competing sound changes which intersect in time and leave residue behind. These findings are presented in detail in chapters 5 and 6 (section 6.2.) and involve two sound changes which have morphological consequences. On the one hand, my data show loss of the -i- formative in categories which should display the formative etymologically, and they do so on analogy with those categories which etymologically carried no -i- formative. Such a change is vastly attested in my data. On the other hand, the opposite process is visible, albeit more sparsely, whereby the -i- formative is being extended to categories where it was not expected. It is clear, therefore, that there are two intersecting, competing phonological and morphological changes visible in the late Northumbrian data collected for this thesis which are competing for the same pool of

as it was found originally. In the context of Old English phonology and morphology, a similar process, although phonologically motivated, is presented by the restoration of /a/ in the context of surrounding back vowels after the operation of First Fronting. This unconditioned change turned all original */a/ into /æ/ in the prehistoric period, hence *mæġ* 'I may' (Campbell 1959: 52). However, in the context of following back vowels, /æ/ was restored or reverted back into /a/ due to assimilation, hence *magon* 'we may' (Campbell 1959: 60).

morphemes, namely weak class 2 verbs (and transferred verbs, although to a lesser degree – see chapters 5 and 6 for details and justification).

On the question of regularity, my data are also informative. Theoretically, when only one sound change is attested, the eventual, complete substitution of sound A by sound B brings about systemic regularity (cf. Table 4 above). When two concurrent sound changes are in competition, irregularity arises, as in the case demonstrated by my data. In such cases, it is difficult to establish which of the possible variants is considered the default, regular variant. One possible way of disambiguating is, where possible, to establish the diachronic success of the sound changes (Wang 1969: 16 fn14). In this respect, my data are clear. Since out of the two main analogical processes affecting my data, the one eliminating the -i- formative from the paradigm of weak class 2 verbs is much more widely attested. It is, therefore, argued in sections 6.3.1 and 6.3.2. that the formativeless stem variant represents the regular one from a synchronic and diachronic viewpoint.

Although the model of lexical diffusion is strictly tied to the implementation phase of a linguistic change, there are similarities between this process and analogy, one of the known processes behind the actuation or triggering phase of change (see above section 3.2.). One of the similarities lies in the gradual nature of both phenomena, already noted by Sturtevant (1917: 80):

> such a spread of a sound change from word to word closely resembles analogical change; the chief difference is that in analogical change the association groups are based upon meaning, while in this case [lexical diffusion] the groups are based upon form.

The other similarity between these two processes is the important role which frequency plays in the implementation process. The connection between analogy and frequency was already discussed at length in section 3.2.1. Wang (1969) made no explicit link between frequency and lexical diffusion, but later studies have shown a correlation. Within the field of phonological change, it has been observed that high token frequency items are generally the first ones affected by a sound change (cf. Schuchardt (1885 [1972]: 26-28 [57-59]) statement that “rarely-used words drag behind; very frequently used ones hurry ahead” in sound changes, although exceptions exist). Examples of sound changes where high token frequency items

change first include vowel reduction (Fidelholz 1975), schwa deletion in English (Hooper 1976), or raising of /a/ before nasals in Old English (Phillips 1980). However, Phillips (1981, 1984, 1994, 1998, 2001) demonstrated that sound change can also first affect words with the lowest token frequency. Examples from two sound changes analysed by Phillips (1984) illustrate this contrary trend, namely the unrounding and merger of Middle English /ö(:)/ with existing /e(:)/, and the more recent Southern Glide Deletion (GD).

The first sound change, namely the unrounding and merger of ME /ö(:)/ with existing /e(:)/ is first attested in the *Ormulum*, a twelfth century text written in the Lincolnshire dialect. In this dialect, /ö(:)/ (the monophthong reflex of OE /eo(:)/) merged with existing /e(:)/. This unrounding process shows clear indications of lexical diffusion spreading via the less frequently occurring words, both in the short and long variants, as Phillips' (1984: 326-330) data show.

Category	**Base forms**	**Frequency band**	**% innovative /e/**
Adverbs and function words	*sket* 'quickly'	12	100
	newenn 'newly'	26	100
Overall /e/ 100%	*bitwenenn* 'between'	51	100
Numerals	*feorþe* 'fourth'	17	0
Overall /e/ 0%	*þreo* 'three'	45	0
Non-numerals	*leof* 'dear'	36	97
Overall /e/ 70%	*seoc* 'sick'	2	50
Verbs	*forrbedeþþ* 'forbids'	2	100
Overall /e/ 67%	*secnedd* 'sickened'	2	100
	beodeþþ 'commands'	2	50
	dreȝhenn 'suffer'	10	100
	fell 'fell'	13	100
	ȝede 'went'	26	100
	beon 'be'	355	41
Nouns	*breostlin* 'breastplate'	1	0
Overall /e/ 28%	*rerrlinng* 'darling'	1	100
	þeos 'thighs'	1	0
	leo 'lion'	2	0
	fend 'fiend'	3	100
	deofell 'devil'	158	1

Table 5. Percentage of innovative /ē/ in ME reflexes of OE /ēo/ in the *Ormulum*[58]

[58] In line with the approach followed in this thesis, vowel length is not marked on the base forms in Table 5 because it is not marked either in the *Ormulum*. Orm only distinguishes short vowels by means of a double following consonant, for example *newenn* 'newly' on Table 5. The same logic applies to the discussion below.

Overall, it is evident that low token frequency words show evidence of unrounding more readily than high token frequency items. Table 5 above (adapted from Phillips 1984: 328) features the ME reflexes of OE /ēo/. In terms of distribution, adverbs and function words appear with innovative <e> only and irrespective of frequency. These categories contrast with the numerals, which show the original <eo> spellings only irrespective of frequency. Verbs and non-numerical adjectives emerge as much more likely to have innovative <e> (67% and 70% average <e>, respectively) than nouns (28%). However, closer analysis of the data reveals discrepancies. Overall, non-numerical adjectives show innovative /ē/ in those adjectives which are high (token) frequency. Consider the most frequently occurring adjective *leof* 'dear' (frequency band 36) which appears 97% of the times with innovative /ē/, as opposed to the least frequently occurring adjective *seoc* 'sick' (frequency band 2) which shows innovative /ē/ in 50% of the cases, only.[59] These figures go clearly against Phillips's main thesis. On the other hand, verbs and nouns tend to show innovative /ē/ in those words which have low token frequency, hence validating Phillips's arguments. Once again, closer inspection to the data highlights discrepancies and inconsistencies. For instance, within verbs, *forrbedeþþ* 'forbids' and *secnedd* 'sickened' (both band 2 frequency) always display innovative /ē/, as expected, whereas the equally infrequent *beodeþþ* 'commands' shows /ē/ in 50% of the cases, only. For the top end of the frequency scale, verbs tend to retain the original /ēo/. *Beon* 'be' represents the highest frequency band (355) and, consequently, shows a considerable low number of attestations with innovative /ē/ (41% of tokens). Such behaviour is expected of high token frequency items (cf. conserving effect in 3.2.1.b.). However, other verbs with intermediate frequency (bands 10, 13 and 26) also show complete adherence to the new system with 100% of their forms attesting /ē/ (eg. *fell* or *ʒede* 'went'). In terms of nouns, discrepancy is found amongst the low frequency nouns, where innovative /ē/ is expected to be more widely attested. This result is true in some cases (*derrlinng* 'darling' and *fend* 'fiend' only showing spellings with <e>) but not in others: equally infrequently occurring *breostlin* 'breastplate', *þeos* 'thighs' and *leo* 'lion' only show

[59] Frequency bands form the system employed by Phillips (1984) to measure token frequency and classify words accordingly. Although Phillips (1984) does not explain how she established each individual band, it is clear that the greater the frequency band indicated, the greater the token frequency of a given word (and vice-versa).

original <eo> spellings. In terms of high token frequency items, they do tend to behave as expected, that is, retaining the original spelling. *Deofell* 'devil', being the noun with highest token frequency in the *Ormulum*, only shows 1% of spellings in /ē/. A very similar scenario results from Phillips (1981: 329) analysis of the reflex of short /eo/ in Orm's writing, where, by and large, low token frequency items show greater numbers of innovative /e/, although exceptions very similar in nature to those just explained for non-numeral adjectives, verbs and nouns with long vowels also arise.

More recent sound changes substantiate Phillips's overall claim. A case in point is the so-called Southern Glide Deletion (GD) change attested in some Southern and South-Midlands dialects of North America, where the /j/ palatal glide which occurs in the root vowel is in the process of being deleted in words such as *tune*, *duke* and *news* (Phillips 1981: 72). Once again, Phillips (1981) Georgian data demonstrate that low frequency items attest the glideless pronunciation more often than higher frequency words, as Table 6 (adapted from Phillips (1981 and 1984)) displays below:

Frequency group	Words in the group	Glideless %
0-1	nude, Tudor, tuber, tunic, dues, neutron, duly, tuba and dude	74.4
1-10	nutrient, tutor, duel, duke, durable, tulip, dune, nuisance, neutral and nucleus	71.8
11-100	Tuesday, numerous, tune, duty, numeral, due and tube	60.1
101-500	knew and during	54.5
Over 500	new	43

Table 6. Effects of token frequency on Southern Glide Deletion (GD)

Her more recent and wider study which included both young and old Georgian speakers (Phillips 1994) confirm the results found in her earlier study, hence lending support to the overall claim that Southern GD is a sound change which lexically diffuses from the low to the high frequency items. A competing sound change is

interestingly affecting highly frequent nouns such as *Tuesday*. In these cases, the glide undergoes assimilation, where the /t/ and the following vowel (with vocalic /j/ glide) assimilate into an initial affricate /tʃ/. Phillips (2001: 127) argues that the distinction in behaviour is to do with frequency, and the way frequency is connected to the lexicon and processes of cognitive analysis and production. The more highly frequent *Tuesday* is not analysed neither processed in terms of constituents, but as a single unit, whereas the less frequently occurring words (such as *tumor*) are analysed into constituents. The latter scenario – which involves a more careful analysis of constituents – reveals a violation of a sequential constraint against initial /tj/ clusters, therefore contributing to its elimination. Such a violation represents a continuation of the historical process of palatal glide /j/ deletion after coronal consonants explained in the following paragraphs, and discussed by Cooley (1978) and Phillips (1981), among others.

Word frequency has been seen to have very different effects on phonological change. While some changes first affect the more frequently occurring words, the two sound changes just discusses, namely the unrounding and merger of ME /ö(:)/ with existing /e(:)/ and Southern GD, behave in the opposite manner. The reason behind such contradictory behaviour is related to the nature of sound changes. Physiologically motivated sound changes such as assimilations and reductions are more widely attested in high frequency items. On the other hand, conceptually and typologically motivated sound changes are more widely attested in low frequency items (Phillips 2001). Thus, it follows that both the unrounding and merger of ME /ö(:)/ to existing /e(:)/ and Southern GD are conceptually and typologically motivated changes.

For the unrounding process, Phillips (1894: 330-332) convincingly argues that this process was brought about by a change to underlying segmental constraints. Only Middle English dialects where unrounding of /y(:)/ to /i(:)/ had happened allowed for the accompanying unrounding of /ö(:)/ to /e(:)/. In Orm's Lincolnshire dialect, therefore, /y(:)/ as a round vowel had already been lost in favour of /i(:)/, creating instability in the system by having one front rounded vowel /ö(:)/. By unrounding /ö(:)/ to /e(:)/, systemic regularity was achieved. Dialects where /y(:)/ did not unround to /i(:)/ and remained a front rounded vowel do not attest the change from /ö(:)/ to /e(:)/, where /ö(:)/ remained a rounded vowel, too. Southern GD equally represents a change in phonotactic constraints (Phillips 1984: 324-325) which works differently in different varieties. It

started off as a change of ME /iu ü ew/ to /ju/ which disrupted the phonotactic constraints which previously had disallowed sequences such as /lj rj nj/ (cf. later *lewd* /ljud/ or *nude* /njud/) (Lass 1992a: 56). Once these sequences had become valid in the system, instability arose. In order to bring stability back into the system, either additional phonological changes followed or changes to underlying phonotactic constraints. Different varieties resolved the problem differently, for some varieties retained the glide while others deleted the glide (like Southern and South-Midlands dialects in Northern America). By deleting the glide, the historical vocalic cluster disappeared, as did the undesirable /tj, dj, nj/ sequences. Deletion of the palatal glide seems to have started during the Early Modern English period, and it first affected coronal nasals and liquids, especially /r/ and /l/ (Cooley 1978: 129-130; Phillips 1981: 76). The loss of the palatal glide then gradually spread to other coronal consonants. The continued loss of the glide after other coronal consonants such as /t, d, n/ (as attested in Southern GD) suggests that the final stage of the process is underway in some varieties of English, such as in general American English (Chambers 1998 and 2002) and Toronto (Canadian) English (Pabst 2022).

In light of the changes discussed and the manner in which words become affected in a sound change depending on their frequency, Phillips (1984 and 2001) put forward two hypotheses, namely the Frequency-Actuation Hypothesis and the Frequency-Implementation Hypothesis. The Frequency-Actuation Hypothesis establishes that "physiologically motivated sound changes affect the most frequent words first; other sound changes affect the least frequent words first" (Phillips 1984: 336). Since it was later demonstrated that changes which do not required analysis also affect high token frequency words first (cf. glide assimilation and affrication of highly frequent *Tuesday* as opposed to glide deletion in low frequency words discussed above), Phillips (2001: 123) later refined the hypothesis:[60]

> for suprasegmental changes, changes which require analysis (e.g., by part of speech or by morphemic element) affect the least frequent words first, whereas changes which eliminate or ignore grammatical information affect the most frequent words first (…) For segmental changes, physiologically motivated

[60] Since assimilation is a physiologically motivated process, it is understandable and expected that it shows in the highly frequent noun *Tuesday*.

> sound changes affect the most frequent words first; other sound changes affect the least frequent words first.

On the other hand, the Frequency-Implementation Hypothesis is concerned with non-physiologically motivated changes, or, in other words, with conceptually and typologically motivated changes. This hypothesis establishes that "[s]ound changes which require analysis – whether syntactic, morphological, or phonological – during their implementation affect the least frequent words first; others affect the most frequent words first" (Phillips 2001: 123-124).

In affecting low frequency items first, conceptually and typologically motivated sound changes behave like analogical change (cf. section 3.2.1.). The reason behind this similarity is that both processes of change "originate in the conceptual sphere of language, not in the articulatory parameters of the vocal tract" (Phillips 1984: 336-337). With regard to lexically diffused sound changes, they affect and modify segmental and sequential constraints, as the ME unrounding of /ö(:)/ to /e(:)/ with resulting merger and Southern GD demonstrated. Thus,

> since such constraints act directly on underlying representations, it is not surprising that they diffuse across the lexicon in the same way as the analogical extension of a morphological rule. Just as analogy is 'successful where memory fails; that is, infrequent forms are prone to be changed first' (Anttila 1972: 101), so changes which produce new constraints on underlying forms also first affect those items which are more unfamiliar to the speaker (Phillips 1984: 325).

As sections 3.1. and 3.2. explained, analogy is considered the driving force behind much linguistic change, and is responsible for the actuation phase of change. The model of lexical diffusion introduced in this section represents the means by which linguistic change is spread in the lexicon of individual speakers and wider speech communities, and is, therefore, linked to the implementation phase of linguistic change. This model is applied in the context of the data collected for this thesis in section 6.3.2., where it is demonstrated that the loss of the -i- formative in weak class 2 verbs (a conceptually motivated change – see section 6.3.1.) is spreading from the low to the high frequency items – for which see also the discussion included in section

6.2.3. The gradual nature of the loss of the -i- formative fits in with the chronology of the lexical diffusion model. Such a gradual change is clearly visible in my data, not only in terms of individual lexical items, where some verbs are more prone to lose the formative than others, but also in terms of morphosyntactic categories and whole datasets. For it is also argued in section 6.3.2. that the variation found within individual lexical items, morphosyntactic categories and the two datasets is a result of the gradual nature of the diffusion and implementation of a linguistic change. Thus, it is possible to justify why, for example, the infinitives and the subjunctives display very low rates of -i- formative deletion, or why Rushworth^{2} is more conservative (in terms of rate of -i- formative deletion) than Lindisfarne (cf. section 2.4.1.b.): because they represent earlier stages of the gradual implementation of the formativeless stem variant in weak class 2 verbs.[61]

3.4. Summary

Before providing a detailed account, explanation and justification for the loss of the -i- formative in weak class 2 verbs as evidence in late Northumbrian data, it was imperative to provide a theoretical framework with which to contextualise the different phenomena encountered. The present chapter has provided such a framework. This thesis adopts Labovian terminology in order to frame the discussion around the loss of the -i- formative because of the convenient way in which such terminology reflects the gradual nature of linguistic change as distinct phases. While all phases have been provided and defined in section 3.1., the bulk of this chapter has focused on the two phases which are concerned with the why and how. Why does linguistic change happen? In other words: what incites such change? These questions are at the core of the actuation phase. How does the change propagate in the language, and what mechanisms are involved in such propagation? These questions, on the other hand, reflect the implementation phase.

In relation to the impetus for change, the process of analogy was introduced in section 3.2. Within this section, several contributing factors were mentioned and discussed in the context of both the general operation of analogy and its outcome.

[61] Although the reading of section 6.3.2. should be followed by that of section 7.2., where important details about the variation in scribal glossing practice found in Lindisfarne and Rushworth^{2} are discussed.

Some of these key factors include declensional asymmetry, structural similarities across paradigms, frequency of occurrence, prosodic structure and phonological and morphological salience. The discussion on analogy also highlighted two important aspects. The first one is the connection that exists between the fields of phonology and morphology. The second one is the explicative power which cognitive and usage-based models have on the issue of linguistic change in general, and morphological change in particular.

With regard to the implementation phase, section 3.3. introduced the mechanism of lexical diffusion. This model views change as gradually implementing itself in the language until it potentially reaches all possible phonemes, morphemes, lexemes and speakers in a given speech community. Lexically diffused change tends to affect low token frequency items first because of their more superficial level of entrenchment. In so doing, lexically diffused change resembles analogical change. Complete adoption of an innovative variant can take a considerable period of time, as represented by the chronological aspect of this model. Throughout the adoption period, both the original and the innovative variant coexist as valid options within the system. Providing no simultaneous, competing changes emerge, the complete generalisation of the innovative variant results in paradigmatic regularity. In the context of a competing change, irregularities emerge.

Chapter 4

Methodology

4.1. Introduction

The present chapter outlines the methodology followed to study the loss of the -i- formative in weak class 2 verbs. The first section presents the factors which have been deemed relevant in the loss of the -i- formative. These factors have been chosen on the basis of existing scholarship on morphological change (cf. chapter 3), as well as the findings in Ramírez Pérez (2017) preliminary study on the loss of the -i- formative in Matthew's Gospel in both the Lindisfarne and Rushworth Gospels. As shall be seen below, these factors are both linguistic and non-linguistic in nature. The second section of this chapter summarises how all instances of weak class 2 verbs in the glosses to the Lindisfarne Gospels and Rushworth Gospels have been collected and classified. Finally, the last section in this chapter explains the statistical method used in this thesis to ascertain which of the factors are contributing to the aforementioned process of morphological simplification.

4.2. Potential contributing factors to the loss of the -i- formative in weak class 2 verbs

Chapter 3 has presented how different processes of morphological change have been studied in the recent years, and it has explained that analogy has been considered the main mechanism driving many of these changes. Previous studies on morphological change have also revealed that there exist a number of factors which seem to be facilitating not only the very occurrence of these analogical processes, but also their implementation in the language, as covered in section 3.2. In what follows, the different linguistic and extra-linguistic factors considered when coding the data for this thesis are listed below, as well as the reasons for choosing them:

1) Frequency of occurrence: token frequency has been shown to have an impact on the outcome of analogical change (see section 3.2.1.b. above). Based on these theoretical premises, this thesis investigates whether low token frequency weak class 2 verbs adopt the formativeless ending more readily than high token frequency verbs. It is important to state at this point that the analysis of token frequency in this thesis is conditioned by the nature of the textual evidence used,

namely Biblical and religious texts. Because the lexis used in these texts is mainly of a religious character, the most frequent verbs in Old English (as determined by the DOEC data) might not necessarily be as frequent in Biblical glosses. The most frequently occurring verbs in this thesis betray the fact that the texts under study are of a Christian nature, hence *bodian* 'preach', *gefēaġan* 'rejoice', *geclǣnsian* 'purify', *gefulwian* 'baptize' or *lufian* 'love'. One also needs to consider dialectal variation. As the present thesis focuses exclusively on late Northumbrian, it might be possible that some of these verbs are more frequently occurring in this variety than in others, for example Old Mercian (cf. Rushworth[1]). Bearing all these points in mind, a list of high frequency verbs in the sets of glosses under study has been compiled (see Table 9 in section 6.2.3.), and the effects of token frequency on morphological change are explored at length in chapter 6.

2) Salience: the notion of salience was introduced in chapter 3 and it became apparent that, in the study of morphological change, salience is inter-connected to other contributing factors such as frequency, phonological sonority and morphological complexity. In the context of the weak verbal paradigm, weak class 2 verbs were rather salient. Not only in terms of numbers and overall type frequency, being the most numerous and productive class by late Old English (Stark 1982: 11), but also in terms of their morphological structure, for the presence of the -i- formative constituted a distinctive marker of class membership. In addition to this, the fact that weak class 2 verbs displayed the -i- formative (reflex of the PGmc *-*ōja*- formative) where the great majority of verbs belonging to the other two weak classes no longer presented a linking element as a direct reflex makes weak class 2 verbs the more morphologically complex class within the weak verbal paradigm. Finally, note that the formative bore half stress (Campbell 1959: 34), hence increasing its phonological salience. The emphasis on salience in the present study has, ultimately, a cognitive justification, for it has been noted that salient features are highly entrenched in human's minds and, by virtue of this deep entrenchment, they are less likely to undergo change in their morphology.
3) Phonological environment: grouped under this heading are those elements surrounding the -i- formative whose phonological properties have been analysed in detail in order to ascertain whether they conditioned the distribution of the formative. The elements under study include the verbal root and the inflectional endings. With regard to the verbal root, several issues have been addressed:

a) Root vowels: this thesis examines whether the presence of a back vowel (as opposed to a front one) promotes the incidence of formativeless weak class 2 verbs, as it would be possible for the formative to lose some of its phonological distinctiveness when following a back vowel (assimilation).
b) Verbal root consonants: this thesis also investigates the phonological make-up of the verbal root consonants preceding the formative in order to determine whether any specific feature(s) either facilitate or inhibit the loss of the formative. In this particular regard, it should be mentioned that careful attention has been paid to fate of the -i- formative in weak class 2 verbs whose final root consonant was <w>. This follows Ross's (1937: 148) observation on the simplifying effects which /w/ had on the morphology of this class of weak verbs, whereby the presence of /w/ before the formative facilitated its deletion. While this observation does account for formativeless instances identified by Ross (1937: 148) such as first-person singular present indicative *fulwa* 'I baptise' and *ðrowa* 'I suffer', other instances have been found where the formative is still present despite following <w>. Examples include *gefulwia* 'to baptise' in MtGl (Li) 3.14, *giwiga* 'to ask' in MtGl (Li) 14.7, and *sceawgias* 'behold' in MtGl (Li) 16.6 (Ramírez Pérez 2017: 46-47). The present thesis has nonetheless extended the analysis of the effects of /w/ on the -i- formative to the whole Northumbrian data collected (see section 1.2.) in order to provide a more complete and detailed account.
c) Syllable structure: the structure or weight of stems has been considered because syllable structure has been shown to condition the outcome of a number of sound changes in the history of English, such as syncope or apocope (cf. section 3.2.1.b.). It has been noted that the fate of high unstressed inflectional vowels such as /i/ and /u/ differed depending on whether they were preceded by a heavy or light syllable: when preceded by heavy syllables, high unstressed vowels tended to be lost, whereas they were preserved when they followed light syllables (Lass 1994: 36). It is, therefore, expected that the formative should be more readily lost when preceded by a heavy stem.[62]

[62] In Wangerooge Frisian, a similar development has been noted whereby the -i- formative in weak class 2 verbs was preserved when preceded by a light or short stem (see Bosse 2012: 130-131). I am indebted to Dr Elżbieta Adamczyk for pointing this out to me.

Previous research on a limited amount of data collected from Matthew in Lindisfarne (Ramírez Pérez 2017: 34-41) pointed to the fact that there did not seem to be a clear correlation between stem syllable weight and the presence or absence of the -i- formative, as there were numerous instances of formativeless or unextended weak class 2 verbs following light syllable verbal roots, for example the inflected infinitive *forlosanne* 'to destroy' or the present participles *styrende* 'shaking' and *ðrowende* 'suffering'.[63] In order to expand this preliminary study and provide a more solid analysis, the present thesis covers the whole of the Northumbrian gospels.

d) Inflectional endings: the phonological properties of the inflectional endings have also been considered by this thesis, because different categories featured endings withs different levels of morphological complexity and phonological weight, with some categories ending in just a vowel (infinitives, subjunctives and first person singular present indicative) and others evincing a more elaborate ending, such as the plural present indicative and imperative plural (typically -*as* or -*að*) or the present participle (-*ande*, -*ende*) and inflected infinitives (-*anne*, -*enne*). In terms of the inflectional vowel, the analysis carried out by this thesis establishes if the presence of a back vowel (as opposed to a front or reduced vowel) is conditioning the distribution of the formative. In this thesis, central or reduced inflectional vowels are present in all those morphosyntactic categories whose inflectional endings did not carry a secondary stress, that is, all categories except for the inflected infinitives and present participles. These central vowels are posited on the basis of the loss of phonological distinction in unstressed, inflectional endings in late Old English. Those categories which did carry secondary stress (inflected infinitives and present participles) were classified as still preserving a full inflectional vowel, either front or back depending on the nature of the ending (e.g. back for -*anne* and -*ande* and front for -*enne* and -*ende*). With regard to the consonants in the inflectional endings, the present study has paid particular attention to the fate of the -i- formative in particular environments such as present indicative plural and imperative plural, where the consonantal endings could alternate between

[63] *Forlosanne* (OE *forlosian* 'destroy') in MtGl (Li) 2.13; *styrende* (OE *styrian* 'stir, move' in MtGl (Li) 11.7; *ðrowende* (OE *ge-þrowian* 'suffer') in MtGl (Li) 27.19.

the etymological *-þ* and the innovative *-s* in late Northumbrian. Such an examination is granted by the numerous instances found in Ramírez Pérez (2017: 19, 22) where the *-s* endings tended to be preceded by unextended or formativeless verbs and *-þ* by extended ones. Examples include the present indicative plural forms *boddages* 'evangelise'*, clænsas* 'clean'*, geduellas* 'err' and e*ðmodas* 'obey'*;* imperative plural forms *leornas* 'learn'*, wunas* 'abide' vs the present indicative plural forms *ondsuerigað* 'answer' and *lufyað* 'love', or the imperative plural forms *wuldriað* 'glorify' and *wynnsumiað* 'rejoice'.[64] One final aspect of verbal inflectional endings has been taken into consideration in relation to the loss of the -i-formative, namely, the morphological complexity and phonological salience of the whole inflectional ending. This analysis follows once again the principles of the sonority scale (see section 3.2.1.b. above), and has thus examined what impact phonologically salient inflectional endings such as plural present indicative and plural imperative *-að*/*-as* or present participle *-ende* may have had on the loss of the preceding and less salient -i- formative.

4) Phonological salience: as introduced in the previous chapter, the phonological salience of a given form or inflectional marker is determined according to the sonority scale (see section 3.2.1.b. above). Markers ending in a vowel followed by a consonant are most phonologically salient, those ending in vowels are less salient, and those with zero inflection are, naturally, the least salient of markers. In terms of processes of morphological change, the more salient an element is, the least likely it is to be affected by these changes. And the underlying reason lies once again in frequency and entrenchment, in the sense that high frequency markers are more salient, and by virtue of being highly frequent and, therefore, highly entrenched in humans' minds, they are less likely to undergo change in their morphology. With regard to the morphology of weak class 2 verbs, the -i- formative was a considerably salient feature because, being a vowel sound, it stood in the middle of the phonological or sonority scale. Moreover, the formative bore half

[64] *Boddages* (OE *bodian* 'announce, evangelise') in MtGl (Li) 11.5; *clænsas* (OE *clǣnsian* 'cleanse, purify' in MtGl (Li) 23.25; *geduellas* (OE *dwelian* 'err') in MtGl (Li) 22.29; *eðmodas* (OE *ēaþ-mōdgian* 'obey') in MtGl (Li) 8.27; *leornas* (OE *leornian* 'learn') MtGl (Li) 9.13; *wunas* (OE *wunian* 'dwell') in MtGl (Li) 10.11; *ondsuerigað* (OE *ge-andswarian* 'answer') in MtGl (Li) 25.37; *lufyað* (OE *lufian* 'love') in MtGl (Li) 5.46; *wuldriað* (OE *wuldrian* 'glorify') in MtGl (Li) 5.16; *wynnsumiað* (OE *wynsumian* 'rejoice') in MtGl (Li) 5.12.

stress (Campbell 1959: 34), hence increasing its phonological salience. Thus, this thesis explores what effects other highly salient inflectional endings such as plural present indicative and plural imperative *-að* or present participle *-ende* may have had on the loss of the preceding -i- formative.

5) Class membership and etymology: it was already mentioned in the previous chapter that the present thesis aims to shed some light on the analogical process transferring weak class 1 and 3 verbs to the second conjugation. This thesis also considers whether the etymology or historical class membership of these transferred verbs has conditioned the occurrence of the -i- formative. The aim of this analysis is, therefore, to ascertain whether transferred verbs show a similar distribution of formative incidence (in terms of presence or absence) to etymological weak class 2 verbs, or whether there are any diverging patterns.
6) Effects of multiple glosses: although this final factor is not a purely linguistic one, it has been considered as potentially conditioning the incidence of -i- formatives in weak class 2 verbs. The two texts under study include a large number of Latin lemmas which have been given more than one Old English translation or interpretamentum by the scribes. One such example is the Latin adjective *pacifici* 'pacific' which is glossed as both *sibsume* and *friðgeorne* 'pacific, peaceable' in MtGl (Li) 5.9. When these multiple interpretamenta include at least one weak class 2 verb, this thesis considers whether the morphology of the other interpretamentum or interpretamenta can be said to condition the morphology of the weak class 2 verbs they co-occur with. For instance, how do the scribes render the morphology of a weak class 2 verb when it is accompanied by a strong verb or a weak class 1 verb in the preceding gloss? Are scribes conditioned by the fact that both strong and weak class 1 verbs lack the -i- formative etymologically? And what is the distribution of the formative when all interpretamenta are weak class 2 verbs? The findings of a preliminary study into the effects of multiple glosses in Matthew's Lindisfarne suggested that the scribal choice of an extended or unextended weak class 2 verb could well be the result of inflectional priming (Ramírez Pérez 2017: 47-52). Thus, there were several instances where a weak class 2 verb was rendered formativeless when preceded by strong and weak class 1 verbs. For example, the Latin gerund *perdendum* is glossed by the inflected infinitives *to fordoanne* and *forlosanne* 'to destroy' in MtGL (Li) 2.13 (anomalous *fordōn* and formativeless weak class 2 *forlosian*, respectively). The Latin imperative plural form

respicite is also glossed by two imperative plural forms: *behaldas* and *locas* 'behold, look' in MtGl (Li) 6.26 (again, strong *behealdan* and formativeless weak class 2 *locian*, respectively). Similarly, the Latin infinitive *mutuari* is rendered by two present participle forms, namely *nedende* and *ðretende* 'urging' in MtGl (Li) 5.42, where the former interpretamentum is weak class 1 verb *ge-nēdan* while the latter is formativeless weak class 2 verb *þreatian*. Interestingly, the aforementioned preliminary study also indicated that the distribution of the formative remained mainly even when both or all interpretamenta were weak class 2 verbs (Ramírez Pérez 2017: 50-51). Thus, the Latin gerund *concupiscendam* was rendered by the formativeless inflected infinitives *to wilnanne* and *to nytanne* 'to desire' by the scribe in MtGl (Li) 5.28, the Latin third person singular future indicative *petet* was rendered by the third person singular present indicative forms *wilniað* and *giuias* 'asks for, shall ask for' in MtGl (Li) 7.10*,* and Latin third person singular pluperfect subjunctive active *postulasset* was rendered by (*wælde*) *giwiga* and *giuiade* 'would ask, had asked' in MtGl (Li) 14.7. Remarkably, *giuiade* in the last example is a third person singular preterite indicative form to which the scribe has added an unetymological -i- formative, perhaps guided by the fact that the preceding interpretamentum displays the expected -i- formative in the infinitive. The previous example, that of Latin *petet* glossed by the third person singular present indicative forms *wilniað* and *giuias,* is also quite striking from a morphological viewpoint, since in this particular environment, weak class 2 verbs did not carry the -i- formative.

This section has provided the theoretical considerations justifying the selection in this thesis of the aforementioned linguistic factors that could potentially be driving the loss of the -i- formative in weak class 2 verbs. The remaining sections in this chapter outline the process of data collection and classification carried out for the present thesis, and conclude with a discussion regarding the statistical methods for data analysis that have been employed.

4.3. Data collection

For the present study on the loss of the -i- formative in weak class 2 verbs in the late Northumbrian dialect of Old English, I have focused on the Lindisfarne and the

Rushworth Gospels, as edited respectively by Skeat (1871-1887) and Tamoto (2013). Following Fernández Cuesta's (2016) explanation that Skeat took a number of liberties when producing his edition of the Lindisfarne Gospels and which obscured the language actually found in the manuscript, I decided to contrast the spelling of all weak class 2 verbs found in Skeat's edition of Matthew's Gospel against the digitised Lindisfarne manuscript to control for editorial interference.[65] Some of the discrepancies found by Fernández Cuesta (2016) in Skeat's volumes include omission of personal pronouns, alterations to the glosses provided by the scribe, and emendations to the text (considered as scribal corrections by Skeat) corresponding to expuncted letters in the manuscript (see Fernández Cuesta 2016: 259-280). Comparing the spelling of weak class 2 verbs and the incidence of the formative in Matthew's Gospel as given in Skeat with those found in the original Lindisfarne manuscript revealed no significant deviations. 152 instances of weak class 2 verbs were found in this subsection of the Gospels where the -i- formative would have been expected. All these forms coincide in spelling and morphology with those found in the manuscript. For this reason, I deemed it unnecessary to consult the digitised manuscript when collecting data from the remaining three gospels in Lindisfarne. Tamoto's (2013) more recent edition of the Rushworth Gospels, on the other hand, is considered to be a 'reasonably accurate' transcription of the manuscript (Houghton 2015: 95). An examination of four sample pages of Tamoto's edition against the digitised Rushworth manuscript revealed three errors in the spelling of Latin words, an unreported correction to the Old English interlinear gloss and confusion in the usage of <e> and <æ> (Houghton 2015: 95). Following Houghton's superficial collation against the manuscript, I carried out a more thorough collation of all weak class 2 verbs found in Mark's Gospel in Tamoto's edition (sixty-four pages in total) against the digitised manuscript.[66] A total of ninety-seven verbal tokens involving weak class 2 verbs were found in this section of the gospels, and the transcription of these forms in Tamoto's edition matches exactly what is found in the digitised Rushworth manuscript. Based on this fact, it was deemed unnecessary to consult the manuscript when reading the remaining gospels and collecting my data from Tamoto's (2013) edition.

[65] Digitised manuscript available online at http://www.bl.uk/manuscripts/Viewer.aspx?ref=cotton_ms_nero_d_iv_fs001r

[66] Rushworth Gospels digitised manuscript available at: https://digital.bodleian.ox.ac.uk/objects/b708f563-b804-42b5-bd0f-2826dfaeb5cc/

The purpose of reading the gospels was to manually identify all verbal instances found in the texts. All verbal forms identified were parsed and linked to the verse and gospel where they were attested. In order to determine their verbal class, a number of resources were consulted. In the first instance, I consulted the *Dictionary of Old English* (2007) (hereafter *DOE*) for verbs beginning with letters *a* up to *i*, or Bosworth-Toller Anglo-Saxon dictionary online (2014) for all other instances. The purpose was to ascertain whether the verb was usually inflected as a strong, weak, preterite-present or anomalous verb. If strong or weak, I then narrowed down the classification to the verbal class the form attested belonged to. At times, the standard grammars of Old English were also used to this end: Wright and Wright (1925), Campbell (1959) and Hogg and Fulk (2011). These grammars have proved particularly useful in identifying transferences among verbal classes, in particular within the weak conjugation types. Occasionally, when neither of these two paths would help me to ascertain verb type and class membership, I turned to Cook's (1894) glossary. Cook's glossary of the Old Northumbrian Gospels includes linguistic information about every word found in the gospels. Some of these verbal forms found in the gospels which are not included in either the *DOE* (2007) or Bosworth-Toller (2014) include *lyceton* third person plural preterite indicative (LkGl (Li) 5.30) attesting weak class 2 verb *lycigan* 'murmur', *getor-nomade* third person singular preterite indicative (LkGl (Li) 6.14) attesting weak class 2 verb *ge-tornomigan* 'give a surname', and, finally, *tretiað* third person singular present indicative (JnGl (Li) 14.26) from weak class 2 verb *tretigan* 'suggest, bring to mind'.[67]

Given the aims of the present thesis, a more thorough record was kept for each attested weak class 2 form. Besides recording the basic information mentioned above, that is, parsing details and occurrence of the form within the gospels, additional features were noted. These features correspond to the linguistic and meta-linguistic factors which are considered by this thesis as potentially conditioning the incidence of the -i- formative. The aforementioned additional parameters recorded for each instance of weak class 2 verb include:

- presence or absence of the -i- formative

[67] These verbs have been classified by Cook (1894) as weak class 2 verbs on account of the fact that some of the forms attested display the -i- formative.

- paradigmatic details (which form within the verbal paradigm the instance represents, e.g. infinitive, inflected infinitive, plural present subjunctive, etc)
- infinitival form of the Old English verb attested
- Latin lemma glossed by the weak class 2 verb and, where applicable, infinitival form corresponding to the Latin lemmata[68]
- syllabic weight of the verbal root (light or heavy)
- type of syllable preceding the -i- formative (short versus long and open versus closed)
- verbal form immediately preceding the weak class 2 verb in order to check for verbal priming. Verbal priming is here understood as the process by which a language user is conditioned in their linguistic production by a form which has recently occurred. Such process is also known as (morphosyntactic) persistence (see Szmrecsanyi 2006)
- presence of double or multiple glosses involving a weak class 2 verb, in which case I further noted whether the weak class 2 verb is in first or subsequent position. If in second or subsequent position, I also recorded the form immediately preceding in order to analyse whether the former form is affecting the morphology of the weak class 2 verb due to verbal priming
- details in relation to the structure of the verbal stem, such as type of root vowel (place in the vowel quadrilateral and length) or root consonant (place and manner of articulation)
- details in relation to the structure of the inflectional ending, such as type of vowel and consonant (the latter only when applicable)

[68] Weak class 2 verbs sometimes gloss Latin adjectives, for instance Latin *vivōrum* 'alive' being glossed by *hlifigiendra* present participle of *lifian* in LkGl (Li) 20.38. There are also a couple of instances in Matthew's Gospel (Lindisfarne) where a weak class 2 verb glosses a Latin noun. One of these occurrences is *efern ł ic sædi* glossing Latin *sero* in MtGl (Li) 20.8, where *ic sædi* is the first person singular present indicative form of *sǣdian* 'to sow'. Latin *sero* can have a number of meanings, being a homonymous word. On the one hand, it can mean 'evening', hence the noun provided in the first element of the double gloss: *efern* (OE *æfen*) 'evening'. On the other hand, *sero* could also represent the first person singular present indicative active form of *serere* 'to sow, to plant', hence the second gloss. This second gloss is the one which corresponds contextually to Latin *sero*.

- etymological class membership, that is, whether the form attests an original weak class 2 verb or rather a transferral from another conjugation, in particular original weak class 1 or 3 verbs
- spelling of the glosses as found in the original digitised Lindisfarne manuscript: information collected for forms found in Matthew's Gospel in Lindisfarne only; used to control for editorial interference in Skeat's edition (1871-1887) – see above.

The following sub-section, however, addresses some issues in relation to the data collection process and interpretation of the forms collected, and outlines how they have been dealt with in the present thesis. The data were later entered in an Excel spreadsheet in order to carry out the statistical analyses described below (see section 4.4. for details).

4.3.1. Orthography, interpretation, and classification

While carrying out the manual process of collecting data, I was faced with a number of methodological issues regarding the interpretation of Old English orthography and its relation to phonology, scribal glossing practice and interpretation of ambiguous verbal forms which had implications in the classification of my data. These issues and the approaches used to deal with them are discussed in the following section.

4.3.1.a. Orthography, phonology and prosodic structure

As mentioned in section 3.2.1., one of the factors I have considered in relation to the loss of the -i- formative in weak class 2 verbs is the syllabic weight of the verbal root. Each single instance of weak class 2 verb collected was classified according to the weight of its root, that is, light or heavy. Syllabic weight is determined by the length of the syllable's rhyme (peak and coda), where length is defined in terms of phonological units called morae (Hogg 2011: 43-44; Minkova 2014: 43). In theoretical terms, a light syllable is made up of a single mora, usually filled by either a single short vowel or diphthong. A heavy syllable, on the other hand, can have up to three morae, which can be filled in a combination of ways: either by having a long vowel or diphthong (bimoric), long vowel or diphthong accompanied by a consonant (trimoric) or by having

a short vowel or diphthong followed by two different consonants or a geminate (trimoric) (Minkova 2014: 40-43; Lass 1994: 36-37, 46-47).

With these considerations in mind, a form such as *bodande* 'preaching' (MkGl (Ru) 1.3) has been classified as containing a light root syllable. This is because, when this form is syllabified (bo.dan.de), we are left with a light syllable as verbal root: *bo-*.[69] On the other hand, a form such as *gearwigað* 'prepare' (MkGl (Ru) 1.39) has been recorded as heavy, because its verbal root contains a short diphthong and one consonant when syllabified: gear.wig.að. On certain occasions, the classification of verbs in terms of their root weight has not been as straightforward. For example, consider the present participial forms *hlingindi* 'reclining, sitting' (JnGl (Li) 21.12) and *lifgende* 'living' (LkGl (Ru) 24.5), which have -g- as opposed to the more common -ig- or -i- for the formative. Without vowel deletion (*hlinigindi* and *lifigende* respectively), these forms would be syllabified as hli.nig.in.di and li.fig.en.de, where both root syllables would be light by virtue of containing one single short vowel: *hli-* and *-li*, respectively.[70] This is indeed the classification chosen for other attested forms in my dataset which are not missing the medial vowel, such as *hlinigað* 'they recline, they sit' (LkGl (Li) 13.29) and *lifias* 'you live' (JnGl (Li) 14.19). However, the syllabification for attested *hlingindi* and *lifgende* has to account for the missing medial vowel, hence hlin.gin.di and lif.gen.de, respectively. Thus, both forms have been classified as having heavy root syllables, since they contain one short vowel followed by a consonant: *hlin-* and *lif-*.

Geminates and double consonants posed further problems in relation to the classification of verbs in terms of their stem weight, particularly in the Lindisfarne data. Phonologically, a geminate in Old English represents a long consonant which takes up two morae -CC (Minkova 2014: 71-73, 76-78). However, the data collected for this thesis problematise this interpretation. On the one hand, there are a number of instances where an original geminate has been reduced to a single consonant. Note the form *gi-cunigas ge* 'you discern' in LkGl (Ru) 12.56, which attests the weak verb

[69] For the principles and orthographic conventions of syllabification in English, see Minkova (2014: 39-43).

[70] The -ig- formative, being a syllabic morphological unit (Campbell 1959: 339), occupies the nucleus of the syllable. Thus, <g> is not interpreted as the onset of the following syllable, but rather as part of the same morphological unit, that is, the formative. Otherwise, following the general principles of syllabification in English, intervocalic consonants would constitute the onset of a following syllable. See Minkova (2014: 40-42) for discussion and examples.

cunnian ‘try, test, tempt, also discern, know’. In light of the reduction of the geminate to a single <n>, this particular instance has been considered to contain a light root syllable: *cu-*. This form is, in fact, one of the only two attestations of *cunnian* with a single consonant in the root according to the DOE (2007-: s.v. *cunnian*). Similarly, the form *nytanne* ‘enjoying’ in MtGl (Li) 5.28 shows reduction of the geminate /tt/. Thus, it has been classified as a light stemmed verb where *ny-* makes up the root when the form is syllabified: ny.tan.ne. The following example involves the infinitival form *clyniga* ‘to knock at a door’ (LkGl (Ru) 13.25), which according to the DOE attests the weak verb *cnyllan (*DOE 2007-: s.v. *cnyllan*). The infinitival form as given in the DOE would have a long root syllable by virtue of the geminate: cnyl.lan. The form found in Rushworth^2, however, shows metathesis and simplification of the geminate.[71] The root syllable, therefore, contains just one short vowel when syllabified (cly.nig.a), and, therefore, the form has been classified as light in the present thesis.

In relation to the interpretation of geminates and its implications in terms of classification of forms into light or heavy roots, one more issue needs to be discussed. This issue is mainly related to glossing practice. When collecting data from Lindisfarne, I came across many instances of verbs which had been spelt with double consonants in the root where they were not etymologically justified. Some examples of such glossing practice attesting weak class 2 verbs include *clioppende* ‘calling’ in MkGl (Li) 1.26, *sleppende* ‘sleeping’ in MkGl (Li) 14.37, *willniað* ‘we desire’ in MkGl (Li) 10.35 and MkGl (Li) 10.36, *cuaccende* ‘trembling, shaking’ in LkGl (Li) 8.47, or *gesynngiga* ‘he sin’ in LkGl (Li) 17.4. These forms attest verbs *clipian* ‘call, to cry out’, *slēpian* ‘sleep’, *wilnian* ‘desire, want’, *cwacian* ‘quake, tremble, shake’ and *syngian* ‘sin’. In total, there are twenty-seven such instances in Lindisfarne and two in Rushworth^2. These numbers grow if the spelling of all attested verbs is taken into consideration, and not only that of weak class 2 verbs. It has long been noted, however, that an idiosyncratic feature of Aldred’s glossing practice is to mark a preceding short vowel or diphthong by doubling the following consonant (Cole 2019: 142-143; Dutton Kellum 1906: 58-62). It will be noted that the great majority of forms provided above do have a short vowel in the root.

[71] DOE (2007-: s.v. *cnyllan*) records a total of three instances where metathesis has occurred, which includes the Rushworth^2 form discussed here. Out of all the attested forms in the DOE under *cnyllan*, that is, twenty-nine, four are given with a single <l>.

Since my data contain instances of verbs where an etymological geminate has been simplified as well as many instances of verbs where a geminate or doubled consonant is inserted (possibly in order to mark a preceding short vowel), I have interpreted such variation as indicative of the loss of phonological length in geminates. As a result, all root geminates in my dataset were considered to represent single phonological units (that is, one mora), even when the geminate was etymological, as in the following cases: *cunnende* 'tempting' in MtGl (Li) 19.3, *spellendo* 'conversing' in LkGl (Li) 24.15, *synnige* (subjunctive) 'he sin' in LkGl (Ru) 17.3 and *afearriað* 'depart' in LkGl (Ru) 13.27. Thus, all these instances, as well as those attesting similar verbs such as *cnyllian* 'knock at a door', *feorrian* 'depart', *for-cunnian* 'test, try', *nyttian* 'enjoy', *spellian* 'converse', *synnian* 'sin' and *un-trymmian* 'become weak', were classified as light-stemmed verbs.

4.3.1.b. Class membership

Another issue worth discussing here is the classification of verbs in terms of their class membership. As mentioned at the beginning of this chapter, several sources were consulted in order to identify the etymological class of verbs found in the gospels: the DOE (2007-), Bosworth-Toller (2014), Wright and Wright (1925), Campbell (1959), Hogg (2011) and Hogg and Fulk (2011). They were also helpful in order to identify non-etymological verbs which were prone to decline following the weak class 2 conjugation, particularly original weak class 1 and 3 verbs. The Old English grammars mentioned above tend focus on West-Saxon material, thus the transferral of weak verbs onto the second weak declension has traditionally been posited on account of West-Saxon data. However, Campbell (1950), Hogg (2011) and Hogg and Fulk (2011) do refer to Northumbrian evidence of this transferral process, too. See for example Campbell (1959: 337-343) or Hogg and Fulk (2011: 294-299). The DOE also includes Northumbrian evidence attesting to this process in the individual entries of verbs (see for instance the entries for *andswarian* 'answer', *bifian* 'shake', *giwian* 'ask' or *hingrian* 'hunger'). Given this evidence and the existence of reputable sources which posit a restructuring of original weak classes 1 and 3 verbs on the basis of weak class 2 verbs in Northumbrian as well, it has been considered valid in this thesis to classify all the verbs listed below as weak class 2 verbs, although originating from one of the other

two weak conjugations. For challenges in the interpretation of forms and, therefore, their classification, see the following paragraphs.

In the present thesis, the following verbs are classified as transferrals from original weak class 1 verbs: *a-feorrian* ‘depart’, *andswarian* ‘answer’, *cnyllian* ‘knock at a door’, *hingrian/hyngrian* ‘hunger’, *mǣnian* ‘moan, complain’, *smirian* ‘anoint’, *strēonian* ‘acquire’, *timbrian* ‘build’ and *trymian* ‘strengthen, confirm’. This classification is based on the fact that these verbs are sometimes inflected following weak class 2 conjugation in the gospels. Following the same rationale, the following original weak class 3 verbs are classified in this thesis as weak class 2 verbs: *andspurnian* ‘offend’, *bifian* ‘shake’, *bysmorian* ‘mock’, *cēapian* ‘buy’, *cunnian* ‘test, try’ *gefēogan* ‘hate’, *giwian* ‘ask’, *hlinian* ‘recline’, *leornian* ‘learn’, *lifian* ‘live’, *losian* ‘lose’, *sceamian* ‘shame’, *wunian* ‘abide, stay’ and *þolian* ‘suffer’. Finally, there is one instance of original strong class 6 verb *swerian* ‘swear’ in Lindisfarne (infinitive *sueriga* in MtGl (Li) 26.74) which is classified as a transferral to weak class 2 conjugation on account of the -ig- formative. In this context, it is worth noting that in the Northumbrian dialect it is not uncommon for strong verbs to decline according to the weak conjugation (Campbell 1959: 313-320; Hogg 2011: 231; Costa Rivas 2020).

With regard to data classification and class membership, it should be mentioned that certain ambiguous forms were collected which posed difficulties for their classification in terms of etymological class. This is particularly true for original weak class 1 verbs possibly having been reformed on analogy with weak class 2 verbs, a gradual process which starts becoming clearly visible in the historic Old English period (cf. section 2.5.). Original weak class 3 verbs posed fewer problems in terms of interpretation and class membership classification, mainly due to the fact that by the historic Old English period there are only four main verbs which belong to the weak class 3 category: *habban* ‘have’, *libban* ‘live’, *seċġan* ‘say’ and *hyċġan* ‘think’. All the other verbs which are thought to once have belonged to this poorly attested conjugation type are by the historic Old English period reformed mainly as weak class 2 verbs (cf. section 2.5.). Thus, all forms encountered in the Northumbrian glosses attesting the original weak class 3 verbs listed in section 2.5. were classified as such and were counted for the statistical analyses presented in chapter 5. One notable exception is the verb *swiġian* ‘be silent’, which Hogg and Fulk (2011: 296-298) mark as an original weak class 3 verb reformed on analogy with weak class 2 verbs. However, all the forms attested in my dataset show no variation in terms of the

realisation of the -i- formative, in the sense that they are all attested formativeless, for example present participles *suigende* and *giswigende* (LkGl (Li) 1.20 and MkGl (Ru) 10.50, respectively), or imperative plural *gesuigas* and *swigas* found in LkGl (Li, Ru) 19.40. Without further research, these forms could have been classified as original weak class 3 verbs reformed as weak class 2 verbs which have lost the formative. Such statement would not be out of line with the general direction of the data in terms of the rates of -i- formative deletion in categories such the present participle and imperative plural. As demonstrated in the following two chapters, these two morphosyntactic categories attest numerous formativeless forms, especially the present participle category, which is one of the most innovative categories in my data (more details on the nature of these categories are given in chapters 5 and 6). However, a search on grammars and dictionaries presents a more complicated story. Campbell (1959: 332-340) classified *swiġian* 'be silent' as both a weak class 2 verb and an original weak class 3 verb, an unsurprising decision given the fact that most original weak class 3 verbs were by the historic Old English period inflecting like weak class 2 verbs. The same approach is followed by Hogg and Fulk (2011: 284-297). However, Bosworth- Toller dictionary attests a weak class 1 verb *swīgan* 'be silent' (Bosworth-Toller 2014-: s.v. *swīgan*, v.). Since the forms given above (*swigende*, *swigas*, etc) are all attested without -i- formative or without any other characteristics marking them as original weak class 3 verbs (see section 2.5. for possible features which tend to give away original weak class 3 verbs), it could be completely possible that these forms attest weak class 1 verb *swīgan* 'be silent'. Thus, these forms are ambiguous and are, therefore, not included in the datasets on which the statistical analyses are based precisely because no consensus could be reached in terms of class membership.

In relation to original weak class 1 verbs, a number of similarly problematic forms were found. Let us consider the ambiguous forms either attesting weak class 1 verbs *ēowan* 'show' and *embihtan* 'serve', or weak class 2 verbs *ēowian* 'show' and *embihtian* 'serve'. A total of nine forms were collected. However, none of them show the distinctive -i- formative of weak class 2 verbs. Some examples include present participles *eauande* and *eowende* (JnGl (Li, Ru) 14.22), first person singular present indicatives *eaua* and *eowo* (JnGl (Li, Ru) 14.21 or infinitives *geembehta* and *giembihta* (LkGl (Li, Ru) 10.40). These and all the other additional forms collected attesting possible *ēowian* 'show' and *embihtian* 'serve' were discounted from the datasets

precisely because no -i- formative was present in these forms and, therefore, it could be interpreted that these forms were attesting the weak class 1 counterparts. It should be mentioned, however, that although no -i- formative is visible in these forms, there are other features present which could be interpreted as evidence that these are innovative forms reformed on the basis of weak class 2 verbs. Sections 2.5. and 6.3. deal with the analogical transference of weak verbs onto the second weak conjugation in great detail, however, for the sake of clarity and completeness, two of these innovative features evinced by the forms just listed will be mentioned here. These are the presence of back inflectional vowels in the endings of the present participle and first person singular present indicative categories. Weak class 1 verbs should have front <e> as inflectional vowel in these endings, in fact note the *-ende* ending in *eowende* above. However, the other present participle form has *-ande* (*eauande*), the ending typical of weak class 2 verbs. A back vowel is also found as the inflectional ending of weak class 2 verbs in the first person singular present indicative category (with Northumbrian texts displaying variation in the realisation of this back vowel – Campbell 1959: 333), hence *eaua* and *eowo* in the forms listed above. All these additional features could point to the fact that these forms are inflecting according to the second weak conjugation. Thus, the nine forms collected for potential *ēowian* 'show' and *embihtian* 'serve' could be showing loss of the formative. However, since no variation was found in these instances (that is, alternation between the presence or absence of the -i- formative), these forms remained as potentially ambiguous and were, therefore, discounted from the data. The same process was followed and outcome reached for the following ambiguous verbs: *ehtian* 'value' (cf. weak class 1 verbs *ehtan* and *ēhtan*) and *worpian* 'throw' (cf. *ge-worpan*, a verb possibly formed on the basis of strong class 3 verb *weorpan* 'throw').[72]

[72] It should be noted that my dataset includes a number of forms which could attest weak class 2 verb *worpian* 'throw'. Although no forms have been found with presence of the -i- formative, other features typical of weak class 2 verbs are attested, mainly the presence of back inflectional vowels where a strong verb would have had a front vowel <e>. Hence, note first person singular present indicative *worpo* in JnGl (Li, Ru) 6.37, or the third person singular present indicative *worpað* in MkGl (Li) 4.26 (cf. *worpes* with front <e> vowel in the corresponding Rushworth^2 gloss). Most significant is the plural preterite indicative form *worpadun* in JnGl (Li) 8.59. If this particular form attested strong verb 3 *weorpan* 'throw', then this innovative weak preterite form follows the inflectional pattern of weak class 2 verbs, hence *-adun* or *-adon*. Otherwise, this as well as all the previously mentioned forms in this footnote could simply attest weak class 2 verb *worpian*.

For weak class 1 verbs ending in *-rian* (cf. *nerian* ‘save’, *herian* ‘hear’), tokens collected were only counted towards the statistical analyses and further discussion whenever variation was encountered in these potentially transferred verbs. Here variation is understood as both presence and absence of the -i- formative within a particular lemma. For example, weak class 1 verb *smirwan* ‘anoint’ appears in late Old English as *smirian*, with loss of original /w/ in place of which the -i- formative is found. In the Northumbrian glosses this verb is attested as *smirian*, inflecting like either a weak class 1 verb of the *nerian* type or a weak class 2 verb. Within the data collected, two forms of *smirian* were encountered, namely the inflected infinitives *smiriane* and *smiranne* (MkGL (Li, Ru) 14.8). While the first form retains the -i- formative, the second one does not. This variation in terms of the surface expression of the -i- formative justifies the fact that these two forms are taken as attesting *smirian* ‘anoint’, an original weak class 1 verb restructured on analogy with weak class 2 verbs. An additional piece of evidence used in this particular occasion in order to ascertain class membership is actually the attested loss of the -i- formative in the second example. Both weak class 1 and class 2 verbs would have had a surface medial -i- in this morphosyntactic category, or a <w> in the case of weak class 1 verbs ending in /w/ (cf. *smirwan* ‘anoint’). However, the second example with no medial <i> suggests that this particular form is behaving like the great majority of inflected infinitives attested in my dataset, that is, with loss of the -i- formative. Similarly reconstructed verbs ending in -rian are attested in my data, namely *a-feorrian* ‘remove’ and *timbrian* ‘build’. These verbs have been classified as weak class 2 verbs but attesting an etymological weak class 1 verb. This decision was made on the basis of the particular characteristics evinced by the verbal stems.

In the case of *a-feorrian*, the verb ends in a geminated consonant, as does the corresponding weak class 1 verb: *a-feorran*. Weak class 1 verbs ending in a geminate tended to be transferred to the second weak conjugation, evidence dating from the early Old English period (Hogg and Fulk 2011: 265). The two forms attested in my dataset demonstrate variation in terms of the surfacing of the -i- formative, hence imperative plurals *afearrað* and *afearriað* in LkGl (Li, Ru) 13.27. The alternation of forms with and without formative justify the classification of this verb as a weak class 2 verb formed on the basis of an original weak class 1 verb, as well as the inclusion of these tokens in the datasets informing the statistical analyses. The same criteria were used to classify and include forms collected attesting weak class 2 verbs formed on

the basis of weak class 1 verbs ending in a geminate, such as *cnyllan* ‘knock at a door’ or *un-trymman* ‘become weak’. *Cnyllan* appears in my dataset only once as infinitive *clyniga* (LkGl (Ru) 13.25), a form with metathesis of the stem consonants but, most importantly, without geminated consonant and, in its place, the -i- formative (spelt <ig> and representing /ij/). *Un-trymman* is also only attested once in my dataset, appearing as infinitive *un-trymmia* (LkGl (Li) 15.14). The presence of the -i- formative, therefore, justifies the interpretation of this form as attesting innovative weak class 2 verb *un-trymmian* ‘become weak’, and its subsequent classification as a weak class 2 verb in my dataset. *Timbrian* ‘build’ corresponds to weak class 1 verb *timbran*, a verb with a heavy stem (one short vowel followed by at least one consonant) ending in a stop /b/ followed by a liquid /r/. Much like in the case of verbs with final geminate, weak class 1 verbs with a heavy closed stem followed by a liquid or a nasal tended to develop forms which inflected like weak class 2 verbs (Campbell 1959: 326; cf. section 2.5.). This development can be clearly seen in my data, where the verb appears as *timbrian*, hence infinitive *gitimbria* (LkGl (Ru) 14.30) and plural present indicative form *timbrias* (LkGl (Ru) 11.47). It is important to note how, in Lindisfarne, the corresponding forms attest the original weak class 1 verb, hence infinitive *getimbra* and plural present indicative *timbras*, where no -i- formative is found. The two forms in Rushworth^2 have, therefore, been classified as attesting a weak class 2 verb formed on the basis of an original weak class 1 verb, and they have been counted in for the statistical analyses. The same justification was used to classify and count the forms attesting *wirmian* ‘to make warm’, from original weak class 1 *wirman*, and *hyngrian* ‘hunger’, from weak class 1 verb *hyngran*.

Continuing with original weak class 1 verbs ending in *-rian*, one final verb should be discussed here: *andswarian* ‘answer’. This verb is attested seven times in my datasets, and always attesting surface <i>. It is, therefore, evident that there is no variation when it comes for the presence of the -i- formative in these instances, and it would have been logical to discard these instances as attesting weak class 1 verb *andswarian* ‘answer’. However, in the great majority of forms (5 out of 7), medial <i> is spelt <ig>, for example plural present indicative *ondsuerigað* (MtGl (Li) 25.37) or *giondsworigað* (LkGl (Ru) 20.3). As covered in section 2.5., original weak class 1 verbs ending in *-rian* developed a glide in the late Old English period. This glide was reflected in the spelling, where the medial <i> was replaced by <ig>, representing /ij/ (Stark 1982: 30). As the illustrative paradigm of the typical weak class 2 verb *lofian* ‘praise’

in section 6.3. demonstrates, the -i- formative in weak class 2 verbs surfaced numerous times as <ig> due to the fact that the formative was a syllabic element bearing light stress (Campbell 1959: 34, 333). The occurrence of forms with medial <ig> such as *ondsuerigað* therefore suggest that *andswarian* 'answer' is inflecting as a weak class 2 verb. Hence, the seven forms collected have been counted towards the statistical analyses. It should also be mentioned that, although Old English grammars tend to list *andswarian* 'answer' under weak class 1 verbs, the DOE classifies this verb as a weak class 2, noting that some forms inflect according to the first weak conjugation (DOE 2007-: s.v. *andswarian*). Given the many attestations given by the DOE under the *andswarian* entry, this classification is justified, since many more forms are seen inflecting as a weak class 2 verb than a class 1. Such a classification follows a synchronic treatment and interpretation of the data, given that weak class 1 verbs ending in *-rian* were adopted into the second weak conjugation (Campbell 1959: 325 – cf. section 2.5.). Although this analogical process is already attested in early Old English, it is much more visible in late Old English. This state of affairs is unsurprising: more textual evidence is preserved from the late Old English period than from the early Old English one (Crowley 1986: 98), and, moreover, by the late Old English period, the analogical process by which weak class 1 verbs are gradually being reformed as weak class 2 verbs has had more time to implement itself in the language and be reflected in texts. Grammars treat data etymologically, hence explaining why *andswarian* is listed in the sections covering weak class 1 verbs.

The above discussion closes the section concerning the methodological decisions associated with data collection and classification. The following and final section in this chapter is concerned with the statistical methods employed to analyse the data in order to ascertain which of all the linguistic factors outlined in section 4.2. are more actively contributing to the loss of the -i- formative.

4.4. Statistical analyses

The aim of this thesis is to establish the path to the loss of the -i- formative in weak verbs 2, and to identify which linguistic or extra-linguistic factors are driving or conditioning this morphological reduction. As mentioned at the start of this chapter, a number of linguistic factors have been identified as potentially effecting this change.

Furthermore, section 4.3 introduced the parameters which have been considered for each of these individual factors. Given the aims of the thesis and the large number of linguistic factors under consideration, the data were analysed quantitatively so as to understand the relationship that exists between the linguistic factors selected and the loss of the -i- formative in weak class 2 verbs.

Statistical methods of data analysis are steadily becoming the norm in the field of historical linguistics. It is also very common to find variationist studies similar to the sort carried out in this thesis which make use of statistical methods of data analysis, such as Tagliamonte and Baayen (2012), Cole (2014 and 2016) or Thaisen (2020). To this end, the statistical software R was employed to carry out different analyses.[73] Firstly, a regression analysis was carried out on the whole dataset, and the results of this analysis are presented in chapter 5, followed by a discussion in chapter 6. A second analysis of statistical significance (known as Chi-squared test) was also carried out, but only on the basis of the Lindisfarne data. This analysis was employed in order to establish whether the difference in the distribution of the formative in the four individual gospels in Lindisfarne was statistically significant. The results are also presented in chapter 5. The reason for employing a chi-squared test for statistical significance is because, as chapters 5 and 6 explain, there are differences in terms of the rate of occurrence of the formative across Lindisfarne. This is particularly true for John's Gospel, which displays fewer instances of formativeless forms than the preceding three gospels. It will be recalled from section 2.3. that a number of previous studies into the variant linguistic forms in Lindisfarne already established demarcations in the gospels where the incidence of these variants markedly changed. Chapter 5 explains that the results obtained from the Chi-squared test did not confirm that the distinct distribution of the formative in John's Gospel in Lindisfarne was statistically significant, therefore, it is not possible to establish a demarcation at the beginning of John, in line with previous studies such as Cole's (2014 and 2016). These findings also contribute to the Lindisfarne authorship debate (section 2.3.1.a.), and it is argued in section 7.3. that the lack of statistically significant variation across gospels does not suggest the involvement of more than one glossator.

In keeping with the aims of this thesis, regression models were employed in order to establish the relationships that exist between a dependent (response) variable (in

[73] The statistical software R is free and available via this link: https://www.r-project.org/

the case of this thesis the presence or absence of the -i- formative) and one of various independent or predictor variables (Levshina 2015: 120). In this study, the dependent variable is either the presence or absence of the -i- formative, while the independent or predictor variables represent each of the factors and parameters outlined in section 4.2. above, which make up a total of eleven independent variables.

There are different types of regression analysis, depending on the number of independent variables and on the scale of measurement of the dependent variable. If there is only one independent variable, a simple regression analysis would be employed. If there are two or more independent variables, it would be necessary to run a regression model which accommodates multiple predictor variables, such as a multiple logistic regression or a conditional inference tree (Levshina 2015: 139, 291). With regard to the nature of the dependent variable, regression models can be either linear or logistic. Linear models are employed if the dependent variable is interval or ratio scale (usually numeric values such as age or temperature in degrees), whereas logistic models are used when the dependent variable is nominal or categorical (Levshina 2015: 253). In the case of the present study, the incidence of the -i- formative (dependent variable) is interpreted as a binary category, with the possible outcomes being either maintenance (1) or loss (0) of the formative. Given the large number of independent variables under consideration in my study, either a multiple logistic regression analysis or a conditional inference tree model could be used.

Conditional inference tress, also known as decision trees, are regression and classification models which employ binary recursive partitioning to interpret and classify the data. These models can be used as an alternative to multiple regression models, particularly when there are a large number of independent or predictor variables and the dataset is not very large (Levshina 2015: 291). Since my dataset includes a large number of predictor variables (eleven) and the combined number of observations for both Lindisfarne and Rushworth is not very large (848 total verbal tokens), a conditional inference tree was deemed to be the best fit for my dataset. In a multiple logistic regression analysis, not so many predictor variables should be entered in the model, because, otherwise, the statistical power of the model would decrease. Statistical power refers to the likelihood that the statistical model will detect a true effect, in the case of the present thesis an effect between the dependent and independent variables. The greater the statistical power of a model, the greater the likelihood that the model detects such effects (Levshina 2015: 13). In such a context,

it would have been necessary to curb the number of predictor variables by means of a manual selection of the most statistically significant ones prior to have run the multiple logistic regression analysis. This issue concerning statistical power, number of independent variables and sample size in multiple logistic regression analyses was another contributing factor on the decision to employ a conditional inference tree to analyse the data in this thesis.

Conditional inference trees are modelled by the statistical software in a process which involves several steps. First, the algorithm identifies which independent variables are associated to the dependent variable, and then chooses the independent variable which has the strongest association with the dependent variable. This independent variable will form the first node or split, which will divide the data in two. These two subgroups of data are then further divided into additional nodes where additional independent variables are selected by the software. Each of these nodes have binary branches where the dataset is further narrowed down, depending on how the data behave in relation to a particular independent variable. The further down in the tree model these nodes or variables are found, the less strong or direct their association to the dependent variable is. This partitioning process is repeated by the software for each subset of data (hence why it is referred to as recursive partitioning of the data), until no further independent variables are deemed statistically significant. At this stage, all the data are subdivided into relevant end nodes at the bottom of the tree. The conditional inference tree or decision tree for the combined Lindisfarne and Rushworth data can be seen in Figure 9 in chapter 5.

4.5. Summary

This chapter has presented the methodological considerations which have guided the process of data collection and classification. The first section in this chapter has outlined the different linguistic factors which are considered to be potentially conditioning the loss of the -i- formative in weak class 2 verbs, and has outlined the theoretical considerations that justify their choosing. The second section was devoted to the process of data collection and classification employed in this thesis, which has also included a discussion about a number of challenges faced when collecting, interpreting and classifying data. This section also outlined which further linguistic

parameters were considered when classifying the data. The process of interpretation and classification of the data was a crucial step in order to successfully analyse the data. As the final section in this chapter explained, a number of quantitative analyses have been carried out on the dataset using the statistical software R. These analyses are regression analyses on the one hand, specifically the model of conditional inference trees, and on the other hand a Chi-squared test for statistical significance. The results of these two analyses can be found in the next chapter.

Chapter 5

Results

5.1. Introduction

This chapter presents the results obtained from the two statistical tests discussed in section 4.4., namely a Pearson's Chi-squared test for statistical significance and a regression analysis. Both tests were run on the statistical software R. As mentioned in the previous chapter, the first test was run only on a portion of the data, that is, the Lindisfarne dataset. The rationale behind this decision is explained below. The conditional inference trees (regression analyses), however, are based on the three different datasets compiled for this thesis. The aim of the regression analyses is to identify which of the eleven independent (predictor) variables introduced in chapter 4 contribute towards the loss of the -i- formative in weak class 2 verbs. The presence or absence of the formative is categorised in this study as a binary dependent (response) variable.

5.2. Intratextual variation, demarcations, and Pearson's Chi-squared test

Before introducing the bulk of the results, some aspects must be addressed in order to better contextualise the discussion that follows below. First of all, it is important to introduce the datasets which form the basis of this thesis. Three different datasets have been compiled: one containing data exclusively from Lindisfarne, one for Rushworth[2], and the last one combining the data from both texts. The distribution of the -i- formative in each of these datasets is presented in Figures 1, 2 and 3 below.

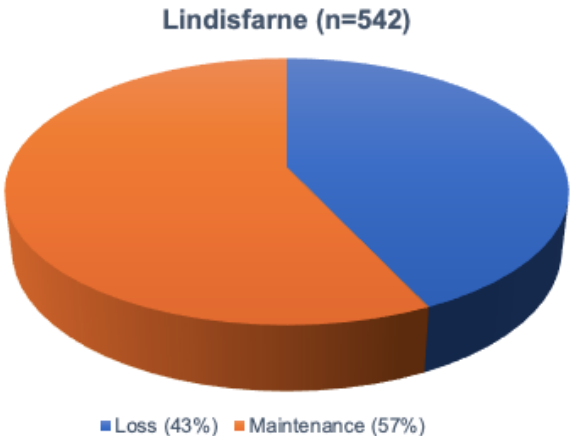

Figure 1. Distribution of the -i- formative in Lindisfarne (in rough percentages)

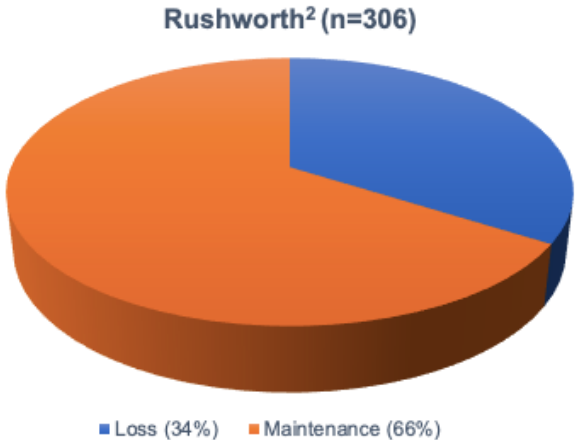

Figure 2. Distribution of the -i- formative in Rushworth^2 (in rough percentages)

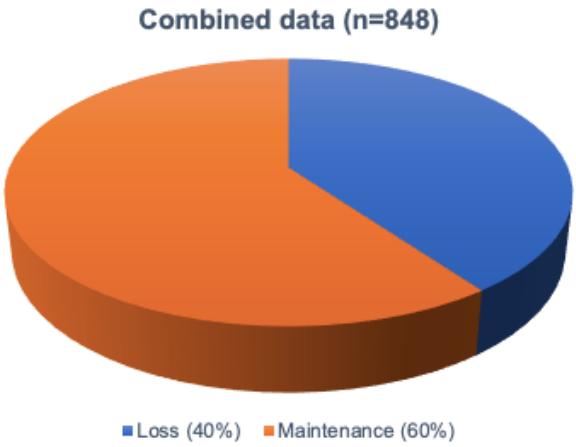

Figure 3. Distribution of the -i- formative in the combined dataset (in rough percentages)

Rough percentages indicate that the loss of the -i- formative is not absolute in the two texts. It is, however, more evident in Lindisfarne (232 formativeless forms out of 542 total forms, that is, 43%) than in Rushworth^2 (105 formativeless forms out of 306 total forms, that is, 34%), which, overall, displays a more conservative language.

Notably, there is much more variation in Lindisfarne than in Rushworth^2. This is true not only in terms of the overall distribution of the formative, or its distribution across morphosyntactic categories (covered below), but also when it comes to the realisation of the formative itself. In Rushworth^2, there are five variant forms of the formative, namely *-i-, -g-, -ig-, -igi-* and *-ag-*. In Lindisfarne, however, there are thirteen distinct variants: *-æg-, -ag-, -agi-, -ai-, -aig-, -eg-, -g-, -gi-, -i-, -ig-, -igi-, -og-* and *-ogi-*.

Further intratextual variation is also evidenced by the fact that Lindisfarne contains a very high number of multiple glosses, that is, instances where a single Latin lemma is given more than one Old English interpretamentum. This phenomenon, which is nearly nowhere as common in Rushworth^2, is mainly responsible for the higher number of weak class 2 verbal tokens identified in Lindisfarne (542) than in Rushworth^2 (306).[74] There are other factors worth mentioning, however. The section known as Rushworth^2 does not include Matthew's Gospel, which instead constitutes Rushworth^1 (cf. section 2.2.). This gospel is, therefore, excluded from the Rushworth^2 dataset. The Lindisfarne dataset, however, covers all four gospels, hence contributing to the greater count of tokens attested. Additionally, it should also be noted that a number of leaves in the Rushworth manuscript have been lost, which also accounts for the fewer verbal tokens collected.[75]

The results obtained after running the regression analyses also confirmed that variation is much more noticeable in Lindisfarne than in Rushworth^2 (see Figures 7

[74] Ross and Squires (1980: 494-495) report 543 double glosses in Rushworth^2, as opposed to 1987 in the equivalent section of Lindisfarne. When discounting the double glosses in Lindisfarne corresponding to missing sections in Rushworth^2, the figure diminishes to 1846. They also report 114 triple or even quadruple glosses in Lindisfarne and the glosses to Durham, Cathedral Library, MS A.iv.19 (Ross and Squires 1980: 490).

[75] A total of thirteen leaves are missing: one full quire (usually consisting of ten leaves in the Rushworth manuscript) after folio 94, one leaf after folio 99, and two leaves after folio 109. These leaves coincide with the Latin text and Northumbrian glosses to some chapters in Luke's Gospel, specifically chapter 4.29 to chapter 8.38, chapter 10.20 to 10.38 and chapter 15.14 to chapter 16.25 (for more detailed information see Tamoto 2013: xii and references therewith).

and 8 below). In fact, when comparing Figures 7 and 8 to Figure 9, which draws on the combined dataset, it is clear that the linguistic variation inherent to Lindisfarne is contributing to the more complex tree structure in Figure 9. Such variation is clearly visible if the Lindisfarne and Rushworth[2] datasets are briefly compared in terms of rate of -i- formative deletion across morphosyntactic categories (Figures 4 and 5).

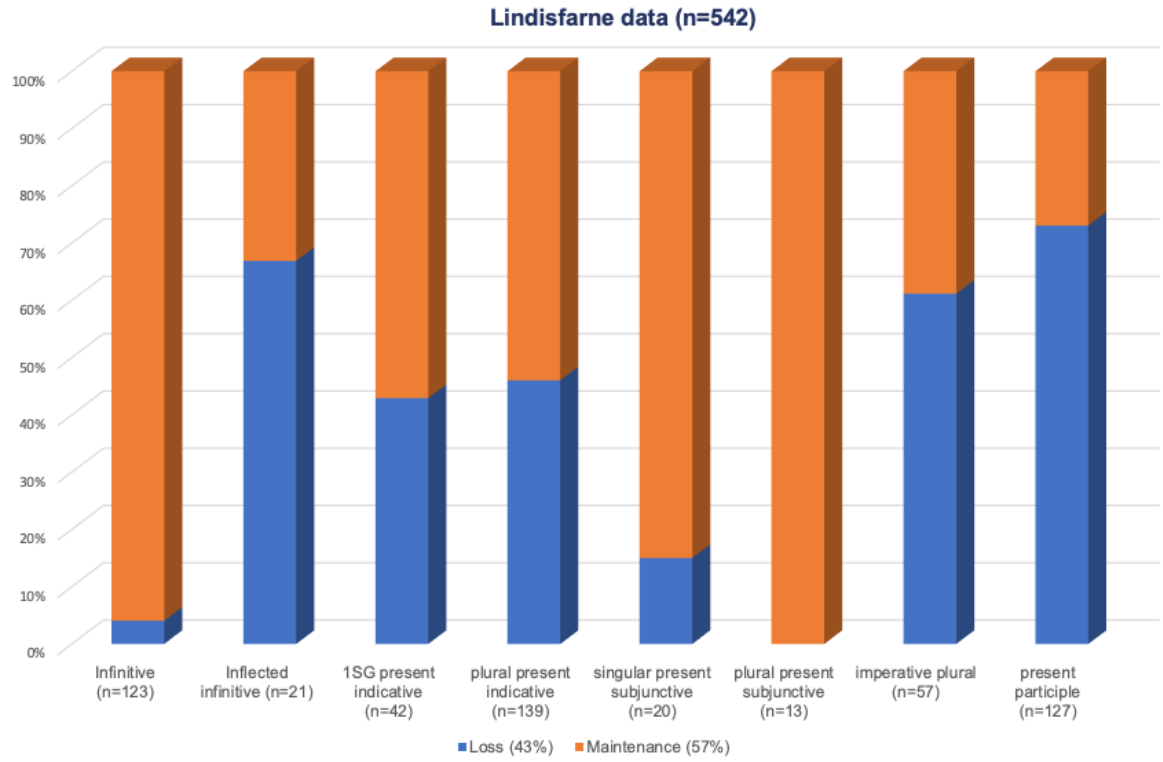

Figure 4. Distribution of the -i- formative across morphosyntactic categories in Lindisfarne

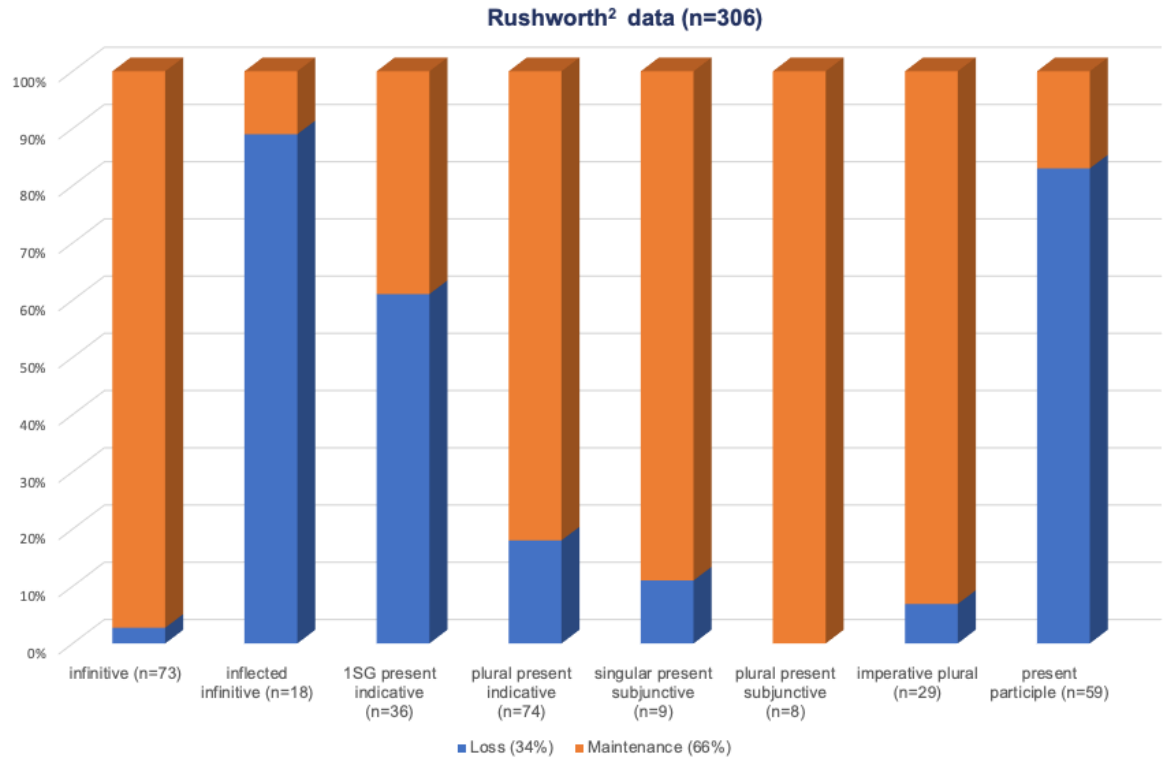

Figure 5. Distribution of the -i- formative across morphosyntactic categories in Rushworth^2

The figures above illustrate that certain morphosyntactic categories favour the formativeless variant, namely the present participle and the inflected infinitive. Lindisfarne attests a total of 127 present participle forms, out of which ninety-three lose the formative (73%), and fourteen formativeless inflected infinitive forms (67%) out of a total of twenty-one attestations. Other categories, however, tend to attest forms retaining the formative, such as the infinitive and the subjunctives. 96% of infinitival forms in Lindisfarne keep the formative (118 out of 123), and 97% in Rushworth^2 (seventy-one out of seventy-three). In terms of the singular present subjunctive forms in Lindisfarne, 85% of the tokens retain the formative (seventeen out of twenty), whereas in Rushworth^2 it is eight tokens out of nine (89%). The plural present subjunctive category shows no variation in the gospels, as all forms attested (thirteen in Lindisfarne and eight in Rushworth^2) retain the formative. The remaining three categories, however, vary in terms of the distribution of the formative. Within the present indicative system, Lindisfarne attests a total of forty-two first person singular present indicative forms, out of which eighteen have lost the formative (43%). In Rushworth^2, the rate of formativeless forms is higher in this category: 61% of

formativeless forms in total (twenty-two out of thirty-six). The plural present indicative category displays the opposite situation. While in Lindisfarne nearly half of the forms attested are formativeless (46% of the forms, that is, sixty-four out of 139), in Rushworth^2 there is a smaller proportion of formativeless forms, with only 20% of them (thirteen out of seventy-four) having lost the formative. Finally, the starkest difference in terms of the distribution of the formative in Lindisfarne and Rushworth^2 is felt in the imperative plural category. While in Lindisfarne a slight majority of the forms are attested formativeless (thirty-five out of fifty-seven, that is, 61%), in Rushworth^2 forms retaining the formative are the norm in this category (twenty-seven out of twenty-nine, that is, 93%). This once again highlights the more conservative nature of Rushworth^2.

In line with the above, it will be recalled from section 2.3.1.a. that Lindisfarne displays considerable variation in its morphological expression. Additionally, that section addressed how some of these variant forms in Lindisfarne are at times spread unevenly across gospels. For example, Cole's (2016) analysis of the distribution of *-ð* versus *-s* in the third person singular present indicative and plural present indicative verbal categories identified higher rates of *-s* endings in Matthew and most of Mark, the increase commencing approximately at MkGl (Li) 5.40, but not as much in Luke. A similar increase in the incidence of *-s* forms was also demonstrated from the beginning of John by Cole (2016: 184-185). In line with earlier studies analysing linguistic variation in Lindisfarne (cf. section 2.3.1.a.), this thesis also analysed whether the distribution of the -i- formative varied across individual gospels in Lindisfarne. The results are visually presented in Figure 6 below:

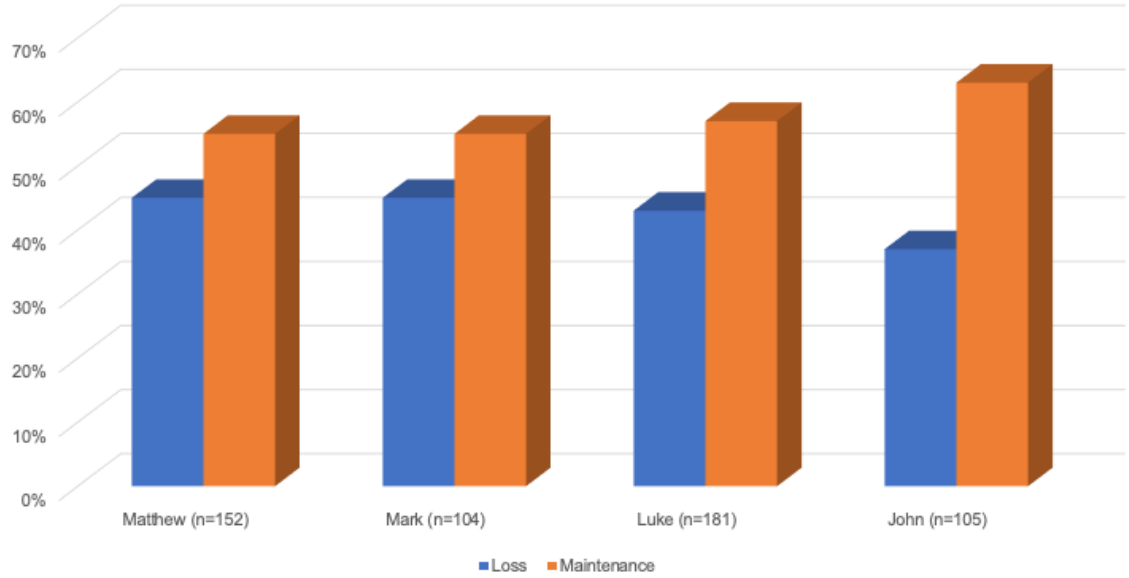

Figure 6. Distribution of the -i- formative in the four individual Lindisfarne gospels (in rough percentages)

Figure 6 shows that the distribution of the formative in Matthew, Mark and Luke is fairly similar: Matthew displays sixty-eight formativeless forms out of the total 152 weak class 2 verbs identified in this gospel (45%); in Mark 45% of the forms identified are formativeless (forty-seven out of 104), and in Luke there is a slight drop in the use of formativeless forms (seventy-eight forms out of 181, that is, 43%). It is also clear that John attests fewer formativeless forms: a total of thirty-nine out of 105 forms identified, that is, 37%. A priori, my data indicate that morphological expression in John is more conservative than in the preceding three gospels in Lindisfarne, in so far as the distribution of the -i- formative is concerned. Results obtained from a Chi-squared test, however, confirmed that the slight conservatism evinced in John when compared to the preceding three gospels is not statistically significant, for which see below.

The division of data according to individual gospels has been customary in studies on the language of the Lindisfarne glosses since Holmqvist (1922). However, since Brunner's (1947-1948) pioneering study on the distribution of different variant forms in Lindisfarne, data are divided randomly into sections of approximately equal length. Van Bergen (2008: 6), on the other hand, divided her data at the demarcation identified in Brunner (1947-1948), that is, at MkGl (Li) 5.40. A combined approach was followed in Cole (2014: 92-93, 112-116), who split data arbitrarily into sections of approximately equal length, one of these coinciding with the demarcation at MkGl (Li)

5.40. A similar approach has been followed in the present study. The aim was to identify if a similar distribution of the -i- formative to that presented in the previous paragraph emerged when data were not divided and constrained by gospel.

The whole Lindisfarne dataset (542 verbs) was, therefore, divided into sections of approximately forty verbal tokens each, since the section covering MkGl (Li) 1 to MkGl (Li) 5.40 contains forty weak class 2 verbs. As a result, fourteen different data sections were created, twelve of which contain exactly forty verbal tokens and two contain slightly fewer: thirty-two and thirty respectively. These data sections are presented in Table 7 below:

Section	**Loss -i- formative**	**Maintenance -i- formative**
MtGl (Li) 2.2 – MtGl (Li) 8.14	18 / 40 (45%)	22 / 40 (55%)
MtGl (Li) 8.14 – MtGl (Li) 14.7	15 / 40 (**38%**)	25 / 40 (62%)
MtGl (Li) 14.9 – MtGl (Li) 22.4	21 / 40 (**53%**)	19 / 40 (47%)
MtGl (Li) 22.18 –MtGl (Li) 28.19	14 / 32 (44%)	18 / 32 (56%)
MkGl (Li) 1 – MkGl (Li) 5.38	18 / 40 (45%)	22 / 40 (55%)
MkGl (Li) 6.10 – MkGl (Li) 13.28	19 / 40 (48%)	21 / 40 (52%)
MkGl (Li) 13.36 – LkGl (Li) 4.41	19 / 40 (48%)	21 / 40 (52%)
LkGl (Li) 4.43 – LkGl (Li) 9.22	17 / 40 (43%)	23 / 40 (57%)
LkGl (Li) 9.22 – LkGl (Li) 13.32	18 / 40 (45%)	22 / 40 (55%)
LkGl (Li) 13.33 – LkGl (Li) 19.5	13 / 40 (**30%**)	27 / 40 (70%)
LkGl (Li) 19.5 – LkGl (Li) 24.23	18 / 40 (45%)	22 / 40 (55%)
LkGl (Li) 24.26 – JnGl (Li) 6.57	11 / 40 (**28%**)	29 / 40 (72%)
JnGl (Li) 6.57 – JnGl (Li) 15.4	18 / 40 (45%)	22 / 40 (55%)
JnGl (Li) 16.5 – Jn (Li) End	14 / 30 (47%)	16 / 40 (53%)

Table 7. Distribution of the -i- formative in Lindisfarne when data are arbitrarily divided into sections of approximately equal length

Table 7 above reveals that the distribution of the -i- formative is quite stable in most of the arbitrarily created data sections, with percentages of formativeless forms between 43% and 48%. There are four of these sections, however, where the distribution is slightly more uneven. The section from MtGl (Li) 8.14 to MtGl (Li) 14.7 sees a slight drop in the use of formativeless forms (38%), which contrasts with the considerable

increase in the following section, that is, MtGl (Li) 14.9 to MtGl (Li) 22.4, where slightly more than half of the forms (53%) are formativeless. The last chapters in Matthew, where formativeless forms drop to 44% in usage, are more conservative. It should be noted that Cole's (2014: 113) data also revealed a drop in *-s* usage in the last few chapters in Matthew.

The next two sections cover the demarcation point identified in previous studies such as Brunner (1947-1948), van Bergen (2008) and Cole (2014). As can be seen in Table 7, however, the distribution of the -i- formative in these two sections is quite regular. Section MkGl (Li) 1 to MkGl (Li) 5.38 displays 45% of formativeless forms, while the following section (MkGl (Li) 6.10 to MkGl (Li) 13.28) displays 48% of such forms. Since this last section contains only one additional formativeless form than the previous one (nineteen forms instead of eighteen), a demarcation at MkGl (Li) 5.40 cannot be posited on the basis of the distribution of the -i- formative in weak class 2 verbs. Another noticeable drop in the usage of formativeless forms can be seen half-way through Luke in the section from LkGl (Li) 13.33 to LkGl (Li) 19.5, where only 30% of the forms are formativeless. Overall, out of the three first gospels in Lindisfarne, Luke seems to be slightly more conservative, as Figure 6 above demonstrates. Interestingly, other recent studies into the language of the Lindisfarne glosses have concluded that Luke was the most innovative gospel, at least in relation to the incidence of regularised strong verbs in the Northumbrian gospels (Costa Rivas 2020: 157), but this claim cannot be sustained on the basis of the data collected for the present thesis.

What this dataset reveals is that John is the least innovative gospel out of the four. Note the sharpest decrease in the incidence of formativeless forms in section LkGl (Li) 24.26 to JnGl (Li) 6.57, where only 28% of the identified forms were rendered formativeless. A similar decrease in the incidence of *-s* verbal inflection in the first chapters of John is identified by Cole (2016: 181), whose analyses also signal John as a rather conservative gospel in terms of its morphological expression. Although the rate of formativeless forms in the present dataset seems to increase in the last two sections of John, it should be noted that the last of these sections contains ten tokens fewer than the rest, and hence the apparent sharper increase in the use of formativeless forms. Overall, John is the most conservative gospel in Lindisfarne as it contains a higher proportion of weak class 2 verbs which retain the -i- formative. Not only is this confirmed by the distribution of the formative in the sections arbitrarily

created (Table 7), but also in terms of the overall distribution in the four gospels as presented in Figure 6 above.

Given the recently discussed uneven distribution of the -i- formative in John compared to the preceding three gospels in Lindisfarne, it was deemed necessary to run a Pearson's Chi-squared ($\chi 2$) test of statistical significance. As mentioned in section 4.4., this test was employed in order to ascertain whether the more conservative rates of formativeless forms in John proved statistically significant. Given the distribution of the formative in the arbitrarily created sections above, the data in Matthew and Mark were grouped together, since they behaved very similarly. Those of Luke and John were grouped separately. The results obtained from the statistical software R are as follows: $\chi 2$ value = 1.4263, degrees of freedom = 2 and p-value = 0.4901. The results obtained reveal that a significant dependence was not found in the Lindisfarne dataset, since the p-value exceeds the maximum value of 0.05 which was set as significance level. These results therefore confirm that, while the language in John seems to be more conservative than that in the preceding three gospels in Lindisfarne, the difference does not prove statistically significant. With this consideration in mind, it is not possible to posit a break in language at the beginning of John (cf. Cole 2014 and 2016).

5.3. Conditional inference trees

This section introduces the results obtained from the main regression analyses of the data compiled for the present thesis. As mentioned in section 4.4., it was decided that, out of the different regression models, a conditional inference tree model would be employed for the statistical analysis of the data. The reasons behind choosing this model as opposed to other very common regression models such as multiple linear regression were threefold. Firstly, multiple linear regression models do not cope well with many predictor (independent) variables, and my datasets contain eleven such variables. Secondly, the more predictor variables introduced in a linear regression model, the less likely it is to detect a true effect between the predictor and the response (dependent) variable. Thus, the statistical power of the model is greatly reduced. Finally, conditional inference tree models tolerate datasets with a relatively small number of observations (Levshina 2015: 291). This was a highly attractive attribute

given the fact that the data combined from the two texts under study reach 848 tokens only.

The three inference trees associated to the three different datasets (Lindisfarne, Rushworth^2, and combined datasets) are given below. Figure 7 draws on the Lindisfarne dataset, Figure 8 on the Rushworth^2 dataset and, finally, Figure 9 draws on the combined dataset. As the Figures 7 to 9 demonstrate, this regression model identifies the predictor (independent) variables which are most statistically significant, and repeatedly divides the data into binary branches, depending on how data behave in relation to the response (dependent) variable. In the case of the present thesis, the response variable is the incidence of the -i- formative in weak class 2 verbs, which, in line with the nature of this model, is categorised as a binary phenomenon: maintenance (labelled "True" at the end nodes on the tree models) and loss of the formative (labelled "False"). The hierarchical design of the inference trees signifies statistical significance. That is, the lower down a predictor variable is positioned on the tree, the least statistically significant that factor is, and the weakest its effects on the response variable (and vice-versa).

One of the aims of the present thesis is to identify which factors are contributing towards the loss of the -i- formative in weak class 2 verbs as evidence in late Northumbrian. Figure 9, created on the basis of the combined dataset, fulfils that goal, and is therefore dissected in detail in the remainder of this chapter. It is crucial, however, to address once again the issue of intratextual variation, since this is a factor that heavily features in the inference trees. Let us consider Figures 7 and 8, that is, the trees drawn on the basis of Lindisfarne and Rushworth^2 data, respectively. The statistical software identified five main contributing factors (predictor or independent variables) in Lindisfarne (Figure 7). In order of statistical significance, these are morphosyntactic category (Paradigm), inflectional vowel type, stem vowel type, place of articulation of the stem-final consonant and, finally, stem weight. The first two factors are the primary ones due to their higher position in the hierarchical tree model, while the remaining three play a secondary role, hence their subordinate position. Figure 8 (Rushworth^2), on the other hand, shows two (primary) contributing factors only, namely morphosyntactic category (Paradigm) and etymological class. This brief comparison suffices as corroboration of the claim made in the previous section regarding the more diverse nature of the Lindisfarne dataset – but see further section 7.2. This varied nature results in the rather intricate Figure 7. Such diversity and complexity are carried

over when the combined dataset is analysed, hence resulting in the increasingly complex Figure 9, where a number of different factors condition the incidence of the -i- formative in weak class 2 verbs. In order of statistical significance, the contributing factors are morphosyntactic category, inflectional vowel type, etymological class, stem vowel type, manner of articulation of the stem-final consonant and, finally, place of articulation of the stem-final consonant. Much like in Figure 7, the first three factors cited for Figure 9 greatly influence the loss of the -i- formative, hence their higher position as head nodes. These are the primary factors. The other three cited factors stem from the head nodes and are, therefore, secondary in nature, affecting the loss of the -i- formative in a more indirect manner. Their more secondary role and lower statistical significance is visually represented by means of their relatively low positioning on the tree. Let us consider these factors individually as well as their effects on the incidence of the formative.

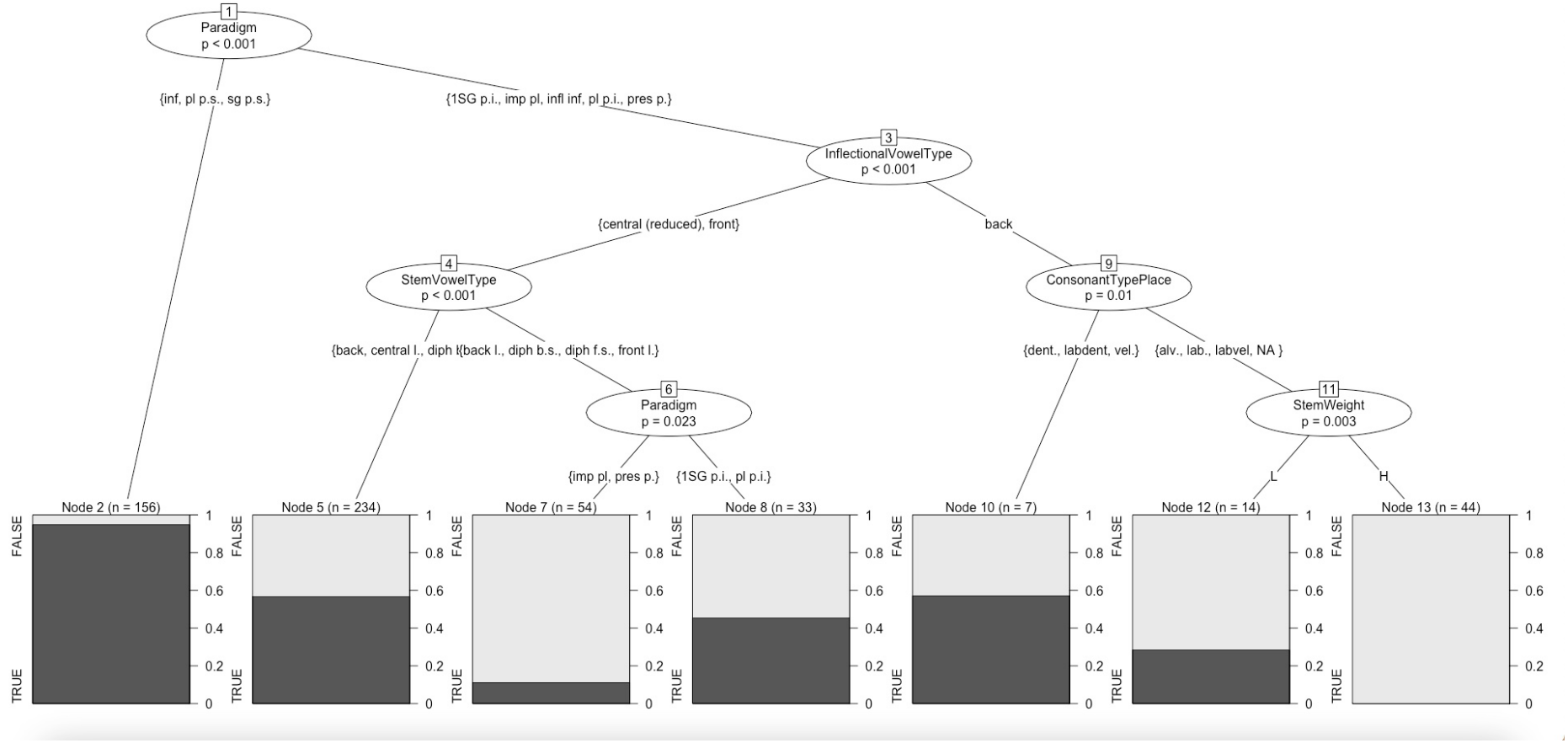

Figure 7. Conditional inference tree modelled on the basis of Lindisfarne data (n= 542)

Key: True = maintenance of the -i- formative (dark grey shading); False = loss of the -i- formative (light grey shading)

Expanded abbreviations: **Paradigm** (morphosyntactic category): infinitive, plural present subjunctive, singular present subjunctive, first person singular present indicative, imperative plural, inflected infinitive, plural present indicative, and present participle. **Stem vowel type**: back, back long, central long, short diphthong, long diphthong, front and front long. **Consonant type place**: alveolar, dental, labial, labiodental, labiovelar and, velar. **Stem weight**: light and heavy

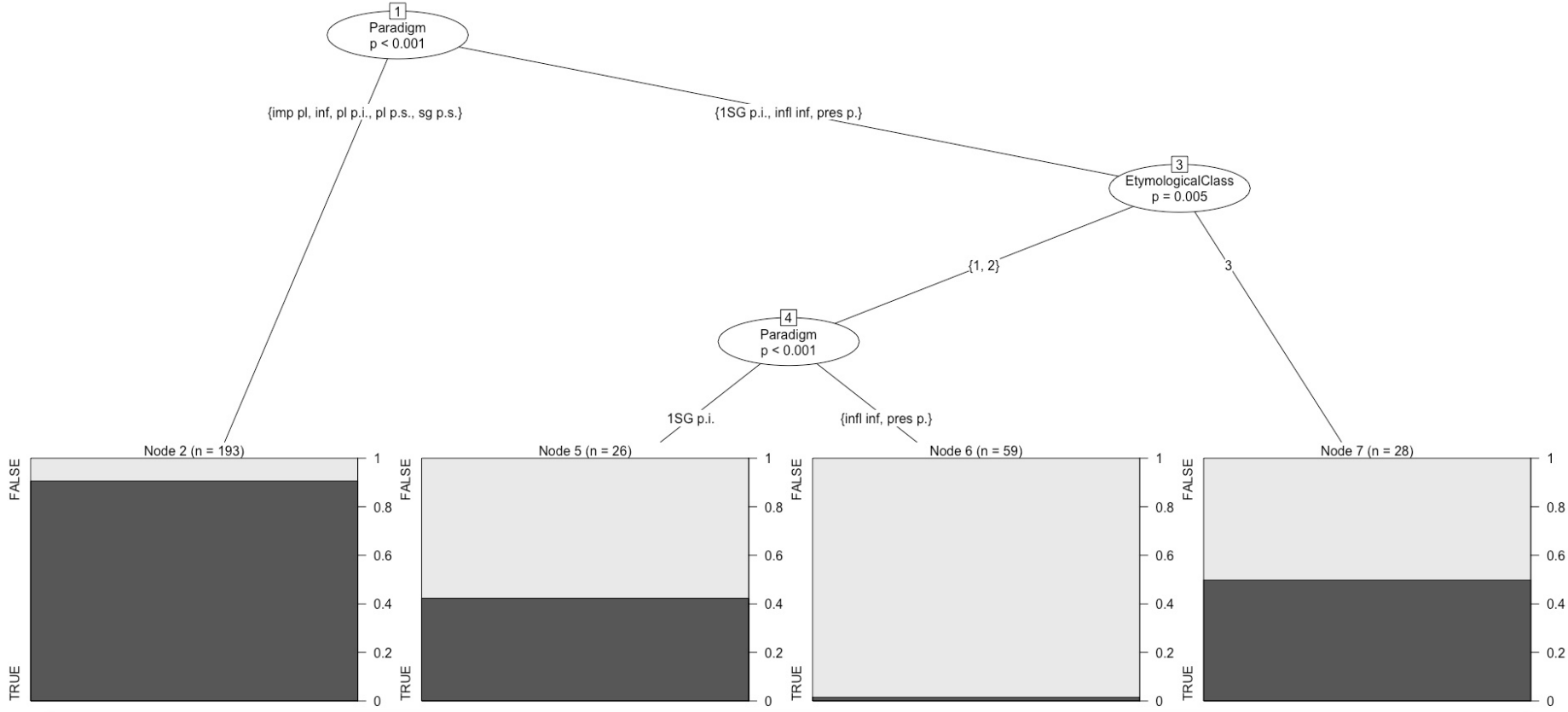

Figure 8. Conditional inference tree modelled on the basis of Rushworth[2] data (n= 306)

Key: True = maintenance of the -i- formative (dark grey shading); False = loss of the -i- formative (light grey shading)

Expanded abbreviations: **Paradigm** (morphosyntactic category): infinitive, plural present subjunctive, singular present subjunctive, first person singular present indicative, imperative plural, inflected infinitive, plural present indicative, and present participle. **Etymological class:** original weak class 2 verbs, and transferred verbs from original weak classes 1 and 3

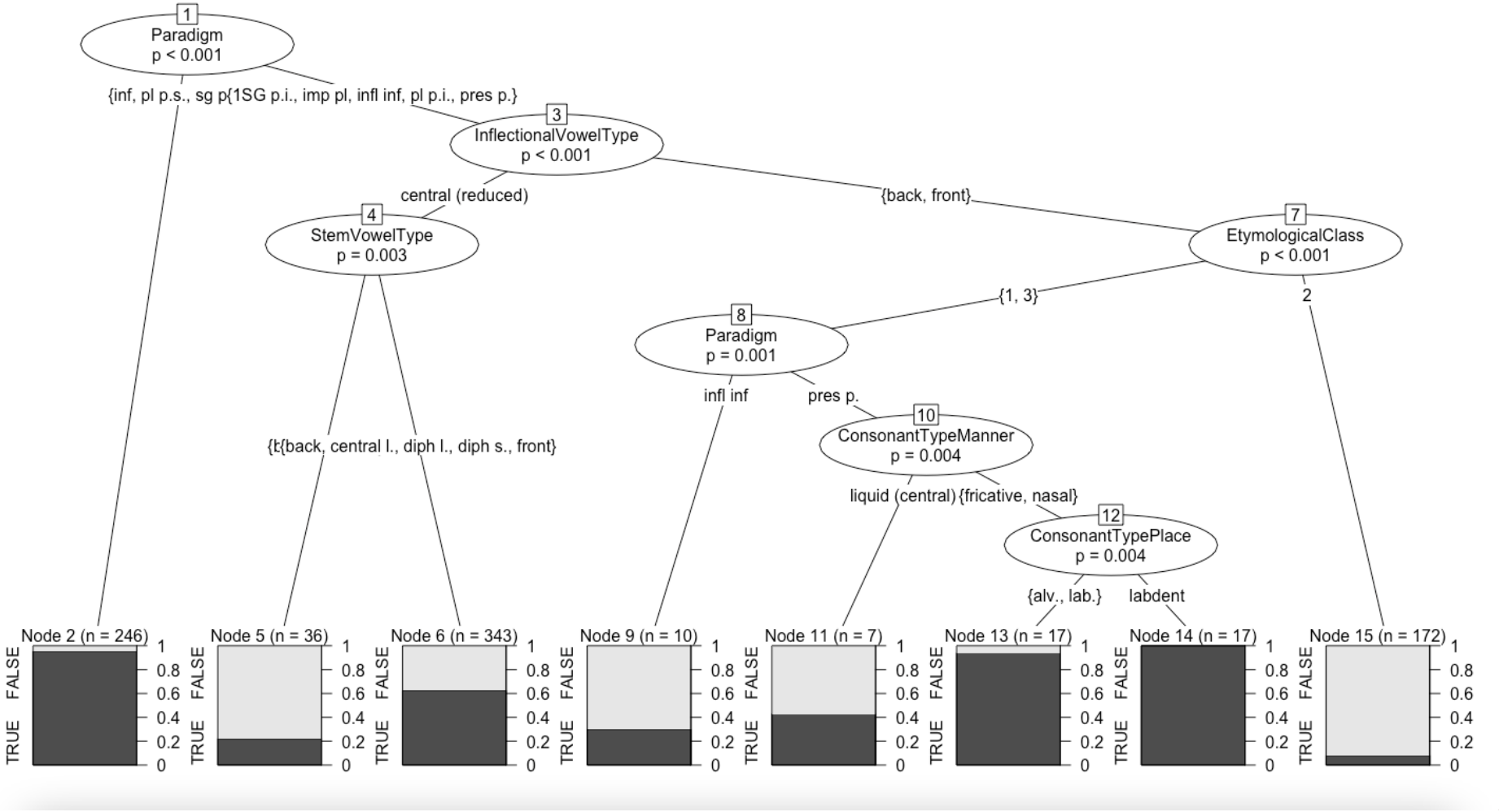

Figure 9. Conditional inference tree modelled on the basis of the combined dataset (n= 848)

Key: True = maintenance of the -i- formative (dark grey shading); False = loss of the -i- formative (light grey shading)

Expanded abbreviations: **Paradigm** (morphosyntactic category): infinitive, plural present subjunctive, singular present subjunctive, first person singular present indicative, imperative plural, inflected infinitive, plural present indicative, and present participle. **Etymological class:** original weak class 2 verbs, and transferred verbs from original weak classes 1 and 3. **Stem vowel type**: back, back long, central long, short diphthong, long diphthong, front and front long. **Consonant type place**: alveolar, labial, and labiodental

The first split follows the division of data in terms of morphosyntactic categories, labelled Node 1 in Figure 9. The categories grouped on the left branch overwhelmingly favour the retention of the -i- formative, namely infinitive, singular present subjunctive and plural present subjunctive. Infinitives are widely attested in the dataset, with a total of 196 instances, where only seven forms display loss of the formative (4%). Although the number of infinitival forms which retain the formative is quite large (189 instances, making up the 96% of the infinitival forms found), it is worth mentioning a few examples which illustrate interesting patterns in the incidence of the -i- formative. Many are the verbs attested by these 189 instances. *Bodian* 'preach' is one of those, where the formative is consistently retained in the thirteen infinitival instances found, and consistently lost in the two most innovative categories (inflected infinitives and present participles), of which more will be said at the end of this chapter. Another such verb is *gefēaġan* 'rejoy', where the formative is retained in the seven infinitival forms, but not so in other categories such as present participle or imperative plural.

The subjunctives tend to retain the formative more readily, particularly the plural present subjunctive. This category, with a total of twenty-one instances, does not display a single formativeless form. Verbs attested in this morphosyntactic category tend to retain the formative overall: *þrowian* 'suffer'*, wunian* 'stay'*, gearwian* 'prepare'*, losian 'die', dēadian* 'die' or *andswarian* 'answer'. It should be noted that many of the verbs just mentioned reveal an interesting connection between the retention of the formative and their etymological class. Except for *dēadian,* the other verbs do not originally belong to the second class of weak verbs, but to the first and third. As demonstrated in the ensuing paragraphs, etymological class is also a factor contributing to the retention of the formative, but, in the specific context of these categories (i.e. original weak class 1 and 3 verbs), it is clear that their etymological class is promoting the retention of the formative in these analogically created forms, too. This correlation is explored and justified in detail in sections 6.2.3 and 6.3.

A slightly more uneven distribution of the formative is found in the final category grouped under the first branch of the inference tree: singular present subjunctive. Much like with the two previous categories, the singular present subjunctive category mainly includes tokens which keep the formative (twenty-five tokens, 86%). The great majority of these tokens once again attest verbs which keep the formative overall: *bodian* 'preach'*, dwolian* 'err'*, ge-rīxian* 'govern'*, ge-sceortian* 'fail'*, lifian* 'live'*, losian* 'die'*, syngian* 'sin' or *wunian* 'stay'. Unlike in the plural subjunctive, however, the

singular category displays a few instances of formativeless forms (four in total, that is, 14%). These forms attest verbs *andspurnian* 'offend'*, beorhtnian* 'glorify' and *wunian* 'stay', the first two scantly attested in the dataset.

The second sub-group stemming from the partitioning of the data in Node 1 in Figure 9, Paradigm, includes all the remaining morphosyntactic categories considered by this thesis, that is, first person singular and plural present indicative, imperative plural, inflected infinitive, and present participle. These categories have a much more complex route to the loss of the formative, where a variety of other interfering factors also play in role.

The next immediate factor significantly conditioning the distribution of the formative in these morphosyntactic categories is the type of vowel found in the inflectional endings, labelled as Node 3 in Figure 9. Three different types of such vowels were identified by the present thesis, namely, back, front and central or reduced (see section 4.2. for details). The left branch stemming from this second partitioning of the data contains central inflectional vowels only, that is, unstressed *-a* and *-e* in forms like plural present indicative *clænsas* 'purify' or *tanages* 'decide by lot'. The categories attested in this branch include first person singular present indicative, plural present indicative, and imperative plural. There are a total of 379 tokens, out of which 156 forms lose the formative (41%) and 223 retain it (59%).[76]

The type of stem vowel found in these 379 verbs which contain a central or reduced inflectional vowel further contributes to the different fate of the -i- formative. This factor is, therefore, the fourth variable identified as statistically significant, labelled Node 4 in Figure 9. This factor has a number of sub-categories, depending on the nature of each vowel: back, front, long back, long front, long central, short diphthong and long diphthong. The division of the data indicates that long back and long front

[76] This number includes three tokens with no inflectional ending, where only the verbal root has been provided, and which are then classified as NA for this category (inflectional vowel type). These three tokens are included within this partition, even though not explicitly mentioned on the inference tree. Note that the sub-category forming the left branch of Node 3 is just central inflectional vowel, and no mention is made of the additional three tokens which the model adds to the final Node 6. These three tokens are first person singular present indicative *sædi* 'I sow', which retains the formative; inflected infinitive *sceawnne* 'behold' with no formative (preceded by *gesea* 'see', perhaps conditioning or reinforcing the variant with no formative), and present participle *sceaunde* 'beholding'*,* with no formative (preceded by present participle *sittende* 'sitting', which perhaps reinforces the formativeless variant).

stem vowels, on the left branch, behave similarly, since they overwhelmingly favour the loss of the formative. There is a total of thirty-six such tokens, where eight keep the formative (22%) and twenty-eight lose it (88%). When looking at the twenty-eight formativeless instances, eighteen have long front stem vowels and ten long back vowels. Interestingly, these instances attest verbs with relatively low rates of retention of the formative, such as *gefēaġan* 'rejoice'*, ge-rīxian* 'govern'*, slēpian* 'sleep' or *smēaġan* 'consider'. The same parallel is true for the eight tokens which keep the formative, since verbs such as *geclǣnsian* 'purify'*, ge-lēcnian* 'cure' or *sǣdian* 'sow' tend to include tokens which preserve the formative. The right branch of Node 4 in Figure 9 contains all other types of stem vowels, that is, back, front, long central, short diphthongs and long diphthongs. Node 6 shows that the distribution of the formative is more uneven for all these type of stem vowels. Here, 343 tokens are found, 128 of which lose the formative (37%) and 215 retain it (63%). It is interesting that a couple of long vowel sub-categories are grouped under this section, and not the previous one (that is, along with long back and long front vowels). These two sub-categories are long central vowels and long diphthongs, which, unlike long back and long front vowels, do not seem to promote the loss of the -i- formative nearly as much. Out of the fifteen instances of long central vowels, only four (36%) lose the formative. Precisely because of the more even distribution of the formative in this sub-category, the verbs attested show more similar rates of maintenance and loss of the formative (*grāpian* 'grope'*, hālgian* 'sanctify' or *hālsian* 'entreat'). In terms of long diphthongs, the distribution of the formative is quite similar to that for central long vowels: fourteen total instances, out of which three lose the formative (21%) and eleven keep it (79%). There is also variation in terms of the distribution of the formative in the individual verbs attested, with some verbs mainly being represented by formativeless forms (*scēawian* 'behold' or *smēaġan* 'consider') and others by more conservative forms (*dēadian* 'die'*, hrēowian* 'rew' or *hrēowsian* 'repent'). Slightly higher rates of formative deletion are evidenced in verbs containing a short diphthong in the root: eighteen forms out of a total of fifty-seven (32%), although overall this sub-category mainly favours the maintenance of the formative. A very similar distribution is found in the last two sub-categories of Node 4, that is, in verbs with back stem vowels (40% loss and 60% maintenance out of the total 181 forms) and with front stem vowels (41% loss and 59% maintenance out of the total seventy-six forms).

Having dealt with Node 4, it is necessary to return to Node 3 and continue right-ways. The right branch stemming from Node 3 groups together all verbal instances where either a back or a front inflectional vowel is found. These comprise a total of 223 tokens, all attesting either inflected infinitival (-*anne* and -*enne*) or present participial (-*ande* and -*ende*) forms. As seen in Figures 4 and 5 above, both the inflected infinitive and the present participle categories are the ones where the loss of the formative is more evidently witnessed. Out of the total 223 tokens, ninety-three feature a back inflectional vowel and 130 forms feature a front inflectional vowel. Eighty-two instances containing a back inflectional vowel lose the formative (88%) and eleven retain it (12%). There is a slightly lower rate of loss of the formative in those tokens containing a front inflectional vowel (130 in total): eighty-eight forms lose the formative (68%) and forty-two retain it (32%). In terms of distribution across morphosyntactic categories, these 223 forms are divided as follows: thirty-eight are inflected infinitives, twenty-nine of which lose the formative (76%), and 185 present participial forms, 141 of which lose the formative (76%).

A further interference effect is felt here, for the rate of the loss of the formative in these highly innovative categories is dependent on another contributing factor. This factor is etymological class, labelled Node 7 in Figure 9. The data are very clear that loss of the -i- formative is more widely spread in verbs which are originally weak class 2 verbs, as opposed to in those verbs which have been transferred by analogy from the first and third weak conjugations (cf. section 2.5.). The distribution is as follows: there are a total of 172 original weak class 2 verbs attesting inflected infinitive and present participle forms; only fourteen of them retain the formative (8%) and 158 lose it (92%). The difference is stark when it comes to transferrals from the other two weak conjugations. A total of fifty-one inflected infinitives and present participle forms in the dataset attest verbs transferred from the first and third weak conjugation (five from the first and forty-six from the third class); only twelve of them lose the formative (24%), as opposed to thirty-nine which keep it (76%). These fifty-one forms attest ten inflected infinitives (seven formativeless and three which maintain it, that is, 70% and 30%, respectively), and forty-one present participle forms, five of which lose the formative (12%) and thirty-six keep it (88%). These forty-one present participle forms deserve further comment, since it is curious that, in such an innovative category like the present participle, formatives are very actively retained. This is due to the combinative effects of the fourth factor, namely etymological class, with the last two secondary factors

identified as statistically relevant in Figure 9. These secondary factors are concerned with the nature of the consonants preceding the -i- formative, namely their manner and place of articulation. These are labelled as Nodes 10 and 12, respectively, in Figure 9. Liquids consonants (/r/ and /w/ in the dataset) tend to favour the loss of the formative: four tokens lose the formative (57%) whereas three keep it (43%).[77] Fricatives (/f/) and nasals (/m/ and /n/) behave in the opposite manner, since they overwhelmingly favour the retention of the formative in present participles. There are thirty-four such forms, seventeen fricatives which retain the formative (100% retention rate) and seventeen nasals where only one form loses the formative (*scomende* 'shaming', perhaps conditioned by the previous verb *sittende* 'sitting'). It should be mentioned that fifteen of the seventeen nasals attest verbs ending in /n/, and two in /m/. One of these two instances is *scomende*, the only present participle form in this sub-partitioning which loses the formative. The other present participle form ending in /m/ here attests *wirmian* 'keep warm' and maintains the formative (*wærmigende*). This very slight variation within the nasals, where present participles ending in /n/ within this sub-category fully retain the formative as opposed to the minimal variation in present participles ending in /m/ justifies the last partitioning, leading to the last relevant contributing factor: place of articulation of the consonant preceding the -i- formative (Node 12). Thus, within the nasals, alveolar nasals (/n/) all retain the formative, while labial nasals (/m/) show minimal variation (cf. *scomende* and *wærmigende*). However, nearly all forms within this final sub-partitioning retain the formative (thirty-three of thirty-four forms – see Nodes 13 and 14). Therefore, this variation is minimal and not very statistically significant. This is, indeed, fully recognised by the inference tree model, since it is the last factor to be considered as relevant. Thus, it affects a relatively small pool of verbal tokens, and therefore, its effects on the loss of the -i- formative are very weakly felt.

[77] /r/ and /w/ are classified as liquids by Hogg (2011: 246), who also labels them approximants. /l/ and /j/ also belong to this group. Minkova (2014: 85) classifies /w, r, j/ as central approximants and /l/ as lateral approximant.

5.4. Summary

This chapter has presented the results obtained from the various statistical analyses run on the data. The first test was carried out in order to ascertain whether the internal variation seen in Lindisfarne, specifically the lower incidence of -i- formative deletion in John, was statistically significant. Whereas the greater variation in Lindisfarne is recognised (for which see also section 7.2.), the difference presented by John was not statistically significant. John, however, remains the most conservative gospel in my data.

In terms of the loss of the -i- formative in weak class 2 verbs, three separate regression analyses were run, one per dataset, and the results in the form of inference trees were presented in Figures 7 to 9. Figure 7, drawing on the Lindisfarne data, presents considerable structural complexity, with two primary and four secondary factors selected as statistically significant. Figure 8 reflecting the Rushworth[2] dataset contains two primary contributing factors and one secondary one (reduplication of one of the primary factors), resulting in a much simpler tree. Figure 9 is a combination of both previous trees and, as a result, presents considerable complexity. This complexity is due to the model's reliance on the Lindisfarne data which are more numerous and varied in nature. Figure 9 is the more informative tree in relation to the overall deletion process of the -i- formative in weak class 2 verbs in the Northumbrian glosses, thus it has been dissected in detail above. Three primary factors emerge as most significant, namely morphosyntactic category, structure of the inflectional ending (i.e. type of inflectional vowel) and etymological class. These three primary factors are discussed at length in section 6.2. Figure 9 also features three secondary factors which are conditioning the loss of the -i- formative but to a lesser degree: type of stem vowel, a particular split of morphosyntactic category, and the nature of the consonants preceding the -i- formative. Due to their more secondary nature and mixed results in this process, these secondary factors, when distinct from the primary ones, are not covered in the following chapter because they are not as informative to the process of -i- formative deletion as the primary ones.

Chapter 6

Discussion

6.1. Introduction

The application of regression analyses on the Lindisfarne, Rushworth[2] and the combined datasets resulted in the three inference trees (Figures 7 to 9) found in section 5.3. These trees clearly indicate which independent variables were selected by the model as statistically significant for the process of -i- formative deletion in weak class 2 verbs. In light of these results, the aims of the present chapter are twofold: first of all, this chapter aims to provide a discussion of the main factors contributing to the loss of the -i- formative in weak class 2 verbs, so that the relevance of and role played by each of these major factors are understood. This will be the focus of section 6.2. Secondly, this chapter also engages with wider theoretical considerations of linguistic change which are regarded as responsible for the ultimate restructuring of the morphology of weak class 2 verbs. In order to address key issues in language change such as why linguistic change happens and how it happens – important considerations for this thesis – the present chapter revolves also around key notions such as actuation of change and implementation of change, addressed in section 6.3. With regard to the actuation phase of linguistic change (section 6.3.1.), recourse will be made to analogical forces as providing the impetus for change, in particular the mechanism known as paradigm levelling (cf. section 3.2.). The mechanism behind the implementation of the change is presented in section 6.3.2., and it involves the process known as lexical diffusion.

In order to ensure that the following discussion is properly understood, it is important to include a reminder about some terminology used throughout this chapter, and already mentioned in the previous paragraph. This point refers to the use of terms such as actuation and implementation of linguistic change. These notions were already introduced and explained in section 3.1., as well as the rationale for using them in this thesis. In short, these two terms refer to specific phases of linguistic change as put forward by Labov (1965) and Weinreich et al. (1968). The actuation phase represents the first phase of the change, whereas the implementation phase is the third phase. Within the context of this thesis, these phases are turned into questions, which are: what are the causes behind the loss of the -i- formative in weak

class 2 verbs? In other words: why does this change take place? These questions are linked to the actuation phase. In terms of the implementation phase, the following question is proposed: how does the loss of the -i- formative spread in the language? The answers to these questions form the core of the present chapter.

Finally, before discussing the factors which contribute to the loss of the -i- formative and their relevance within the overall restructuring process, it is worth emphasising the level of variation seen in Figures 7 to 9. It is clear that the layout of the trees is rather different depending on which dataset has informed which tree. For instance, for the Lindisfarne tree (Figure 7), two primary independent variables were identified as statistically significant, namely morphosyntactic category and type of inflectional vowel, while three secondary factors were identified as less significant, but still exerting an influence on the loss of the -i- formative: type of stem vowel, place of articulation of the consonant in the inflectional ending, and weight of the verbal stem.[78] For the Rushworth^2 tree (Figure 8), only two primary factors resulted statistically significant: morphosyntactic category and etymological class. The one factor selected as exerting a smaller influence on the loss of the formative is, in fact, one of the same factors selected as most influential in Figures 7 and 8, that is, morphosyntactic category. It is safe to say, then, that only two factors seem to be conditioning the loss of the formative in the Rushworth^2 dataset. The most complex tree is provided by the combined dataset, namely Figure 9. This situation is hardly surprising, since the tree encapsulates the complexity of the combined dataset. Here, three main, primary factors are the most influential, namely morphosyntactic category, type of inflectional vowel and etymological class, while three other (secondary) factors are less influential, although still significant: type of stem vowel, manner, and place of articulation of the consonant in the inflectional ending. In terms of layout and structural complexity, Figure 9 sits in between the other two trees, but it bears a closer resemblance to the Lindisfarne tree (Figure 7) than to the Rushworth^2 one (Figure 8).

As already established in the previous chapter, more tokens were collected from Lindisfarne (542 tokens) than from Rushworth^2 (306 tokens – see section 5.2. for a

[78] It is worth emphasising once again that the structure of the trees is hierarchical. The conditional inference tree model selects relevant conditioning factors and orders them from more to less relevant in a hierarchical, top to bottom branching fashion. The most relevant factors are given as head nodes high in the tree, and secondary contributing factors are displayed as branching out (and downwards) from each of these head nodes (cf. section 5.3.).

detailed explanation). This numeric dominance partly explains why factors in Figure 9 are distributed similarly to those in Figure 7, because the majority of tokens found in the combined dataset come from Lindisfarne. To this point should be added that conditional inference models are data-sensitive, thus the predominance of the Lindisfarne data can be explained by virtue of the sheer number of overall tokens which derive from this dataset.

A further aspect informing the structural complexity seen in Figure 9 and, to an extent, in Figure 7 is the fact that the language of Lindisfarne presents much more variation than the language of Rushworth^2. This is a crucial point covered further in section 7.2., but it is important to mention it here as well, since the linguistic variation found in Lindisfarne partly explains the complex, multi-branching structure of Figure 9. Lindisfarne's scribe, Aldred, is not very consistent in his morphological choices, purely because he embraces linguistic variation (either stemming from his various sources, his dialect/idiolect, or both) and is willing to provide several variants for the same element, whether it is the spelling of the root of a word (cf. Brunner 1947-1948), the realisation of morphological and syntactic categories (cf. Cole 2014, Cole 2016, Millar 2016, Walkden 2016, Costa Rivas 2020, Ramírez Pérez 2020, Rodriguez Ledesma 2022), or the rendering of Latin lemmas (cf. Pons-Sanz 2004 and Pons-Sanz 2013 for Norse-derived terms alongside native Old English ones, Pons-Sanz 2016 for double, multiple and unfinished glosses for single Latin lemmata). In the context of this thesis, linguistic variation was evident on many different levels: rates of formative deletion versus formative retention, surface realisation of the -i- formative, rates of transferred verbs from other weak classes, etcetera. It is the combination of linguistic variation and scribal inconsistency as seen primarily in Lindisfarne which resulted in a much more varied and complex dataset, especially when compared to the Rushworth^2 one, which is considerably much more regular.

One final aspect must be briefly mentioned here in relation to the overall layout of the trees. This aspect refers to the level of implementation of the loss of the -i- formative in weak class 2 verbs. As is argued and explained in the following sections, it is Lindisfarne that displays a more advanced stage of phonological and morphological reduction, a fact that explains why the loss of the -i- formative is attested more robustly there, and why there are more principal and secondary factors interacting with the loss. Rushworth^2, on the other hand, clearly represents the initial stages of the linguistic change, thus why very few factors are contributing to the loss

of the -i- formative. As the change advances and implements itself in the language, it affects more and more tokens and morphosyntactic categories and, therefore, it becomes conditioned by a growing number of factors and environments, as depicted in both the Lindisfarne and combined data trees (Figures 7 and 9). Despite the marked differences among the trees, there are also important shared similarities, which are explored in the following section.

6.2. Factors conditioning the loss of the -i- formative: discussion and justification

The introductory section above has highlighted the marked structural disparity which exists among the three trees presented in chapter 5, and has provided a number of justifications for such disparity. Despite the different layouts, selection, and distribution of factors in the trees, it is clear that there are three main factors which exert the most influence on the loss of the -i- formative. These are the three factors selected as statistically significant in Figure 9, which, in turn, also feature as relevant in Figures 7 and 8. In hierarchical terms, these factors are morphosyntactic category, type of inflectional vowel and etymological class (head nodes 1, 3 and 7, respectively, on Figure 9). In the discussion that follows, each of these primary factors is addressed individually, as they are the more informative in relation to the process of -i- formative deletion. Where relevant, recourse is made to other contributing and interfering factors such as type and token frequency. This is due to the fact that these factors are seen to interact with one another, and this interaction and its effects also account for the results presented in chapter 5. Since the present discussion only addresses the primary factors proven to be statistically significant as given in Figure 9, Figure 10 below offers a more concise path to the loss of the -i- formative which is more fitting to the present discussion.[79]

[79] I am indebted to my student Juno Balder (Leiden University) for producing the graph given in Figure 10.

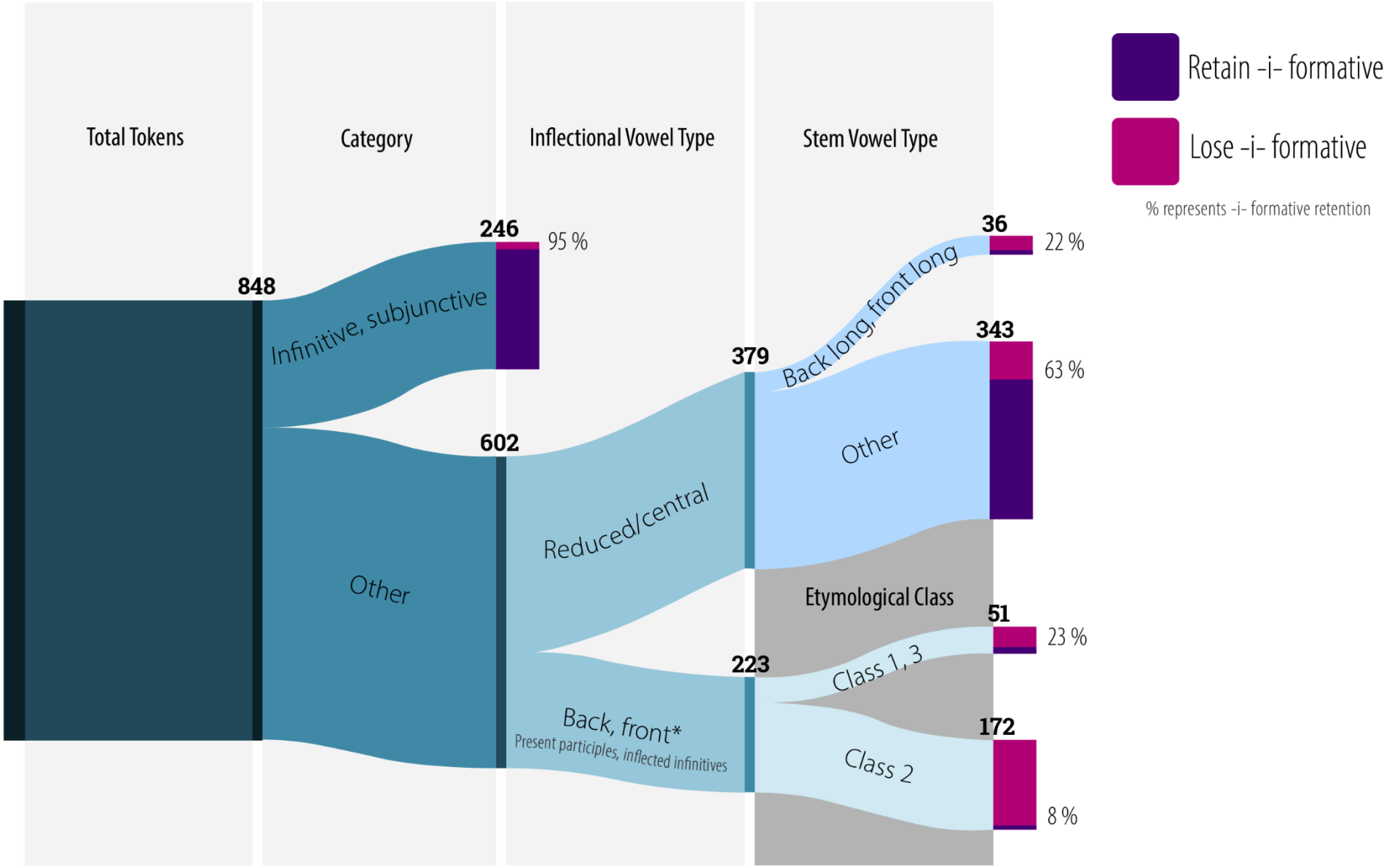

Figure 10. Loss of the -i- formative in weak class 2 verbs as conditioned by the three primary contributing factors

6.2.1. Morphosyntactic category and structure of the inflectional endings

The first element selected as statistically significant in each of the three conditional inference trees is morphosyntactic category. Being the first and highest of all the factors in the trees, it is also the one which conditions the incidence of the -i- formative the most. As presented in Figures 4 and 5 in section 5.2. above, it was evident that, in both the Lindisfarne and Rushworth[2] datasets, there were certain categories which favoured the retention of the -i- formative, others tended to favour the loss of the formative, while others presented a more intermediate stage of the loss of the formative. Within this first classification, that is, the most conservative categories, one finds the singular present subjunctive, with 14% of total forms attested formativeless (four out of twenty-nine); the infinitive, with 4% of formativeless forms (seven out of 196), and the plural present subjunctive which only attests forms which retain the formative (twenty-one total forms). The categories where the loss of the formative is felt the most are the inflected infinitives, with 76% of all total attested forms being formativeless (thirty out of thirty-nine), and the present participles, where 76% of all forms are formativeless, too (142 out of 186).[80] Finally, the intermediate categories, where neither the presence nor the loss of the formative is robustly attested, are the first person singular present indicative (51% of formativeless forms, that is, forty out of seventy-eight), the imperative plural (43% of formativeless forms, that is, thirty-seven out of eighty-six) and the plural present indicative (36% of formativeless forms, that is, seventy-seven out of 213). These figures and percentages clearly highlight the fact that the loss of the -i- formative in weak class 2 verbs is very much a change in progress in Northumbrian, since not all categories are equally affected by the morphological reduction, nor has the loss reached its completion. This rather neat picture of the distribution of the formative is, in fact, a much more complex process, and in order to account for the varying distribution of the formative across categories, it is necessary to also include in this discussion the second contributing factor, namely structure of the inflectional endings. The reason behind this decision lies in the fact that, as mentioned in the previous lines, factors interact with one another. In this particular case, it is the different levels of morphological complexity which each of the

[80] Both Ross (1937: 145-146) and Campbell (1959: 333) already noted the almost categorical loss of the -i- formative in these two categories in Northumbrian.

inflectional endings displayed that conditioned the incidence of the -i- formative across categories.

When dissecting Figure 9 in section 5.3., it was seen how the fate of the -i- formative differed depending on the type of inflectional vowel categories had (under Node 3). On the one hand, verbs which featured a reduced (central) vowel showed differing rates of -i- formative deletion, a circumstance exacerbated by the fact that these verbs were further conditioned by the secondary factor type of root vowel. On the other hand, verbs with a full inflectional vowel (either back or front) displayed a much more even distribution of the -i- formative.

It should be remembered from section 4.2. that the classification of inflectional vowels as reduced or full was a direct consequence of the morphological complexity of the inflectional endings in all the morphosyntactic categories explored in this thesis. Thus, categories such as the infinitive, subjunctives, first person singular present indicative, plural present indicative and imperative plural were classified as having reduced inflectional vowels due to the nature of their inflectional endings.[81] The first three categories listed featured a single vowel as ending, mainly <a, e, o> in my dataset. The other two categories had slightly more complex and, therefore, phonologically salient endings by virtue of the final consonant: *-að*, *-as*, *-eð*, *-es*. Despite slight differences in salience, all the aforementioned categories displayed reduced inflectional vowels given the gradual loss of phonological distinction of these vowels as attested in the late Old English period. There are only two categories in my data which were classified as containing full inflectional vowels (either back or front), namely the present participles and inflected infinitives. Their full inflectional vowels are justified by the fact that they display a rather complex (disyllabic) inflectional ending which bore secondary stress (Campbell 1959: 333): *-ande, -ende, -anne* and *-enne*.[82] In Figure 9, these two categories are given under Node 3, where it is clear that the majority of forms attested (76%) are formativeless. At first glance, it might seem contradictory that such an opposing set of vowels in terms of place of articulation (i.e.

[81] Infinitives ended in /n/ in Old English. Northumbrian, however, displays early loss of this consonant (cf. section 2.2.). This fact accelerates the weakening of inflectional vowels which are, as a result, more exposed and prone to reduction since they are less phonologically salient (cf. 3.2.1.b.).

[82] Other scholars offer a different label for this stress, hence Minkova (2014: 286) opts for non-primary stress while Hogg and Fulk (2011: 282) choose tertiary stress.

the places they occupy in the vowel quadrilateral) behave in the same manner, that is, favouring the loss of the -i- formative. In terms of verbal morphology, grammars have noted that, in cases of vowel deletion via syncope, a fronted inflectional vowel was more prone to deletion than a back inflectional vowel. The two categories more prone to undergo syncope were the second and third person singular present indicative. Thus, it is interesting to note that weak class 2 verbs did not usually show syncopation of inflectional vowels (-*ast* and -*að* endings, respectively), whereas both strong and weak class 1 verbs are attested with syncopation of inflectional vowels (-*est* resulting in -*st* and -*eð* resulting in simply -*ð*)(Campbell 1959: 300-302, 324).[83] It has been suggested that the reason why inflectional vowels were not syncopated in these categories in weak class 2 verbs is because the vowel found in these verbs, namely <a>, was perceived as less weak than <e>, the vowel found in the other verbal conjugations (Laing 2009: 247). Given this additional evidence, the behaviour visible under Node 3 in Figure 9, where both back and front vowels lead to overwhelming loss (syncopation) of the -i- formative, could be difficult to reconcile. However, the reason why the -i- formative is overwhelmingly lost in these two categories lies not in the nature of the inflectional vowels, but of the whole inflectional endings, as explained in the following paragraphs.

My data indicate that the difference in morphological complexity and phonological salience of the inflectional endings in the categories analysed by this thesis is responsible for the different distribution of the -i- formative in these morphosyntactic categories. The following discussion addresses the more innovative categories through to the more conservative ones.

It has been noted that the two most innovative categories, namely the inflected infinitives and the present participles, display the most morphologically complex and phonologically salient inflectional endings by virtue of their disyllabic inflectional endings (-*ande, -ende, -anne* and -*enne*) which bore secondary stress. Thus, given that the verbal root bore the main stress and the inflectional endings bore secondary stress, the medial -i- formative was more prone to syncope, as can be clearly seen in my data. Out of all the present participial (n=186) and inflected infinitives forms (n=39)

[83] Although Northern texts very consistently retain all these inflectional vowels, irrespective of whether they are front of back vowels (Campbell 1959: 300-302, 324). This statement is fully supported by my data, where only two forms, discussed below, have a syncopated inflectional vowel.

collected, 76% of them are attested formativeless. My data once again demonstrate that the process of syncopation resulting in -i- formative deletion was a change in progress in Northumbrian, since not even in the more innovative categories was the -i- formative completely lost.

The next two morphosyntactic categories explored, namely the plural present indicative and the imperative plural, are those which displayed considerably morphologically complex and phonologically salient inflectional endings, namely *-að*, *-as*, *-eð*, *-es*. It should be noted that these endings were monosyllabic but bimoric, that is, they contained two elements which occupied a mora each, namely the vowel and the final consonant. These categories with their intermediate inflectional endings in terms of morphological complexity and phonological weight display as a result an intermediate level of -i- formative deletion. Thus, the plural present indicative category displayed 36% of formativeless forms while the imperative plural did so by 43%. Such intermediate level of formative loss reveals an interesting detail about the interaction between morphemes, in this case between the -i- formative and the inflectional endings of the two categories under study. It was established as early as in section 4.2. that the -i- formative was an element which bore light stress. Therefore, in the tug of war of disappearance via phonological syncope, both elements (-i- formative and the inflectional endings, particularly the vowels) had considerably high chances of disappearing. However, my data are unequivocal about the fact that variation is exclusively found in terms of presence or absence of the -i- formative in these categories, as it was mentioned in the previous lines that weak class 2 verbs very consistently retained their inflectional vowels in the present indicative system, as well as in the imperative. This observation is fully supported by my data, since not a single form within the two relevant categories was found with loss of inflectional vowel. As argued in section 6.3. below, the loss of the -i- formative is mainly an analogically driven morphological phenomenon, but one which interacts with and is conditioned by other phenomena, such as the weight of inflectional endings.

Finally, the more conservative morphosyntactic categories in my dataset are those whose inflectional endings had a single vowel, namely the singular and plural present subjunctives and the infinitives. The fact that the vocalic endings in these categories are barely salient explains why the -i- formative is overwhelmingly retained. As a result, no formativeless forms are recorded for the plural present subjunctive in my dataset, while only 14% such cases are found in the singular present subjunctive

and 4% in the infinitives. Before concluding this sub-section, it must be remembered that there is one more morphosyntactic category ending in an inflectional vowel, namely the first singular present indicative. Given its vocalic inflectional ending, it would be expected that this category displayed a fairly low rate of -i- formative deletion. However, this is not the case, since slightly over half of collected tokens are formativeless (51%). In this respect, this category behaves like the intermediate categories covered earlier in this sub-section, namely the present plural indicative and imperative plural. While, a priori, this state of affairs might seem at odds with the general trend of categories ending in an inflectional vowel, it must be remembered once again that the loss of the -i- formative is an analogically-driven process. As such, the first singular present indicative category is succumbing to the analogical pressures also felt by the rest of the categories in the present system, resulting in faster rates of formative deletion at than the subjunctives and infinitives.

6.2.2. Etymological class

The regression analyses presented in 5.3. indicated that etymological class was the third and last primary conditioning factor when it came to the loss of the -i- formative (see Figure 10 and Node 7 in Figure 9). The correlation between etymological class and the differing rates of -i- formative deletion is explored in detail in this section.

It was already mentioned in the methodology chapter (section 4.3.1.b.) that my dataset included verbs which were etymologically weak class 2 as well as verbs which had been transferred from other conjugations. My dataset includes mainly weak class 2 verbs, but also a number of transferred verbs original from the other two historical weak conjugations, namely weak classes 1 and 3 verbs, as well as one original strong class 6 verb: *swerian* ‘swear’.

Grammars and individual studies of Old English weak verbs recognise the transferral of etymological weak class 1 and class 3 verbs into the second weak conjugation (see section 2.5. for a detailed account). This gradual transferral of verbs took place in different periods for weak class 1 verbs and class 3 ones, but it starts to be attested more robustly from the late Old English period. In attracting members of the other weak classes, the second weak conjugation constitutes the dominant and productive class from a synchronic perspective. Such morphological productivity is linked to the higher type frequency this class had (cf. section 3.2.1.a.), which is, in

turn, the result of its considerable paradigmatic stability and uniformity (cf. section 2.5.).

My data support the generally held view that innovative weak class 1 and weak class 3 verbs arose by analogy with weak class 2 verbs, the category which was synchronically the most stable and productive conjugation. As it will be shown in detail in the following paragraphs, my data demonstrate one step further in the analogical reformation of non-etymological weak class 2 verbs. This innovative development attested in my data is the appearance of reconstructed verbs evidencing loss of the -i- formative, just like original weak class 2 verbs do, although, most significantly, the rate at which original weak class 2 verbs lose the formative is much faster and much more evident than in non-etymological weak class 2 verbs, a state of affairs which is accounted for below in section 6.3.

Table 8 includes all the transferred verbs in my dataset and indicates which conjugation they etymologically attest.

Verb	Etymological class	Total tokens
a-feorrian	weak 1	2
andspurnian	weak 3	4
andswarian	weak 1	7
bifian	weak 3	2
bysmorian	weak 3	6
cnyllian	weak 1	1
for-losian	weak 3	1
gefēoġan	weak 3	2
giwian	weak 3	30
hlinian	weak 3	13
hyngrian	weak 1	1
leornian	weak 3	5
lifian	weak 3	30
losian	weak 3	38
mǣnian	weak 1	1
sceamian	weak 3	5
smirian	weak 1	2

strēonian	weak 1	1
swerian	strong 6	1
timbrian	weak 1	2
trymian	weak 1	1
un-trymmian[84]	weak 1	1
wirmian	weak 1	1
wunian	weak 3	48
þolian	weak 3	14

Table 8. Verbs transferred to the weak class 2 conjugation from other conjugations as attested in the glosses to the Northumbrian gospels

As is clear from Table 8, the most widely attested verbs in my data are original weak class 3 verbs such as *giwian* 'ask for', *losian* 'die' or *wunian* 'stay'. What is most remarkable about the verbs displayed in the table above is the fact that, by and large, they resist the loss of the -i- formative. The difference in behaviour is more evident if these verbs are compared with original weak class 2 verbs, and the rates in which the -i- formative is lost in these two etymological groups. The graphs below represent the distinctive behaviour of transferred verbs.

[84] *Un-trymmian* 'ail' is given in this thesis based on the infinitive *un-trymmia* found in LkGl (Li) 15.14. As detailed section 2.5. regarding the characteristics of weak class 1 verbs which were transferred to the weak class 2 conjugation, verbs ending in a geminate were prone to this restructuring and resurfaced as weak class 2 verbs with the -i- formative in place of the geminated consonant. For instance, *tryman* 'construct' turning into *trymian*. However, the verb attested in Lindisfarne displays both the geminated consonant and the -i- formative. There is reason to believe that this geminate is, in fact, not a phonological geminate. First of all, weak class 2 verbs do not end in geminated consonants, and evidence shared in section 2.5. from other reconstructed verbs formed by an etymological weak class 1 verb supports this claim (cf. *fremman* 'do' resurfacing as *fremian*; *aðennan* 'stretch out' as *aðenian*, etc). Secondly, as mentioned previously in section 4.3.1.a., Lindisfarne's scribe Aldred shows a tendency to orthographically mark a preceding short vowel by doubling the following consonant, and I believe *un-trymmia* represents such a case. After all, the root vowel in the original *trymman* was indeed short. Variation being one of the key characteristics of the language in Lindisfarne, it is not surprising to find other similar forms with a single consonant instead, as the plural present indicative form *getrymies*, found in JnGl (Li) 15.27, demonstrates.

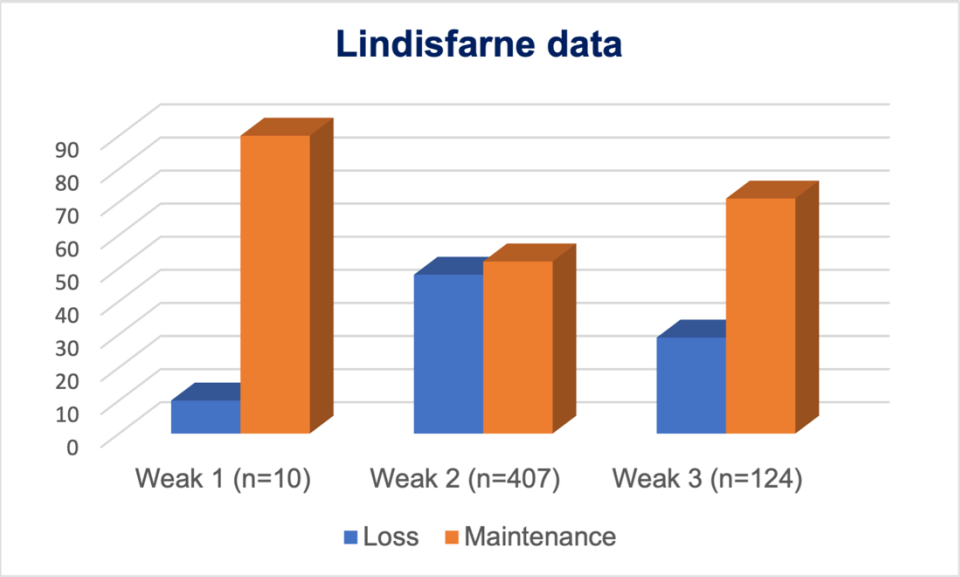

Figure 11. Rate of -i- formative loss in the three weak verbal classes based on the Lindisfarne dataset

Figure 11 clearly demonstrates that original weak class 2 verbs attest a more evident rate of -i- formative deletion than transferred verbs. For Lindisfarne, a total of 407 original weak class 2 verbs were collected, and nearly half of these forms are already attested formativeless (48%). For the transferred verbs, the rate of -i- formative deletion is much lower. This can specially be seen in the category of original weak class 3 verbs, the most widely attested of the two transferred categories, where out of the 124 forms collected, only 29% lose the formative.

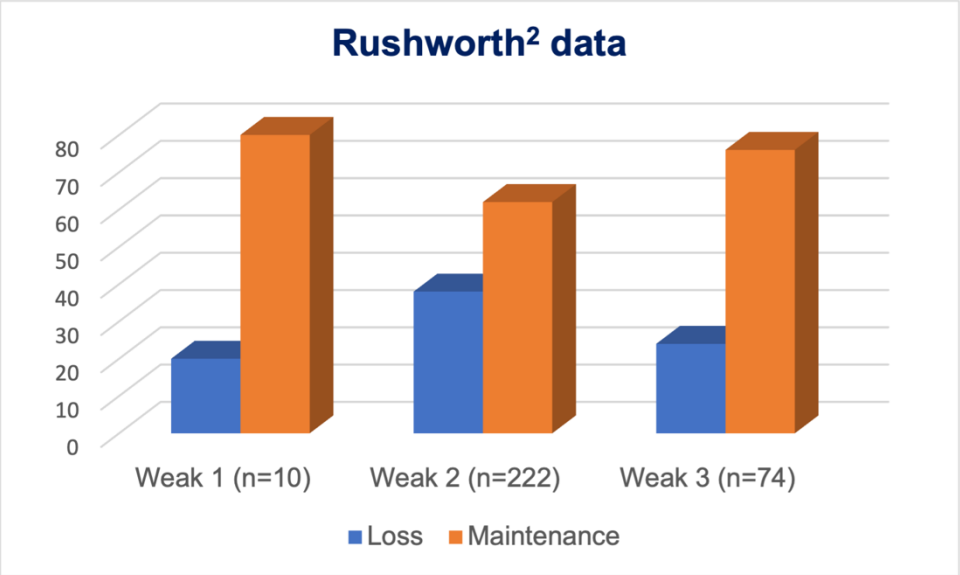

Figure 12. Rate of -i- formative loss in the three weak verbal classes based on the Rushworth^2 dataset

The Rushworth^2 dataset displays a similar scenario: the loss of the -i- formative is felt more strongly in original weak class 2 verbs than in the transferred verbs. Transferred verbs once again arise as more resistant to the loss of the formative. Although fewer forms were collected for Rushworth^2 than for Lindisfarne (see section 5.2. for a justification), it is evident that the great majority of original weak class 3 verbs are attested retaining the -i- formative (76% of the forms). The Rushworth^2 dataset reflects yet again the more conservative nature of this text. It was already mentioned at the beginning of this chapter that fewer weak class 2 verbs were attested formativeless in Rushworth^2 than in Lindisfarne. But the same is true for original weak class 3 verbs, where more of these verbs retain the -i- formative in Rushworth^2 (76%) than in Lindisfarne (70%). The relative conservatism of Rushworth^2 and the apparent more advanced nature of the language in Lindisfarne are explained in section 6.3.

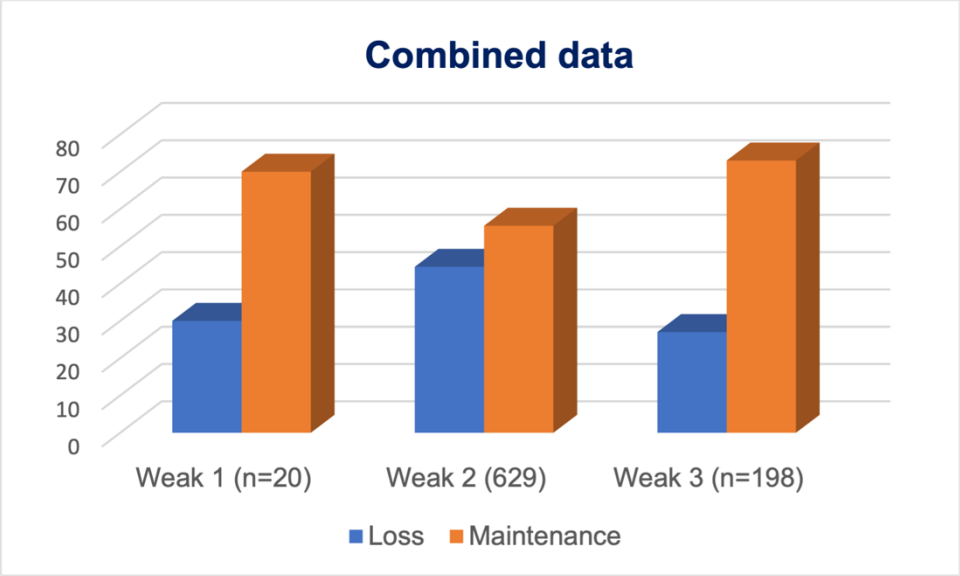

Figure 13. Rate of -i- formative loss in the three weak verbal classes based on the combined dataset

Finally, the combined dataset reflects all the trends already established. Despite the slightly more innovative nature of the Lindisfarne data when it comes to the morphology of transferred verbs, it can be seen that transferred verbs are, in comparison, more conservative than original weak class 2 verbs, in the sense that they attest fewer forms with loss of the -i- formative. Within original weak class 3 verbs, a very well attested etymological class in my datasets, the loss of the -i- formative is very lightly felt, since only 27% of all the collected forms are attested formativeless.

These few formativeless forms appear across the board, but mainly in categories which display an intermediate stage in the deletion process, namely the first person singular present indicative (twelve tokens), plural present indicative (seventeen tokens) and the imperative plural (twelve tokens). There are very few formativeless transferred verbs even in the two most innovative categories in my dataset: six inflected infinitives and four present participles. These low figures clearly demonstrate that in the correlation between morphosyntactic category and etymological class, etymological class emerges as the most robust factor. This is because, even in the categories more prone to the deletion of the -i- formative (due to the structure of their complex inflectional endings, cf. section 6.2.1.), transferred verbs (and weak class 3 verbs in particular, due to the higher number of attestations) are clearly retaining the formative at a much higher rate. Interestingly, there are three formativeless weak class 3 verbs in one of the most conservative categories in my dataset, namely the singular present subjunctive, a detail which is also accounted for in section 6.3. Compare the relative low rate of -i- formative deletion in weak class 3 verbs to the figures for weak class 2 verbs only in Figure 13 above: nearly half of the 629 verbs collected (44,5%) have already lost the -i- formative. The conservative nature of these transferred verbs is further addressed and justified in section 6.3. below. Another feature of these transferred verbs which is clearly attested in my dataset is their relative high token frequency, that is, some of the transferred verbs are amongst the most frequently occurring verbs in my dataset. It was stated in section 3.2.1. that high token frequency items tended to retain the etymological morphology more readily and better resist the effects of any restructuring (analogical) pressures (i.e. conserving effect of high token frequency). The correlation between linguistic conservatism and high token frequency is explored in the following section on the basis of the data collected for this thesis.

6.2.3. Frequency

The notion of frequency of occurrence was already briefly mentioned in section 2.4.2. and in much more detail in section 3.2.1., where it was established that frequency plays a key role in processes of linguistic change. Frequency can refer to both type and token frequency. Type frequency denotes the frequency of a particular pattern, for example, the frequency of a particular inflectional ending, stem plus inflection alternation or morphosyntactic category. In morphological terms, type frequency is

highly connected to markedness, salience, and productivity (cf. section 3.2.). Patterns with high type frequency typically provide the morphological bases analogically extended to unetymological environments. The opposite of what has just been explained is true for low type frequency patterns. As explained in section 3.2.1., the cognitive underpinning for such behaviour is rooted in the notions of repetition (i.e. frequency), accessibility, and entrenchment. In the context of the present thesis, the notion of type frequency becomes relevant when discussing the simultaneous and competing analogical processes affecting the paradigm of weak class 2 verbs. One of the main points made in section 6.3.1. below argues that the analogical process which was getting rid of allomorphic variation in the paradigm of weak class 2 verbs seems to emerge victorious because of the higher type frequency of the stem variant which carried no -i- formative. In the broader context of the weak verbal system as a whole, the higher type frequency which weak class 2 verbs benefitted from also explains their productivity as a conjugation type, attracting verbs originally belonging to the other two weak classes (see sections 2.5. and 6.3.1.).

Token frequency is also a relevant, explanatory concept for the present thesis. Token frequency refers to the frequency of a particular word in running text. Token frequency has three well-known effects in the language: one phonological and two morphological. The first effect, labelled the reducing effect of high token frequency, explains why high frequency items tend to be shortened phonologically. This process entails the loss of clear phonological distinction by means of a reduced placement of stress, a behaviour which is physiologically and cognitively justified. For the repetition involved in the neuromotor production of high token frequency items leads to a laxation in articulatory gestures (leading to loss of phonological distinction) and, at the same time, it registers cognitively as a single unit. As mentioned in section 3.2.1.b., a clear example is the cliticization of negative particles which, due to their high frequency and associated reduced phonological distinction and stress, attach to auxiliaries and modals. The resulting cliticized items are cognitively accesses as single units. In terms of the data collected for the present thesis, the reducing effects which high token frequency has on weak class 2 verbs is discussed in the context of two individual lexical items, namely *clipian* ‘call’ and *lufian* ‘love’ (see section 6.2.4.). On the morphological plane, high token frequency has one main effect, namely the preservation of original features. On a very extreme scale, high token frequency can result in items displaying very idiosyncratic features which do not align with the general

grammar and are, thus, consider irregularities from a synchronic perspective. Such items are usually described as displaying lexical autonomy. The peculiar characteristics of modal verbs in English is one such example of lexical autonomy and extreme morphological conservatism stemming from their high token frequency. High token frequency has generally a less extreme conserving effect. The link between high token frequency and conservatism is once again rooted in cognitive notions such as entrenchment and accessibility. The repetition involved in producing high token frequency items cements their structure deep in the lexicon (deep level entrenchment). Such deep level of entrenchment results in a much faster accessibility and production as a single unit (cf. section 3.2.1.b.).

High token frequency is proven to be a very relevant factor in the overall fate of the -i- formative in weak class 2 verbs, as explained in the immediate discussion. In line with theoretical assumptions, highly frequent weak class 2 verbs retain the -i- formative much more readily than low token frequency verbs. In the context of the results obtained by this thesis, the effects of frequency of occurrence are visible both on the phonological and morphological make up of weak class 2 verbs. It was already stated in section 5.3. that some morphosyntactic categories are more conservative, since they display a higher rate of -i- formative retention. The most extreme case of conservatism in the dataset is exemplified by the following categories: the plural present subjunctive, where all forms retain the formative; the infinitives, with 96% of the forms retaining the formative; and the singular present subjunctive, with 86% retention rate. It should be noted that the number of tokens attested for each of these categories is markedly different. The infinitival category, for instance, includes 196 tokens, whereas the subjunctives reach a total number of fifty tokens (twenty-one in the plural and twenty-nine in the singular). Despite these differences in terms of the tokens of data collected, close inspection of these data revealed a correlation between high token frequency verbs and the retention of the -i- formative, which is more robustly attested in the three aforementioned categories. Before exploring this correlation and its effects on the results presented in chapter 5, it should be made clear that the classification of verbs into high (and low) token frequency groups is carried out differently from analysis to analysis, and it is strictly bound to the nature and quantity of the data collected. This lack of uniformity in the methodology of frequency analyses stemming from the difficulty to establish a low frequency and high frequency boundary has been recognised as an “inherent problem” in usage-based models (Bybee 2007:

16). Table 9 below displays the most frequently occurring verbs collected for this thesis (in number of tokens) alongside the approximate total number of attested forms for each verb in the DOEC.

The first detail to bear in mind is that the most frequently occurring verbs in the combined dataset are *lufian* 'love' and *wunian* 'stay', with forty-nine and forty-eight total tokens, respectively. Although these figures are not very high, particularly when compared to the total attested forms for these verbs in the DOEC, that is, approximately 1400 per verb, they are in proportion with the overall number of tokens attested for the thesis, namely 848. Thus, the total number of forms attested for *lufian* represents the 5.7% of the data collected. The fact that some of these verbs are highly frequent in the present dataset is best explained by considering the text type of the data sources. Given that the two texts analysed by this thesis are of a religious nature, and Christian in particular, that explains why the most frequently used verb is *lufian* 'love'. The same logic follows for other verbs such as *losian* 'die', *bodian* 'preach', *gefēaġan* 'rejoy', *gefulwian* 'baptize' or *miltsian* 'have mercy'. The final aspect reflected in the table below worth emphasising refers to the correlation between the total number of forms in the combined dataset and the DOEC. With the notable exception of *giwian* 'ask for', *clipian* 'call' and *smēaġan* 'consider', the highest frequencies in the combined dataset correspond in general to the highest frequencies as given in the corpus, and vice versa.

Verb	**Total tokens collected**	**DOEC (approx.)**
lufian	49 (26)	1400
wunian	48 (16)	1400
losian	38 (10)	350
bodian	36 (11)	850
lifian	30 (4)	530
giwian	30 (10)	65
clipian	28 (24)	1800
gearwian	28 (7)	375
weorþian	27 (6)	230
gefēaġan	20 (13)	450
gesomnian	19 (5)	220

wilnian	18 (5)	520
gefulwian	17 (13)	175
þrowian	17 (5)	160
miltsian	16 (16)	200
wundrian	15 (8)	150
geclǣnsian	14 (5)	150
smēaġan	14 (9)	630
þolian	14 (5)	54
cunnian	13 (8)	100
hlinian	13 (0)	65
endian	12 (4)	60
widlian	12 (5)	16
dēadian	11 (0)	24
slēpian	10 (10)	22

Table 9. High token frequency verbs in the combined dataset with the corresponding approximate total number of attested forms in the DOEC[85]

As previously stated, it is theoretically expected that high frequency items behave differently than low frequency items, both from a phonological and morphological perspective. Table 9 shows that the higher the frequency of occurrence of the verb, the higher the number of tokens attested with conservative morphology (i.e. forms which retain the -i- formative). The results are valid despite the existence of clear outliers, that is, verbs that clearly prove this point (such as *dēadian* and *hlinian*) and others which disprove it (such as *lufian*, *gefeaġan* and *miltsian*). A statistical analysis was carried out in order to establish whether the visible correlation between conservatism and high token frequency counts was statistically significant. The correlation test returned a very high correlation value (0.82), as well as a very low p-value (0.0000003608), thus validating the correlation. Further, it should be mentioned that the rate with which all these verbs display conservatism is very regular throughout, with roughly 60% of forms per verb attesting the etymologically expected (i.e. conservative) morphology, while roughly 40% of forms appear with innovative morphology. This is true for all high token frequency verbs on Table 9, and irrespective

[85] n=X in Table 9 refers to total number of tokens attested for each verb in the combined dataset. Numbers in brackets (x) represent the total number of formativeless forms attested for each verb in any given category.

of their individual frequencies. A further statistical test was carried out in order to establish whether higher rates of individual frequencies translated into higher rates of conservative morphology within my highly frequent verbs. This test was done to check, for example, whether the most frequently occurring verbs (such as *lufian* and *wunian*) displayed higher rates of conservative morphology than less frequently occurring verbs such as *dēadian* or *slēpian*. This correlation was disproved, however, since the correlation value obtained in this analysis was 0.15 and the p-value was 0.48. The latter result was to be expected, however, for it was already established that the rate with which high token frequency verbs displayed conservative morphology remained fairly regular across the board (roughly 60:40 ratio), and, therefore, it is not expected to gradually grow the higher the individual frequencies of verbs. What these analyses do confirm is that, in the context of the data obtained by this thesis, higher token frequency does translate into higher rates of conservatism.

This correlation is visible in the individual morphosyntactic categories explored in this thesis, as the discussion below demonstrates. Within the more conservative categories in the combined dataset, namely the plural present subjunctive, the infinitive, and the singular present subjunctive, the conserving effect of high frequency items can be clearly observed. Table 10 below lists the most common verbs in the dataset and the way in which they are distributed across these three morphosyntactic categories (in total numbers).

The figures in Table 10 demonstrate that the conserving effect of high token frequency items is visible in the three most conservative morphosyntactic categories in my dataset, particularly in the infinitival category. As exemplified by the figures in brackets in the table above, these verbs are highly resistant to the loss of the -i- formative, with the notable exceptions of *lufian* ‘love’ and *clipian* ‘call’. The contradictory behaviour of these two high frequency verbs, covered in section 6.2.4., is very interesting and informative because it highlights the effects of interaction of factors on morphology, in this case the interaction between frequency, morphosyntactic category and phonology. Outside these verbs, however, the great majority of forms attested in the three categories retain the -i- formative. Note, for instance, *wunian* ‘stay’, *lifian* ‘live’, *gearwian* ‘prepare’ or *dēadian* ‘die’ which are exclusively attested retaining the formative in these categories. Since there are many more infinitival forms attested in the combined dataset, the conservative effects of frequency are more visible in this category. Note the fifteen infinitival forms attested

for *losian* ‘die’, all of which retain the formative; the thirteen forms for *bodian* ’preach’, also formativeful; and the seven forms attesting *gefēaġan* ‘rejoy’. In addition to what was argued in relation to these categories in section 6.2.1. and the fairly non-salient structure of their inflectional endings, it can be added that part of the conservative nature of the plural present subjunctive, infinitive and singular present subjunctive categories is derived from the interaction of these categories with high token frequency effects, which can be said to contribute to the retention of the original morphology.

Verb	**Infinitive**	**Singular present subjunctive**	**Plural present subjunctive**
lufian (n=49)	6 (2)	0	4 (0)
wunian (n=48)	8 (0)	3 (1)	2 (0)
losian (n=38)	15 (0)	3 (0)	1 (0)
bodian (n=36)	13 (0)	2 (0)	0
lifian (n=30)	0	6 (0)	0
giwian (n=30)	6 (0)	0	0
clipian (n=28)	2 (0)	0	0
gearwian (n=28)	6 (0)	0	6 (0)
weorþian (n=27)	2 (0)	0	0
gefēaġan (n=20)	7 (0)	0	0
gesomnian (n=19)	5 (0)	0	0
wilnian (n=18)	0	0	0
gefulwian (n=17)	2 (0)	0	0
þrowian (n=17)	6 (0)	0	1 (0)
miltsian (n=16)	1 (1)	0	0
wundrian (n=15)	2 (0)	0	0
geclǣnsian (n=14)	8 (0)	0	0
smēaġan (n=14)	3 (0)	0	0
þolian (n=14)	6 (0)	0	0
cunnian (n=13)	4 (0)	0	0
hlinian (n=13)	0	0	0
endian (n=12)	4 (0)	0	0
widlian (n=12)	4 (0)	0	0

dēadian (n=11)	5 (0)	2 (0)	2 (0)
slēpian (n=10)	0	0	0

Table 10. Correlation between high token frequency and conservatism in the three most conservative morphosyntactic categories. Verbs in bold represent original weak class 3 verbs[86]

Another important interaction worth noting in the context of these categories is the role played by original weak class 3 verbs, which, as mentioned earlier, are given in bold in Table 10 above. It has been demonstrated (cf. section 6.2.2.) that the conserving effects of these transferred verbs is not exclusively felt in the three morphosyntactic categories displayed in Table 10, but it can be felt throughout the whole data. However, within the three more conservative categories in the dataset, it is revealing that some of the high token frequency verbs displayed in Table 10 are, in turn, transferred verbs from the weak class 3 conjugation. The conservatism proper to high frequency tokens and original weak class 3 verbs clearly contribute in a jointly fashion to the very conservative nature of the plural present subjunctive, infinitive and singular present subjunctive categories. Note the fifteen infinitives for *losian*, eight for *wunian*, six for *giwian* and *þolian* and, finally, the six singular present subjunctive forms for *lifian*.

The next three categories explored, namely the first person singular present indicative, plural present indicative and imperative plural, show an intermediate stage of the loss of the -i- formative, with percentages of formativeless forms ranging between 51% and 36%. Section 6.2.1. accounted for the intermediate stage of -i- formative deletion in these categories in connection to the increasingly complex structure of their inflectional endings. As indicated in Figures 7, 9 and 10, and detailed in section 5.3., the loss of the formative in these categories is more complicated as it testifies to the combinatory effects of a number of linguistic factors, namely morphosyntactic category, type of inflectional vowel and type of stem vowel. It is significant that this interaction and its effects on the loss of the -i- formative are only visible in the Lindisfarne dataset. As stated in the introduction to this chapter, there exist overlaps in the distribution of factors in the statistical trees presented in chapter 5, particularly between Figure 7 (based on the Lindisfarne dataset) and Figure 9 (combined dataset), like in the case of the aforementioned interaction between

[86] n=X in Table 10 refers to total number of tokens attested for each verb in the combined dataset. Numbers in brackets (x) represent the total number of formativeless forms attested for each verb in any given category. Verbs in bold represent original weak class 3 verbs.

morphosyntactic category, type of inflectional vowel and type of stem vowel (see nodes 1, 3 and 4 in Figures 7 and 9). Once again, this overlap is due to the numeric dominance of the Lindisfarne dataset and its much more varied linguistic nature.

The conserving effects of frequency and etymological class can also be felt in the three morphosyntactic categories at hand, although with a less robust influence than in the previous categories explored. The reason why this influence is felt less in these categories is because of the more complex morphological and phonological structure of their endings, which featured a final consonant (cf. section 6.2.1.). The exception to this rule is the first category given in Table 11 which, like the conservative categories in my dataset, ended in an inflectional vowel. Section 6.2.1. argued that the first person singular present indicative category presented higher rates of formativeless forms than it was expected for categories with barely salient inflectional endings because it was being analogically restructured in line with the other categories in the present system (indicative and imperative). The interaction between morphosyntactic category, frequency and etymological class in the first person singular present indicative, plural present indicative and imperative plural is presented in the following Table 11:[87]

Verb	First person singular present indicative	Plural present indicative	Imperative plural
lufian (n=49)	12 (12)	22 (10)	3 (1)
wunian (n=48)	4 (3)	10 (4)	11 (7)
losian (n=38)	4 (1)	11 (5)	0
bodian (n=36)	2 (0)	2 (0)	3 (0)
lifian (n=30)	4 (4)	5 (0)	0
giwian (n=30)	0	15 (7)	5 (1)
clipian (n=28)	0	2 (0)	0
gearwian (n=28)	2 (0)	2 (0)	11 (6)
weorþian (n=27)	3 (1)	15 (1)	0

[87] n=X in Table 11 refers to total number of tokens attested for each verb in the combined dataset. Numbers in brackets (x) represent the total number of formativeless forms attested for each verb in any given category. Verbs in bold represent original weak class 3 verbs.

gefēaġan (n=20)	0	0	3 (3)
gesomnian (n=19)	3 (0)	5 (3)	4 (0)
wilnian (n=18)	0	16 (3)	0
gefulwian (n=17)	5 (4)	1 (0)	0
þrowian (n=17)	5 (1)	1 (0)	0
miltsian (n=16)	2 (2)	0	0
wundrian (n=15)	0	4 (0)	0
geclǣnsian (n=14)	0	4 (3)	1 (1)
smēaġan (n=14)	0	5 (4)	2 (1)
þolian (n=14)	5 (4)	1 (1)	2 (0)
cunnian (n=13)	0	4 (3)	0
hlinian (n=13)	0	2 (0)	0
endian (n=12)	4 (0)	0	0
widlian (n=12)	0	8 (5)	0
dēadian (n=11)	0	2 (0)	0
slēpian (n=10)	0	0	2 (2)

Table 11. Correlation between high token frequency, etymological class, and conservatism in the three intermediate morphosyntactic categories. Verbs in bold represent original weak class 3 verbs

With regard to the conserving effect of high token frequency, the data in Table 11 above demonstrate that this effect is still visible in the three categories under study, although, in sharp contrast to Table 10 previously shown, the effects of frequency are not as stable here as in the three more conservative categories. As a result, formativeless forms are attested in these categories even for high token frequency verbs. Note how *gearwian* ‘prepare’, *gefēaġan* ‘rejoice’ and *slēpian* ‘sleep’ attest formativeless forms in the imperative plural, *gesomnian* ‘summon’, *wilnian* ‘desire’, *cunnian* ‘test’ and *widlian* ‘defile’ in the plural present indicative, or *gefulwian* ‘baptize’, *miltsian* ‘have mercy’ and *þrowian* ‘suffer’ in the first person singular present indicative category. *Lufian* ‘love’ is once again an outlier within these categories, as it attests a great majority of formativeless forms, despite being the most frequently occurring verb in the combined dataset.

A similar picture emerges when observing the correlation between morphosyntactic category and etymological class. Although some conservative

properties are still visible in weak verbs originally belonging to the third conjugation (in bold in Table 11 above), the retention of the -i- formative in these verbs in the three categories at hand is not as consistent as in the most conservative categories (Table 10 above) because of the structure of their inflectional endings (for the plural present indicative and imperative plural) and because of analogical pressures in the case of the first person singular present indicative category (cf. section 6.2.1.). While Table 10 demonstrated that verbs such as *losian* 'die', *lifian* 'live', *giwian* 'ask for' or *þolian* 'suffer' were always attested retaining the formative in the infinitive and subjunctive categories, Table 11 shows that in the first person singular present indicative, plural present indicative and imperative plural, even these highly conservative verbs have already started losing the -i- formative, although in small numbers.

The final two categories explored in this thesis are given below in Table 12.[88]

Verb	**Present participle**	**Inflected infinitive**
lufian (n=49)	2 (1)	0
wunian (n=48)	7 (0)	3 (1)
losian (n=38)	0	4 (4)
bodian (n=36)	7 (7)	7 (4)
lifian (n=30)	15 (0)	0
giwian (n=30)	4 (2)	0
clipian (n=28)	24 (24)	0
gearwian (n=28)	1 (1)	0
weorþian (n=27)	0	7 (4)
gefēaġan (n=20)	10 (10)	0
gesomnian (n=19)	2 (2)	0
wilnian (n=18)	1 (1)	1 (1)
gefulwian (n=17)	7 (7)	1 (1)
þrowian (n=17)	4 (4)	0
miltsian (n=16)	13 (13)	0
wundrian (n=15)	7 (6)	2 (2)
geclǣnsian (n=14)	1 (1)	0

[88] n=X in Table 12 refers to total number of tokens attested for each verb in the combined dataset. Numbers in brackets (x) represent the total number of formativeless forms attested for each verb in any given category. Verbs in bold represent original weak class 3 verbs.

smēaġan (n=14)	4 (4)	0
þolian (n=14)	0	0
cunnian (n=13)	3 (3)	2 (2)
hlinian (n=13)	11 (0)	0
endian (n=12)	0	4 (4)
widlian (n=12)	0	0
dēadian (n=11)	0	0
slēpian (n=10)	8 (8)	0

Table 12. Correlation between high token frequency, etymological class, and conservatism in the most innovative morphosyntactic categories

As can be seen in Table 12, etymological class remains quite a robust factor. Thus, verbs originally belonging to the third weak conjugation (in bold in Table 12) resist the loss of the -i- formative. Note the fifteen present participles attesting *lifian* 'live', eleven such forms of *hlinian* 'sit at a table' or seven for *wunian* 'stay'. The same effect can be felt across the inflected infinitives, although this category, which is slightly more innovative than the present participle, already attests some forms of original weak class 3 verbs with loss of the formative. Note the four formativeless forms for *losian* 'die', two for *giwian* 'ask' and one for *wunian* 'stay'. These figures demonstrate that etymological class is a more robust factor than morphosyntactic category, since it is clear that the -i- formative is more readily kept in verbs originally belonging to the third weak conjugation even in the two most innovative categories in my dataset, namely, the present participles and inflected infinitives, although some formativeless forms are already found.[89] This is a remarkable fact because, as seen above in section 6.2.1., these two categories displayed the most morphologically and phonologically salient inflectional endings, which, crucially, bore secondary stress. Under these circumstances, it is expected that the less salient -i- formative is lost. This is indeed true for the great majority of cases, but Table 12 above highlights that transferred verbs overwhelmingly resist the loss of the -i- formative even under very syncope-prone conditions. Section 6.3. below offers further justification for the conservative behaviour of transferred verbs. On the other hand, the conserving effect of high token

[89] My data include three present participle forms for *hyngrian* 'hunger' (a verb formed from weak class 1 verb *hyngran* 'hunger') which are attested formativeless, hence going against the visible trend of conservatism.

frequency is not felt as much in these two innovative categories. Note for instance how all the present participle forms for *clipian* ‘call for’, *miltsian* ‘have mercy’, *gefēaġan* ‘rejoice’, *slēpian* ‘sleep’ and *bodian* ‘preach’ are attested formativeless. Within the inflected infinitives, however, some more variation can be seen because in this category high token frequency verbs can still be seen to retain the -i- formative at times, hence the three forms for *weorþian* ‘honour’ and the two forms for *wunian* ‘stay’. These figures indicate that morphosyntactic category is a more robust factor than frequency, since the -i- formative is lost even in these high frequency verbs. It could, therefore, be concluded that morphosyntactic category, in this case understood as belonging to either of the two most innovative categories (present participles and inflected infinitives) by virtue of the presence of secondary stress in their complex inflectional ending, has a much more direct effect on the loss of the -i- formative than high token frequency has on the retention of the formative. On the other hand, on the basis of the data shown in Table 12, it can be claimed that etymological class is a more robust factor than morphosyntactic category, since transferred verbs tend to retain the formative even in those categories where the loss of the -i- formative is extremely well attested, namely the inflected infinitives and present participles.

6.2.4. An excursus on *clipian* ‘call’ and *lufian* ‘love’

The correlation between frequency and morphosyntactic category has been addressed in the previous sections. There it was mentioned that, by and large, high token frequency verbs behaved in the same manner, namely by maintaining the -i- formative, due to the conserving effect of high token frequency. This maxim explained why in language highly occurring items tend to retain their original morphology much more readily than low frequency items, whose original morphology is historically generally lost and analogically replaced with the markers of more stable, dominant categories (properties conferred on these categories by their high type frequency). However, there were two notable exceptions to this trend in my data posed by the verbs *lufian* ‘love’ and *clipian* ‘call’. The case of *clipian* is very straight forward once the data are explored in detail. Out of the total twenty-eight attestations for *clipian* in my dataset, twenty-four are present participle forms. Section 5.3. already demonstrated that the great majority of present participles (and inflected infinitives) were overwhelmingly dropping the -i- formative and, by extension, adopting the

formativeless type of the verbal stem (the reasons for which have been covered in section 6.2.1.). It is, therefore, no surprise that *clipian* 'call' is mainly attested formativeless in my data, despite the fact that it is a high token frequency verb which, theoretically, should better resist the loss of the -i- formative. In this case, it seems safe to assume that morphosyntactic category (and the associated effects of the weight of the complex inflectional ending) is a more robust factor than frequency, because it is conditioning the loss of the -i- formative to a greater extent than frequency is.[90] The case of *lufian* 'love' is less clear and the following discussion can only be tentative. The first detail to notice is that *lufian* is the most frequently occurring verb in my dataset, with a total of forty-nine tokens. One would then expect this verb to retain its etymological -i- formative on account of its high token frequency. However, this is not the case, since *lufian* attests 53% of formativeless forms. These forms are found in all possible morphosyntactic categories, even in those where the formative tends to be kept, for example in the infinitives (two tokens). The great majority of formativeless forms (twenty-three out of twenty-six), however, are found in the intermediate categories, that is, the first person singular present indicative, plural present indicative and imperative plural. The same is true for the twenty-three *lufian* forms which retain the formative in my dataset. Therefore, it could be argued that the fact that *lufian* is mainly attested in categories which display an intermediate stage of -i- formative deletion explains why this verb shows an almost equal number of conservative and innovative forms, despite being a high token frequency verb. In relation to the formativeless forms, a comparison with structurally similar weak class 2 verbs such as *lofian* 'praise' and *lifian* 'live' could shed some light. Unfortunately, *lofian* seems not to be very well attested in Old English, since only one form occurs in the Northumbrian gospels: present participle *lofande* 'praising' in LkGl (Li) 24.53. As can be seen, this form carries no -i- formative, arguably because of the morphosyntactic category it represents. A search in the DOEC also returns a very small number of attestations, since only twenty-eight *lofian* forms were retrieved, as opposed to the approximate 1400 hits for *lufian* 'love', as reported in Table 9 in section 6.2.3.[91] As these *lofian* data

[90] A comparable case is that of *miltsian* 'have mercy', another high token frequency verb in my dataset. Out of sixteen tokens collected for *miltsian* (all of which are found formativeless), thirteen are present participle forms.

[91] Eighteen forms for *lofia** which included forms such as *lofian* (3), *lofiað* (14), *lofiaþ* (1), as well as compounds from related verbs *ymb-lofian* 'praise' and *sealm-lofian* 'sing psalms', thus *ymb-lofiað* and *sealmlofiað*. Eight hits for *lofig**, one of which corresponds to a different word

demonstrate, the great majority of these forms carry the -i- formative, since only two tokens are attested formativeless: present participle *lofando* and plural present indicative *lofað*. In terms of the conserving effect of frequency, one would expect this low token frequency to lose the formative more readily, but the data do not point to this direction. Admittedly, it is difficult to justify comparing a very highly frequent verb such as *lufian* to a scantly attested verb such a *lofian*, but these are the data at my disposal. Given the circumstances, it could be suggested that the behaviour evidenced by *lufian* and *lofian* represents a morphological way to keep a distinction between these structurally similar verbs. When it comes to *lifian* 'live', the similarity with *lofian* is clear, in the sense that both these lemmas show a preference for the formativeful variant of the stem. In the case of *lifian*, however, it has already been established that the reason why this is the case is because it is a relatively high frequency verb and, moreover, it is a verb reconstructed on the basis of an etymological weak class 3 verb, another feature which enhances its conservativeness (see sections 6.2.2. and 6.2.3 for details).[92] The combinatory effect of high token frequency and etymological class in promoting conservativeness was already noted when discussing the particular conservative nature of the infinitives and the subjunctives category in sections 6.2.2. and 6.2.3.

Comparing the behaviour of *lufian* with that of equally highly occurring *wunian* 'stay' reveals interesting details. The first aspect to highlight in the case of *wunian* is that, unlike *lufian*, this verb overwhelmingly retains the -i- formative, as reported on Table 8. This thesis has argued that the main reason for this behaviour is the fact that *wunian* is a transferred verb originating from the third weak conjugation, a characteristic that clearly enhances morphological conservatism, as seen in my data. Further, section 6.2.3. demonstrated that the interaction between etymological class (particularly transferred verbs) and high token frequency positively influenced the retention of the formatives. The fact that formatives were retained even in the most innovative categories in my data like present participles highlights the robustness of

clofige, possibly a proper name, and, therefore, not attesting *lofian*. One hit for both *lofað* and *lofando*. The following variants were also searched for on the corpus, but no data were returned: *lofiand**, *lofiend**, *lofann**, *lofan**, *lofenn**, *lofen**, *lofias* and *lofaþ*. *Lofas* returned two hits but attesting the noun *luf* 'love' in the plural (and glossing Latin *redimicula* 'headbands, chaplets').

[92] Structurally, *lifian* 'live' is further removed from *lofian* 'praise' and *lufian* 'love' by virtue of its front root vowel, as opposed to the back root vowels present in the other two verbs.

etymological class as a conservatism-inducing factor. Thus, in the case of *wunian*, it can be confidently argued that its morphological conservatism is the result of its combined (conservatism-inducing) properties. *Lufian*, on the other hand, is an original weak class 2 verb. By virtue of its high token frequency, lower rates of -i- formative deletion would be expected. However, it was mentioned in the previous lines that the majority of forms collected for *lufian* belong to the intermediate morphosyntactic categories, thus justifying the very equal amounts of innovative and conservative forms. Consequently, these data indicate that morphosyntactic category is a more influential factor on the fate of the -i- formative (whether it is its retention or loss) than frequency is. So, while frequency is still a relevant explanatory factor (cf. section 6.2.3.), in hierarchical terms, it is the least conducive to the loss of the -i- formative when compared to the other two main primary factors, namely etymological class and morphosyntactic category (with the associated morphological effects of the weight of their inflectional endings).

6.2.5. Interim summary

Section 6.2. has contextualised the loss of the -i- formative in weak class 2 verbs and has discussed in detail how each of the three main factors selected as significant by the statistical software, namely, morphosyntactic category, structure of the inflectional ending (inflectional vowel) and etymological class, are conditioning the loss of the formative. The discussion has highlighted a number of important points. First of all, that the loss of the -i- formative is a multifactorial process. Secondly, that further qualitative investigation of the data revealed key interferences between factors, most notably between morphosyntactic category, frequency and etymological class. The key role of token frequency was also revealed, most specifically the conserving effect which high token frequency confers upon these items. This conservatism was clearly visible in three of my morphosyntactic categories, namely the infinitives and the singular and plural subjunctives, where numerous high token frequency verbs are attested, as well as numerous weak class 2 verbs retaining their original morphology. The reason why the effects of high token frequency were more obvious in these categories than others was because the most influential factor leading the process of -i- formative deletion, namely the morphological structure and phonological weight of inflectional endings, is not as strongly felt in these categories by virtue of their barely

salient vocalic inflectional ending (cf. section 6.2.1.). The statistical regression analyses showed the hierarchy of factors (section 5.3.) contributing to the loss of the -i- formative, but the discussion presented in this chapter has demonstrated that some of these three factors seem to be more robust than others when it comes to the deletion of the stem formative. Hence, etymological class emerged as more robust than the structure of the inflectional endings, since it was seen how transferred verbs, particularly those which were etymological weak class 3 verbs, overwhelmingly retained the -i- formative even in the most innovative morphosyntactic categories, namely inflected infinitives, and present participles. It should be remembered that these two categories were characterised by having a complex inflectional ending bearing secondary stress, a property which aided the syncope of the medial -i-. By extension, etymological class is a more resistant factor to the loss of the -i- formative than morphosyntactic category, too. Frequency, in turn, seems to be less robust than morphosyntactic category, as the excursus on *lufian* 'love' and *clipian* 'call' in particular demonstrated. There, it was clear that all the *clipian* forms were attested formativeless because they were present participle forms. Although the conservative nature of transferred verbs was visible in all categories, it was most evident in the most innovative categories, where the formative in transferred verbs was overwhelmingly kept despite their very syncope-inducing properties (i.e. complex inflectional endings bearing secondary stress). It was also very clearly seen when their rate of -i- formative deletion was compared to that of etymological weak class 2 verbs, which emerged as the most prone to morphological reduction out of all the three etymological classes. Besides categories where the loss of the -i- formative was either not felt very much or very much felt, there were three other categories where this morphological reduction was in a more advanced stage than in the very conservative categories but by no means as well established as in the two most innovative categories. These three categories are the first person singular present indicative, plural present indicative and imperative plural. The reason behind their intermediate stage of implementation of the loss of the -i- formative is once again rooted in the semi-complex structure of their inflectional endings (cf. section 6.2.1.). Such varied nature of the data and their distribution is addressed and justified in the following section, namely section 6.3. A very important and related point is also covered in section 6.3., namely the more conservative nature of Rushworth^2, especially when compared to Lindisfarne. In order to provide a justification for all these visible trends, recourse will be made to analogy

as the overall process driving linguistic change (its actuation) – see section 6.3.1. – and lexical diffusion as the process responsible for the manner in which the change is developing (its implementation), for which see section 6.3.2. Both processes help explain the nature of the data in terms of their varied nature and their apparent contradictions.

6.3. Restructuring phenomena

The final, major section of this chapter covers the bigger picture, that is, the phenomena responsible for the loss of the -i- formative in weak class 2 verbs. The previous section of this chapter introduced the factors which conditioned the morphological reduction, and discussed them in detail. The present section aims to provide a justification for the linguistic change. Section 6.3. is divided into two major sub-sections. 6.3.1. addresses the motivation of the change and aims to answer the following question: why did this particular change take place? In terms of Labovian terminology, this section deals with the actuation of the change. Recourse will be made to analogy, a process discussed at length in section 3.2., as well as to a couple of relevant analogical processes which are discussed below, since they are clearly attested in my data. The most important one is paradigm levelling, which works in two opposite directions in my data, as is shown below. The last one is the analogical extension of the inflectional marking of weak class 2 verbs into verbs of the other two weak conjugations, weak class 1 in particular. The discussion is centred around the extension of the -i- formative because the -i- formative is the focus of this thesis, but other relevant features are addressed, too, such as the emergence of (analogically created) innovative inflectional endings in weak verbs of the other two conjugations. In turn, section 6.3.2. aims to answer the following question: how did the loss of the -i- formative in weak class 2 verbs take place? Focusing on the manner in which the change happened, this section covers the implementation phase of the change, in Labovian terms. Here, the model and process of lexical diffusion is introduced, and it is shown to match well the different phenomena attested in the data and discussed in the present thesis. Most notably, this model explains and justifies the behaviour of the data as seen in specific morphosyntactic categories, where certain categories were more innovative than others, and vice-versa. Finally, part of the discrepancy between Lindisfarne and Rushworth[2], with the latter being a more conservative text, can also

be explained by means of this model. Some of the variation present in these texts is, however, a result of the idiosyncratic copying and glossing practice of the scribes, for which see further section 7.2.

6.3.1. Analogy and the actuation of linguistic change

It was already mentioned in section 3.2. that analogy has for centuries been discussed in connection with linguistic change, and in particular (although not exclusively) with morphological change. The Neogrammarians, with Hermann Paul being the maximum exponent of analogy, operated with a narrow definition of the term, not considering it a type of change but rather the very basic cognitive principle ruling the dynamic, fluid system which is language. Section 3.2. showed why a broader definition of analogy was required, one which also encompassed non-proportional and partially proportional cases of analogical innovation such as folk etymology and, to an extent, paradigm levelling. Thus, following Fertig (2013) in his detailed, nuanced treatment of analogy, two related definitions of analogy were provided, one for analogy$_1$ (general cognitive capacity) and one for analogy$_2$ (linguistic capacity). The two main types of analogical change discussed in section 3.2. were analogical extension and analogical levelling, the latter also known as paradigm levelling. As it will become clear in the following discussion, both processes are clearly visible in my data, but paradigm levelling takes a more central position because it is the primary analogical process affecting the paradigm of weak class 2 verbs. An issue related to analogical paradigm levelling touched upon in section 3.2. is exemplified by my data below. The issue pertains to the link that exists between analogical extension and paradigm levelling, and it ties into a wider debate in the literature pertaining to the nature of paradigm levelling as an analogical process: is paradigm levelling a proportional model? Further, does it intrinsically lead to paradigmatic and systemic regularity? (cf. section 3.2.). There is still ongoing debate as to whether paradigm levelling simply involves the analogical extension of a (stem) variant which happens to be non-alternating – like in the case of my data –, or whether the clear preference in world's languages for non-alternating systems is rooted in an intrinsic, universal bias or constraint. A further, related topic just mentioned and which is discussed below in relation to my data pertains the paradigmatic (and potentially) systemic regularity that arises from process of analogical innovation and change, particularly paradigm levelling. However, as

explained in section 3.2., and as it will become apparent in the following section on the basis of my data, irregularity can also result from these processes of analogical change. My data clearly align with previous research on analogical processes and support the generally held claim that, by and large, irregularity is a rarer outcome of analogy. Out of the two competing processes of paradigm levelling visible in my data, the one reinstating stem allomorphy into the system is much more poorly attested, and in the synchronic – and diachronic – tug of war, it did not emerge victorious. My data, therefore, do support the view that non-alternation is the preferred option in the linguistic system, although, from a synchronic perspective, variation can be found which indicates that both regularity and irregularity are possible outcomes of analogical innovative formations (cf. Fertig 2013: 83).

Section 2.2. introduced the standard strong and weak verbal paradigm for early Northumbrian (Table 1) and listed the more common verbal features of late Northumbrian. For the purposes of the current discussion, however, it is convenient to introduce the paradigm of a given weak class 2 verb: *lofian* ‘praise’. The paradigm below, based on Hogg and Fulk (2011: 280), also introduces the morphological variants evinced in my data with regard to the presence or absence of the -i- formative:

Infinitives		**Participles**	
Infinitive	lofia(n)	**Present**	lof(i)ande
Inflected	lof(i)anne	**Past**	lofad, -od
Present indicative		**Preterite indicative**	
1SG	lofi(g)e	**Singular**	lofade, -ode
2SG	lofas(t)	**Plural**	lofadon, -odon
3SG	lofað, -as		
Plural	lof(ig)að, -(ig)as		
Present subjunctive		**Preterite subjunctive**	
Singular	lofi(g)e	**Singular**	lofade, -ode
Plural	lofi(g)en	**Plural**	lofaden, -oden
Imperative			
Singular	lofa		
Plural	lof(ig)að, -(ig)as		

Table 13. Paradigm of weak class 2 verbs on the basis of late Northumbrian data

As it can be seen, certain environments carry the -i- formative etymologically while others do not. This state of affairs is not an Old English innovation, but was inherited from Germanic, as seen in the reconstructed paradigm below (based on Hogg and Fulk 2011: 281). Wherever the -i- formative is found in the paradigm above, Germanic displayed the earlier *-*ōja*- formative:

Infinitives		**Participles**	
Infinitive	luƀōjanã	**Present**	luƀōjandī
Inflected	luƀōjannjai	**Past**	luƀōðaz
Present indicative		**Preterite indicative**	
1SG	luƀōjō	**1SG/3SG**	luƀōðæ
2SG	luƀōs	**2SG**	luƀōðæs
3SG	luƀōþ	**Plural**	luƀūðun
Plural	luƀōjãþ, -āþ		
Present subjunctive		**Preterite subjunctive**	
1SG/3SG	luƀōjai	**Singular**	luƀōðī
2SG	luƀōjais	**Plural**	luƀōðīn
Plural	luƀōjain		
Imperative			
Singular	luƀō		
Plural	luƀōjãþ, -āþ		

Table 14. Reconstructed Proto-Germanic paradigm of weak class 2 verbs

As a result, from a synchronic Old English perspective, weak class 2 verbs presented allomorphic variation of the stem: *lofi*- in some environments and *lof*- in some others. The distinction between formativeful and formativeless variant of the stem arose in Germanic due to analogy with the paradigm of heavy-stemmed weak class 1 verbs, so that the original stem vowel *-*ō*- of weak class 2 verbs was reformed to *-*ōja*- in those forms where heavy-stemmed weak class 1 verbs had *-*ija*-. The remaining forms

retained the original *-*ō*- (Ringe and Taylor 2014: 161).[93] Such a system where the same class of verbs presented stem allomorphy could be interpreted as not transparent (unnatural) and redundant, because one same concept (in this case the category of weak class 2 verbs) would be carried out by two main different forms in most of the paradigm.[94] Such an unstable system and paradigm tends to lead to analogical restructuring, as it was already exemplified in section 3.2. by means of the synchronic and diachronic development of the OE verb *cēosan* 'chose'. Here, the stem alternation between forms ending in <s> (in the present tense) and those in <r> (in the past tense and past participle) was resolved in favour of the stem variant in <s>. Moreover, the allophonic variation, with /s/ being either voiced or unvoiced depending on whether a vowel followed in the next segment, was also eventually resolved in favour of the unvoiced variant across the board. Such an intraparadigmatic reduction of variants where one existing form in the paradigm takes over the environments of other variants, hence ironing out intraparadigmatic variation, is known as paradigm levelling. Two simultaneous and competing processes of intraparadigmatic levelling are evinced by my data. These involve, on the one hand, the extension and generalization of the formativeless variant of the stem to environments where the formative would be etymologically expected. Such a process is the main focus of the present thesis and it is dealt with first in section 6.3.1.a. The other instance of paradigm levelling seen in my data represents the opposite direction of the process, that is, the extension of the formativeful variant of the stem to environments where the formative

[93] Subsequent phonological changes that took place in the prehistoric period rendered the Germanic *-*ōja*- formative as -i- or -ig-, as attested in the Old English period. Such sound changes include *i*-mutation of the back vowel preceding the fronted /j/, resulting in *-œj-; unrounding and shortening of *-œj- resulting in *-ej- and, finally, rising of *-ej- to -ij-, spelt in the historic period as either <i> or <ig> (Ringe and Taylor 2014: 227-228).

[94] It should be remembered that, due to the scope of this thesis, I am strictly focusing on some morphosyntactic categories, that is, those which carried the -i- formative etymologically which were for the most part in the present tense system. In these environments, stem allomorphy was represented by the variants with and without the formative, for example, *lofi*- and *lof*-, as stated before. Such stem variation is also visible in some of the non-finite forms of the verbs, such as the infinitives, inflected infinitives and present participles. However, the preterite presented an alternative variant of the stem, too, namely *lofo*- (with the connecting back vowel taking on various realisations, most notably <a> in my dataset). Theoretically, therefore, the paradigm of weak class 2 verbs displayed three different stem variants, although, as my thesis demonstrates, by the late Old English period, its internal stem alternation was being levelled out. See sections 2.5., 6.3.1.a., and also Stark (1982) for similar phenomena occurring in the paradigm of weak class 1 verbs.

should not appear. This process, scantly attested in my dataset, is covered second in section 6.3.1.a. Finally, for completeness' sake and because of its related significance in terms of the synchronic development of the weak verbal system and how its restructuring is evident in my data, section 6.3.1.b. covers another analogical process visible in my data, namely the interparadigmatic extension of the weak class 2 morphological features to verbs originally belonging to the other two weak conjugations.

6.3.1.a. Paradigm levelling

The first analogical process to be discussed here represents the main focus of this thesis, namely, the generalization of the formativeless variant of the stem of weak class 2 verbs to the environments where the -i- formative should be found etymologically, hence creating more intraparadigmatic regularity by getting rid of stem allomorphy. Sections 5.2. and 6.2. have explained in detail how this process was attested in the glosses to the Northumbrian gospels, and it became apparent that some morphosyntactic categories were more advanced than others when it came to the adoption of the formativeless stem variant (see the following section for a justification). Section 6.2. also highlighted some of the factors which were either contributing or impeding this process. One of the conducing factors discussed in the previous section was frequency. It has become apparent that, in analogical processes, frequency (both type and token) plays a crucial role (Bybee 1985; Bybee 2007). In general, type frequency is linked to salience and morphological productivity. Thus, a feature or category with high type frequency tends to be salient and, therefore, resistant to change. In terms of the operation of analogy, high type frequency items and categories, unlike low type frequency ones, supply the material upon which analogical change is based. In other words, their morphological characteristics are extended to other items or categories in processes of analogical change (Bybee 2007: 15-16). Such a high type frequency is directly linked to morphological productivity and membership: these categories do not lose members to other categories, precisely because they are the most salient ones. On the contrary, they attract members of other categories into their own, eventually increasing the number of tokens which display their features. Token frequency becomes relevant when exploring the outcome of analogy. It will be remembered that sections 3.2.1.b. and 6.2.3. explained the effects

which high token frequency could have both phonologically (reducing effect) and morphologically (conserving effect).

In terms of the data collected for this thesis, it was demonstrated in section 6.2.3. that, by and large, high token frequency verbs resisted the loss of the -i- formative, especially if these verbs were also benefitting from the also conservative properties proper to transferred verbs. In terms of analogy, such behaviour is anticipated, since it is low token frequency items which are seen to succumb first to analogical pressures. This is indeed the state of affairs visible in my data, where high token frequency verbs resist the analogical change, that is, the loss of the -i- formative, and low token frequency verbs attest a much higher rate of -i- formative deletion. The justification for such behaviour is cognitive, as already explained in section 3.2.1., and it is linked to the notion of entrenchment.

Studies on nominal morphology in Old English have demonstrated that data indeed behave in such a way, since highly irregular nouns such as original athematic nouns whose plural forms are created by means of *i*-mutation resist the analogical adoption of the more general, more salient, less marked and more productive *-s* plural marker (from OE strong masculine *-as* ending) (Adamczyk 2018: 175-176). In this case, it seems that high token frequency and its associated conservative effect in the morphology (conserving effect) has a more direct effect than type frequency. In terms of the formation of the plural in Old English nouns, *i*-mutation of the root vowel had a lower type frequency than the addition of an inflectional marker, especially the most salient and productive (high type frequency) *-as* ending. It would, therefore, be theoretically expected that the low type frequency plural marker (*i*-mutated root vowel) would be analogically replaced by the marker with higher type frequency (OE *-as* inflectional ending). However, this is not the case. Old English athematic nouns, despite their intrinsic irregularity and the low type frequency of their plural marker, are protected from such analogical changes by virtue of their high token frequency. This high token frequency and its associated deep level of entrenchment makes the process of mentally accessing and producing these forms much easier.

In terms of verbal morphology, it is worth noting the highly irregular (suppletive) paradigm of the verb *be*, arguably the most frequently occurring verb in English, whose irregularity is possibly retained due to its high token frequency and subsequent deep level of cognitive entrenchment. One further example relevant to this discussion was already mentioned in sections 2.5. and 6.2.3., namely the synchronic state of weak

class 3 verbs and its link to type and token frequency. Those verbs which were low token frequency were transferred to the second weak conjugation in the prehistoric period. The four Old English remnants of this class, namely *habban* 'have', *libban* 'live', *seċġan* 'say' and *hyċġan* 'think', resisted for the most part the transference to the second weak conjugation precisely because of their high token frequency and its associated conservative properties. My data, however, show several instances of these four high token frequency verbs inflecting according to the second weak conjugation, hence suggesting that, by the late Northumbrian period, even these four verbs were in the gradual process of transferring to the second weak conjugation. Examples of this phenomenon can be found in section 6.3.1.b. My data, therefore, do abide by the general analogical tendencies, whereby low token frequency items are the first ones to succumb to the analogical paradigmatic levelling, hence ironing out internal allomorphic variation by gradually removing from the system the stem variant which carried the -i- formative.

With regard to the (re)introduction of stem alternation and, therefore, irregularity in the system, my data interestingly show an additional, competing analogical innovation taking place, which also constitutes an example of paradigm levelling. This innovation involves the extension of the stem variant which carried the -i- formative to environments where it was not etymologically justified. It should be noted that this process is attested in a much minor scale, and it seems to be restricted to a small number of morphosyntactic categories, namely the third person singular present indicative and the imperative singular.[95] Some examples of the former category include: *he synngieð* 'he commits adultery' (MtGl (Li) 5.32), *slepiað ł slepeð* 'he sleeps' (MkGl (Li) 4.27), *wundriað ł miclað* 'magnifies' (LkGl (Li) 1.46) and *cliopigað* 'he calls out' (JnGl (Ru) 1.15. Some examples of the latter category include *gefrig* 'free' (MtGl (Li) 6.13), *giuig ł wilnig* 'ask ł desire' (MkGl (Li) 6.22), *hlioniga* 'sit at a table' (LkGl (Ru) 14.10) and *halgig ł halga ðu* 'sanctify' (JnGl (Li) 17.17). Only seventy-two forms with unetymological -i- formative have been found in my data, mainly for the third person

[95] Two more isolated instances of unetymological -i- formative are found in my data. These forms are second person singular present indicative *ðu worðias* 'you adore' found in LkGl (Li) 4.7, and third person singular preterite indicative *giuiade* 'she asked' found in MtGl (Li) 14.7 as second element to a double gloss. The presence of the latter unetymological -i- formative might be motivated by the preceding element in the double gloss, that is, infinitive *giwiga* 'ask', where the -i- formative was expected.

singular present indicative category (fifty-seven tokens), but, due to the regularity in terms of the categories in which they happen, they cannot be ruled out as simply scribal errors. Rather, they represent yet another analogical attempt to iron out intraparadigmatic variation, this time by means of extending the stem variant carrying the -i- formative to other potential environments.

Out of the few illustrative examples just listed, those involving double glosses are particularly significant and informative. It is clear that the scribe is providing equally valid translations for the corresponding Latin lemma these verbs render. The case of *slepiað ł slepeð* is perhaps the most enlightening, since the scribe has provided two alternative ways of expressing the third person singular present indicative category. The only difference between these forms is that the first one represents an innovative analogical formation featuring an unetymological -i- formative, while the second element represents the historic and etymologically expected form. However, the presence of these forms in a double gloss suggests that both options are acceptable in the scribe's system.[96]

It will be noted that, if and when complete, both the analogical processes just described would lead to paradigmatic regularity, either by getting rid of the -i- formatives completely or by generalizing them across the paradigm. Due to the scale of these processes, with the latter being scarcely attested, it becomes clear that the dominant analogical change as demonstrated by my data is represented by the process involving the loss of the -i- formative. This point also implies that the formativeless stem variant was more robust than the competing formativeful stem variant, because, despite competing analogical forces, it was the variant that resisted other simultaneous analogical processes and won out. The formativeless stem emerges, therefore, as the most salient and productive variant in this analogical process because it extends to other environments within the paradigm and, as a result, it emerges as the variant with a higher type frequency.

The following question might be asked: given the two competing analogical processes visible in relation to weak class 2 verbs covered in this section, why is the first one (that is, the process eliminating the -i- formative) more widely attested and, therefore, more dominant? Subsequently, the following question emerges: given the

[96] For a discussion on the different suggested purposes for the double and multiple glosses in Lindisfarne, see Pons-Sanz (2016).

intraparadigmatic allomorphy proper to weak class 2 verbs, why would the formativeless variant of the stem be more salient and, therefore, more productive than the formativeful one? The answer is that the formativeless variant of the stem was the more transparent one synchronically. It should be remembered that, theoretically, medial <i> was also the marker of a particular sub-group of weak class 1 verbs (*nerian* type), as mentioned in section 2.5. This medial element was, therefore, not only not transparent within the paradigm of weak class 2 verbs (due to the existence of a competing stem variant carrying no medial <i>), but also within the larger weak verbal system. Such plurality of functions and lack of iconicity did not constitute a transparent system, hence why the analogical process which removed the -i- formative and, therefore, the stem variation in the paradigm of weak class 2 verbs emerged as more dominant, and is widely attested in my data. As a result, the formativeless variant of the verbal stem gradually took over the formativeful one, starting from low token frequency verbs, and affecting some morphosyntactic categories more visibly than others. Such behaviour aligns, too, with one of the maxims of analogy put forward by Mańczak, who stated that stem allomorphy is generally removed (and not (re)introduced) in analogical processes (Mańczak 1957: 301).

The very small number of instances in my data evincing extension of the -i- formative would constitute an example of introduction of stem allomorphy and, therefore, irregularity in a synchronic system where the dominant direction was towards the deletion of the formative. Such an outcome of analogy is rare but not unprecedented in languages, and indeed in English, as demonstrated in section 3.2. by the examples of verbs which analogically developed irregular preterite forms: *heave* attesting preterites *hove*, *heaved* and *heft*, the last two forms analogically reconstructed on the basis of different weak inflection types (OED 2000-: s.v. *heave*, v.). The more common outcome of analogy is paradigmatic and systemic regularity (Fertig 2013: 80).

In the absence of competing analogical processes, the levelling and generalization of either stem variant across the paradigm of weak class 2 verbs would have resulted in regularity. Synchronically, however, only the process which was eliminating the -i- formative could render the paradigm regular. This is because this process was the more dominant and productive, therefore much more widely attested in my data. In such a system with competing analogical levellings taking place, the opposite process which was reintroducing the -i- formative back into the paradigm of

weak class 2 verbs would not contribute to paradigmatic regularity. Given the aforementioned analogical maxim proposed by Mańczak (1957), it is easy to justify the direction of the levelling, that is, why the analogical process which was inserting the -i- formative back into the paradigm of weak class 2 verbs was not successful and, indeed, not very productive synchronically. It is interesting to note a similar phenomenon already referred to in section 2.5. to do with a particular sub-class of weak class 1 verbs, namely those verbs whose stems ended in /w/. These verbs presented stem allomorphy as well, by which some forms in the paradigm ended in /w/ while others did not. Although the direction of paradigmatic levelling in these verbs varied from lemma to lemma, the process ultimately resulted in a single stem variant. Therefore, some verbs such as *smirian* 'anoint' (former *smirwan*) or *wylian* 'roll' (from **wylwan*) favoured the stem variant without the final /w/, whereas *gyrwan* 'prepare' or *frætwan* 'adorn' retained the /w/ (Hogg and Fulk 2011: 270). In the case of weak class 2 verbs, however, my data are more conclusive, allowing to confidently state that the main analogical process affecting this class of verbs involved the levelling of stem variation by means of the analogical generalization of the variant which etymologically carried no -i- formative. In relation to the question of the proportional nature of paradigm levelling, my data suggest that, at least in the context of weak class 2 verbs, the process of levelling is proportional because it leads to the complete elimination of stem alternation.

The attested variation in my data clearly reflects both irregularisation and regularisation processes (cf. Fertig 2013), and, a priori, it might be difficult to establish the directionality of analogical change. However, sheer number of attestations for both processes indicate which is the direction of analogical reformation, and the explanation for this direction has been given above.

6.3.1.b. Interparadigmatic extension of features proper to weak class 2 verbs into the other two weak conjugations

One further analogical process relevant to the current discussion is attested in my data. This process involves the analogical reformation of original weak class 1 and class 3 verbs on the basis of weak class 2 verbs. The extension of features proper to weak class 2 verbs was not restricted to the -i- formative because, as demonstrated

below, original weak class 1 and 3 verbs are also attested in my data with the inflectional back vowels characteristic of weak class 2 verbs. It is important to consider this additional analogical process because it represents yet further evidence of the synchronic instability of the weak verbal system as a whole. It is in the context of such synchronic and systemic instability that the loss of the -i- formative in weak class 2 verbs by means of analogical paradigm levelling can be better understood.

It was already seen in section 2.5. that from the early Old English period some weak class 1 verbs were starting to develop innovative forms on analogy with weak class 2 verbs. Verbs which shared certain formal characteristics were more prone to the analogical pressures, such as verbs with original final gemination (*fremian* 'do' from *fremman* or *lemian* 'lame' from **lemman*), verbs with both short and long closed syllable before a nasal or a liquid (*hyngrian* 'hunger' from *hyngran* or *timbrian* 'build' from *timbran*), verbs whose stems originally ended in /w/ (*gearwian* 'prepare' from *gierwan/gyrwan* or *smirian* 'anoint' from *smirwan*) and, finally, light-stemmed verbs of the *nerian* type (*werian* 'wear, defend' or *andswarian* 'answer'). The transference of the *nerian* type of verbs into the second weak conjugation was further aided by the structural similarities which these verbs shared (cf. section 3.2.1.a. on the factors facilitating the operation of analogy), most notably the presence of a medial <i> between the root and the inflectional vowel in certain categories.

Forms of original weak class 1 verbs are also attested in my data with the back inflectional vowels proper to weak class 2 verbs, for example, *ic fæsto* 'I fast' and *ic sello* 'I give' in LkGl (Li) 18.12, *heras* MkGl (Li) 4.24 and *herað* 'he hears' in MkGl (Li) 4.23, *gie gebrenga* 'you should bring' in JnGl (Li) 15.16, *gebēcnade* 'beckoned' in JnGl (Li) 13.24 or *gestiorande* 'agitating' in MkGl (Li) 9.25. It should be remembered that, unlike for the weak 3 class, the weak 1 class was in the gradual process of acquiring the inflections of the weak 2 class during the historic period, hence why these verbs show variation in their inflection. In any case, the fact that these verbs are gradually being transferred to the second weak conjugation via analogy demonstrates that the latter one is the productive class from a synchronic perspective, since it is the only weak class which attracts new members. Consequently, from a synchronic perspective, the weak 1 class is not a very robust conjugation, because it is starting to lose some of its members to the dominant, productive second weak conjugation type. It has been suggested that the reason why the weak class 1 conjugation was no longer stable was because of its internal lack of uniformity, containing up to five distinct sub-

classes of verbs, each with specific inflectional peculiarities. The weak class 2, on the other hand, represented a considerably uniform and stable conjugation type by virtue of its little synchronic internal variation (see section 2.5. and Stark (1982)). A further factor contributing to the internal instability of the weak class 1 conjugation is the fact that one of its sub-groups, containing a great number of verbs (that is, the *nerian* type), shared a number of structural similarities with weak class 2 verbs including but not restricted to the presence of a medial <i> between the root and the inflectional ending. The significance of the presence of a medial <i> in both weak class 2 verbs and the *nerian* sub-group of weak class 1 verbs has already been stated in the previous section, and it is related to its plurality of functions and, therefore, its lack of iconicity, rendering the weak verbal system not very transparent.

With regard to weak class 3 verbs, it will be remembered that, by the historic period, only four highly irregular and highly frequent verbs belonged to this category, namely *habban* 'have', *libban* 'live' (exclusively attested as *lifian* in my data), *seċġan* 'say' and *hyċġan* 'think'. All the other original members, with lower token frequency, had been analogically transferred to the second weak conjugation in the prehistoric period. Section 2.5. listed the verbs which are thought to have once belonged to the weak class 3 conjugation, as well as all such verbs attested in my dataset, all appearing as weak class 2 verbs. An interesting detail about the four remaining weak class 3 verbs in Old English is the fact they simultaneously had low type frequency and high token frequency. With respect to their low type frequency – a property not exclusive to these specific verbs but, in fact, intrinsic to the verbal class as a whole –, these four verbs should have been absorbed by the weak class 2 conjugation type as well, just like all the other original members did. However, it was indeed the high token frequency of these four main verbs which protected them against the prehistoric analogical pressures resulting in a shift of conjugation type.[97] Just like with the previous discussion about athematic nouns in section 6.3.1.a., it is clear that high token frequency and its associated conserving effect resulting in the retention of original morphology is a more robust factor than type frequency in the case of weak

[97] Although it should also be remembered that, from a synchronic perspective, the very existence of this category has been called into question by a number of scholars, for instance, Stark (1982) and Krygier (1998). By the historic period, this category contains four highly irregular verbs which share very few similarities in common, hence their inclusion within a single verbal category is problematic from a synchronic perspective, as argued in section 2.5.

class 3 verbs, upon which the four remaining weak class 3 verbs should have been reformed on the basis of the more dominant and productive weak class 2 conjugation type. Despite their high token frequency, however, even these four verbs were starting to succumb to analogical pressures by the historic period, resulting in the adoption of inflectional endings proper to weak class 2 verbs, as mentioned in section 2.5. Although the great majority of forms collected from Lindisfarne and Rushworth[2] for these verbs still reflect their etymological inflections, some examples found in my dataset do show contamination from the second weak conjugation in the form of back inflectional vowels. Thus, *saego* 'I say' in MtGl (Li) 3.9, *ic sægo* 'I say' in JnGl (Li) 3.3 and JnGl (Li) 3.12, *hæfo* 'I have' in MtGl (Li) 8.9, *ic hafo* 'I have' in JnGl (Li & Ru) 4.32, *forhycgað* 'acuses' in JnGl (Li) 5.45, *for-hycganne* 'to neglect to do something' in LkGl (Li & Ru) 11.42 or *to habbanne* 'to have' in MkGl (Li & Ru) 6.18 and JnGl (Li) 5.26. The analogical pressures are eventually more effective and successful because, by the Middle English period, these four verbs (with the exception of *hycġan* 'think' which is not preserved in Middle English) have been absorbed into one of the two main weak conjugation classes, namely the one where no connecting vowel was found between the root and the inflectional ending in the preterite and past participle categories (cf. weak class 1 verbs of the *dēman* type) (Stark 1982: 24; Fulk 2012: 81-82). The prehistoric development and synchronic situation of weak class 3 verbs provides a similar picture to that obtained when examining the development of weak class 1 verbs. Namely, the internal irregularity and instability of the third weak conjugation resulted in its low type frequency. As a result, this low type frequency led to its gradual transference to the more regular and stable second weak conjugation. Such internal regularity and stability contributed to the higher type frequency of the second weak conjugation, thus enhancing its morphological productivity by attracting members from other conjugation types. This transference process started in the prehistoric period, with the great majority of original weak class 3 verbs only being attested in Old English as reformed weak class 2 verbs. The existing four verbs in this category remained unchanged for the most part due to their high token frequency, although data collected from the Northumbrian gospels demonstrate that even these highly frequent and highly conservative verbs are in the process of being absorbed by the second weak conjugation, the most stable and productive one synchronically.

An interesting aspect in relation to the transferred verbs mentioned in chapter 5 and discussed in more detail in section 6.2.2. is the fact that they were highly

conservative, in the sense that the great majority of attested forms retained the -i- formative. Part of this conservatism arose from the fact that some of these transferred verbs, such as *wunian* 'stay', *losian* 'lose', *lifian* 'live' or *giwian* 'ask for', benefited from high token frequency and its associated conservative properties in the morphology (cf. section 6.2.3.). But it can also be argued that part of their conservatism is due to the fact that these verbs are being affected by competing analogical processes. On the one hand, transferred verbs are being mainly affected by the analogical interparadigmatic extension of features proper to weak class 2 verbs, both in terms of the -i- formative and back inflectional vowels. On the other hand, and to a lesser degree, transferred verbs are also evincing incipient loss of the -i- formatives. The latter scenario was illustrated by Figures 11, 12 and 13 in section 6.2.2. It could, therefore, be argued that part of the reason why transferred verbs are not as affected by the analogical levelling process gradually removing the stem variant which carried the -i- formative is because these verbs are simultaneously being affected by the competing analogical interparadigmatic extension of weak class 2 features.

As mentioned earlier, the latter process started in the prehistoric period for weak class 3 verbs and already in early Old English for weak class 1 verbs. The former process, on the other hand, is first attested in the Northumbrian glosses (tenth century), so far as written evidence allows one to see. Therefore, the synchronic state of affairs in relation to the loss of the -i- formative in transferred verbs is a result of competing analogical forces and the associated gradual nature of these processes. Because paradigm levelling and its resulting loss of the -i- formative is a later development than the extension of weak class 2 features, levelling has not yet affected that many potential items. The analogical extension of weak class 2 features is much more solidly attested in Old English than is the loss of the -i- formative, and the same reality is visible in my data.[98] This is particularly true for original weak class 1 verbs,

[98] See the treatment of weak verbs in standard grammars such as Campbell (1959) or Hogg and Fulk (2011). On the other hand, Stark's (1982) study of the weak verbal system in Old English discusses in detail the changes undergone by weak class 1 and 3 verbs, with a whole chapter (chapter 4) devoted to the transference of weak class 1 verbs into the second weak conjugation. With regard to the loss of the -i- formative, Stark devotes eight pages to this phenomenon, but not specifically in the context of weak class 2 verbs. He treats the loss of the formative in conjunction with the loss of the medial <i> in weak class 1 verbs of the *nerian* type, arguing that this medial vowel was part of the inflectional ending by Old English times, as opposed a stem formative (Stark 1982: 124-125).

whose absorption to the second weak conjugation started for the most part in the historic period. Thus, these verbs display very low rates of -i- formative deletion (30% of the total forms collected, that is, three in twenty) as visible in Figure 13 (section 6.2.2.).

By this logic, one would expect weak class 3 verbs to evince slightly higher rates of -i- formative deletion, precisely because their absorption into the second weak conjugation is dated to the prehistoric period. The Lindisfarne dataset seems to support this claim (see Figure 11 in section 6.2.2.), where 10% of original weak class 1 verbs are attested formativeless (one in ten) as opposed to a higher number for original weak class 3 verbs (29% of total forms, that is, thirty-six in 124). This slightly higher number of formativeless forms for original weak class 3 verbs is even more significant when bearing in mind that a number of these verbs were highly frequent. Because high token frequency has been proven to favour morphological conservatism (cf. section 6.2.3.), the fact that 29% of original weak class 3 verbs are attested formativeless represents a considerable high number. On the other hand, none of the original weak class 1 verbs collected for this thesis feature in the high token frequency tables (Tables 9 to 12) given in section 6.2.3. Thus, the conservative nature of original weak class 1 verbs cannot be ascribed to high token frequency and its associated conservative effects in the morphology. Alternatively, my data suggest that their conservatism is a result of the competing analogical pressures affecting these verbs, namely the analogical extension of weak class 2 features and the paradigm levelling removing the stem variant carrying the -i- formative. The same can be confidently stated about weak class 3 verbs, where their slightly higher rate of -i- formative deletion is to be understood as a result of the fact that the analogical extension of weak class 2 features had been affecting this conjugation from an earlier date than weak class 1 verbs. Consequently, this analogical process had mostly ended its operation in the paradigm of weak class 3 verbs (with the exception of the four main verbs which are beginning to succumb to the analogical pressure in the historic period), and so the competing analogical process, that is, paradigm levelling, could exert a bigger influence on this conjugation. For weak class 1 verbs, on the other hand, the analogical extension of weak class 2 inflections was still in the process of being implemented, therefore, there was not as much scope for the operation of paradigm levelling.

Before concluding the present discussion, a further, relevant detail should be mentioned. It was claimed above that the Lindisfarne dataset supported the view that,

out of the two competing analogical processes, paradigm levelling and its subsequent loss of the -i- formative was better attested in original weak class 3 verbs than in weak class 1 verbs, and a justification was provided on the basis of the chronology and gradual nature of these analogical processes. Upon examination of Figure 12 in section 6.2.2., it is revealed that the Rushworth^2 dataset does not support the aforementioned interpretation. There, it can be seen that very similar percentages of formativeless weak class 1 and 3 verbs are attested, 20% for the former (two in ten) and 24% for the latter (eighteen in seventy-four). Although such figures could be difficult to reconcile, particularly in the context of the present discussion, I believe that they are clear indicators of the fact that the language of Rushworth^2 represents an earlier stage of these linguistic changes, both the analogical extension of typical weak class 2 features to original weak class 1 and weak class 3 verbs, and the elimination of the -i- formative via paradigm levelling. This evidence further reinforces the view of Rushworth^2 as a more conservative text, especially when compared to Lindisfarne, an aspect that has been raised at several points throughout this chapter (particularly in section 6.2.) as well as chapter 5 (cf. for instance Figures 1, 2, 4 and 5 in section 5.2.). A justification for this discrepancy and differing behaviour is introduced in the following section 6.3.2. by means of the model of lexical diffusion.

6.3.2. Lexical diffusion and the implementation of linguistic change

It has become apparent throughout this chapter and the previous one that my data present a great deal of variation. The main area of interest for this thesis is the variation in terms of the presence or absence of the -i- formative in weak class 2 verbs. As demonstrated in the preceding sections in this chapter, the behaviour of original weak class 2 verbs is different across specific lexical items and morphosyntactic categories, resulting in a varying degree of -i- formative deletion. Section 6.3.1. has argued that the change was conceptually and analogically motivated, in a clear example of paradigm levelling eroding internal allomorphic variation. Such a reductive process fits well with the synchronic status of weak verbs in Old English, a category which was undergoing significant reductive and restructuring changes in late Old English, as detailed in section 2.5. One significant example is the comparable levelling process affecting weak class 1 verbs whose stems ended in /w/ covered in section 2.5. Such levelling processes resulted in greater paradigmatic regularity. Regarding the levelling

of the formativeless stem across the paradigm of weak class 2 verbs, both sections 5.3. and 6.2. demonstrated that this process was conditioned by a number of factors which either contributed to the loss of the -i- formative independently or in combination with other factors. This is particularly true for the Lindisfarne data, which attests a higher number of contributing factors than the Rushworth^2 data, as the comparison between Figures 7 and 8 in section 5.3. revealed. Overall, it has also been established that the language in Rushworth^2 is more conservative than that of Lindisfarne, because the loss of the -i- formative is not as robustly felt in Rushworth^2 as it is in Lindisfarne. On the topic of linguistic conservatism, sections 5.3. and 6.2.2. also revealed that transferred verbs tend to also behave differently than original weak class 2 verbs, since they are more conservative in nature and, as a result, tend to retain the -i- formative much more readily. Sections 6.2.1 and 6.2.3. argued that this conservatism was partially linked to the high token frequency which some of the original transferred verbs had (particularly original weak class 3 verbs) as well the morphosyntactic categories these transferred verbs belonged to.

In light of what has been discussed thus far in this chapter, the aim of the present section is to explain the manner in which the loss of the -i- formative is spreading in weak class 2 verbs, and how this spread is evinced in my data. This section is concerned with the implementation phase of the linguistic change and explains the loss of the -i- formative through the lenses of the lexical diffusion model.

The model of lexical diffusion, first proposed by Wang (1969), was introduced in detail in section 3.3. Unlike the classical Neogrammarian interpretation of sound change, the lexical diffusion model is able to account for the time span it takes for a sound change to spread in language. This is because the gradual nature of the implementation and spread of sound changes is one of the key aspects highlighted by this model, where a sound change is phonetically abrupt but lexically gradual. An important aspect which emerges as a result of this gradual nature of sound change is the appearance of synchronic variation. Doublets, as termed by Wang (1969: 15), arise when any given sound change affects one particular context, for example, a specific phoneme. The result is synchronic allophonic variation where both variants are equally valid in the system. In the majority of cases, when sound changes complete their course, the new variant replaces the older, original variant, as Table 4 in section 3.3. presented. During the synchronic period when variation occurs, however,

competing sound changes may intervene and disrupt the operation of the diffusion of the initial sound change, giving rise to irregularities.

Section 3.3. also revealed a direct correlation between frequency of occurrence of a word and its fate in the adoption of a new variant. Different sound changes affect the lexicon differently, depending on the nature of the change and the frequency of words. Physiologically motivated changes which do not require lexical analysis (such as assimilations or vowel reductions) affect the high token frequency items first. On the other hand, conceptually and typologically motivated sound changes which require lexical analysis (such as segment deletion) affect the low token frequency items first. In so doing, these conceptually motivated sound changes resemble analogical changes, which are also conceptual in origin (Philips 1984 and 2001).

As established in the previous section, the loss of the -i- formative in weak class 2 verbs was conceptually and analogically motivated as a means of bringing paradigmatic regularity. In a clear example of paradigm levelling, the formativeless variant of the stem of weak class 2 verbs was in the process of being generalised across the paradigm, as indicated by my data. It was also established in section 6.2.3. that the great majority of high token frequency items were considerably resistant to the loss of the formative, as opposed to low token frequency items were more prone to the loss – although, see section 6.2.4. for the most notable exceptions to these trends. Thus, there is ample evidence in my data supporting the view that the loss of the -i- formative in weak class 2 verbs is being gradually and lexically implemented. This is true not only in terms of individual verbs (the lexical aspect considered by Wang (1969)), but arguably in the wider speech community (social aspect), as argued further down in this section. The behaviour of original weak class 2 verbs as opposed to transferred verbs, and the marked differences in my two datasets in relation to the loss of the -i- formative are also a direct consequence of the gradual nature of this change.

6.3.2.a. The gradual nature of -i- formative deletion

The gradual nature of the process of -i- formative deletion has been highlighted at several points throughout this chapter. This process, conceptually motivated and analogical in nature, produced further synchronic variation within the paradigm of weak class 2 verbs – a paradigm which already presented stem allomorphy (see Table 13 in section 6.3.1.). As a lexically diffused change, the process of -i- formative deletion

can be seen on the three different levels established by Wang (1969: 13): phonetic, lexical, and social. Phonetic variation is clearly seen in my data in terms of the innovative, optional deletion of the -i- formative in categories where it was expected. As a result, these categories now display two variants which are equally valid in the system: the variant carrying the formative and the one without it. Lexically, the innovative adoption of the formativeless variant is better attested in some lexical items and morphosyntactic categories than others, and section 6.2. proved that such variation was jointly conditioned by the structure of their inflectional endings, their historical class association and the frequency of occurrence of specific verbs. The social aspect of the diffusion model entails the adoption of the innovative variant by an ever-growing number of speakers and speech communities, until the change has completed its course, and the novel variant has superseded the original one, provided no competing sound changes emerge (cf. Table 4 in section 3.3.). Although my datasets do not show a complete adoption of the innovative, formativeless variant, there are marked differences in terms of rates of -i- formative deletion between the two texts under study, which were glossed by two different scribes (see sections 2.1. and 2.3.). This interesting point is covered separately on the last section in this chapter (section 6.3.2.c.). Competing sound changes which disrupt the diffusion of the loss of the -i- formative are covered in the following section.

It is worth returning to the question of frequency, for it is revealing that it is precisely low token frequency items that are first affected by conceptually motivated changes. Alongside the gradual nature of the process of -i- formative deletion, which is covered in more detail in the following paragraphs, it is precisely the fact that these items are the first ones to show consistent variation and more proneness to adopt the innovative variant without -i- formative that suggests this deletion process is indeed lexically diffused. For, as Phillips (1984 and 2001) established, non-physiological sound changes – that is, conceptually or typologically motivated changes – which require lexical analysis affect the least frequently occurring items first (see further section 3.3.). Section 6.3.1. already established that the loss of the -i- formative was conceptually and analogically motivated, hence why it first affects low token frequency items (cf. section 6.2.3.). Cognitively speaking, these are the tokens with less entrenched representations in the lexicon by virtue of their low frequency, thus they are much more susceptible to change (see section 3.2.1.b.). It is evident, then, that

analogically motivated changes which are lexically diffused affect low token frequency items first, and the loss of the -i- formative in weak class 2 verbs is a clear example.

A peculiar behaviour visible in my data and discussed at length in the preceding sections of this chapter is the fact that individual lexical items and morphosyntactic categories display different rates of -i- formative deletion. With regard to specific lexical items, it is low token frequency items such as *be-hāwian* 'consider', *be-hōfian* 'behoove', *bletsian* 'bless', *cnylsian* 'knock at a door', *ēaþ-mōdian* 'make humble', or *for-hogian* 'scorn', just to provide a few, which are for the most part attested formativeless. This is, of course, the expected behaviour for low frequency items in analogically motivated and lexically diffused changes. However, much like in the cases of the unrounding of ME /ö(:)/ and merger with existing /e(:)/ and Southern glide deletion covered in section 3.3., there are exceptions to this trend in my data. Note, for instance, *druncnian* 'sink', *dwolian* 'go astray', *fiscian* 'fish', *frāsian* 'ask', *gadrian* 'gather', or *ge-lēcnian* 'cure', equally infrequently attested verbs which are only found in my data with retention of the formative. Despite these apparent irregularities which contradict the overall direction of change, the general trend is for low token frequency items to lose the formative more readily. The opposite scenario has been covered in detail in section 6.2.3., where it was revealed that, by and large, high token frequency items resisted the loss of the -i- formative, as expected. Similarly, section 6.2.2. highlighted the conservative nature of transferred verbs, especially when compared to original weak class 2 verbs (cf. Figures 11 to 13). Of significance is also the fact that many of these transferred verbs, particularly original weak class 3 verbs, were amongst the most highly frequent in my data, a combination of factors that justifies their conservatism. The conserving effect of high token frequency is well attested in my data (cf. section 6.2.3.). However, notable exceptions also exist in this regard, like the treatment of *clipian* 'call for' and *lufian* 'love' revealed in section 6.2.4. Bearing in mind that the implementation of the formativeless variant was a gradual process conditioned by the frequency of occurrence of individual verbs (amongst other factors), it is possible to justify the initially peculiar behaviour of certain lexical items attesting higher rates of -i- formative deletion than others – and vice-versa. These lexical items clearly attest to different stages of the diffusion of the formativeless variant.

A similar situation emerged during the discussion about the different morphosyntactic categories where the -i- formative in weak class 2 verbs was etymologically expected and the varying rates of deletion (section 6.2.1.). The most

innovative categories where the higher incidence of formative deletion was attested were the inflected infinitive and present participle categories, and section 6.2.1. argued that the reason behind such pronounced loss of the formative was due to the structure of their complex inflectional endings which bore secondary stress. Remarkably, even the highly conservative high token frequency transferred verbs (conservative on double grounds) displayed loss of the -i- formative. On the other hand, the infinitives and subjunctives emerged as the most conservative categories, with very few formativeless tokens attested on account of their barely salient inflectional endings (cf. section 6.2.1.). Some of the conservatism was also a consequence of the high number of verbs in these categories which were highly frequent. The fact that some of these highly frequent verbs were transferred from the other two weak conjugations added to the conservatism of these categories. The extreme cases presented by these five morphosyntactic categories, namely inflected infinitives, present participles, infinitives and singular and plural present subjunctives, resonate with the gradual nature of the diffusion of linguistic change, where certain categories present a more advanced stage of the implementation phase than others, particularly if they are conditioned by other factors, as was the case with the two most innovative categories: inflected infinitives and present participles. Similarly, additional factors such as high frequency could slow down the diffusion rate, a situation particularly visible in the three most conservative categories in my datasets: singular and plural present subjunctives and infinitives. In any case, and as indicated in sections 6.2.1. and 6.2.3. (Table 10), the implementation of the formativeless variant is even attested, although timidly, in one of the most conservative categories in the most conservative dataset, namely the singular present subjunctives in Rushworth^2. Even more revealing is the fact that three of the four formativeless forms found in this category attest verbs originally belonging to the third weak conjugation, that is, verbs which are generally highly resistant to the loss of the -i- formative. These numbers, although small, demonstrate that the formativeless variant is already found in the most conservative environments, marking the beginning of the deletion process in these particular categories. The spread of the formativeless variant in these conservative categories is slightly better attested in Lindisfarne than in Rushworth^2 (cf. Figures 4 and 5 in section 5.2.), a detail of significance to which I will return in section 6.3.2.c. below.

Finally, it is worth addressing those categories which displayed greater variation, that is, those with intermediate rates of -i- formative deletion ranging from 51% to 36%

of formativeless forms, namely the first person singular present indicative, plural present indicative and imperative plural categories. Sections 5.3. and 6.2.1. showed that the loss of the -i- formative in these categories was conditioned by two additional contributing factors, namely the type of inflectional vowel and stem vowel (see nodes 3 and 4 in Figure 9 in section 5.3.). However, a comparison of Figures 7 and 8 reveals that these contributing factors appear in the context of the Lindisfarne dataset only.[99] This is an important observation which is directly linked to the more advanced stage of the implementation of the formativeless variant in Lindisfarne. For the more advanced the deletion process is, the more factors it is conditioned by. This point holds not only for the two particular factors under discussion, namely type of inflectional vowel and stem vowel, but in general for the Lindisfarne data. Notice how Figure 7 clearly indicates that this dataset is conditioned by considerably more primary and secondary factors (in the form of top and subordinate nodes on the tree) than the Rushworth^2 dataset is (for which see Figure 8).

An interesting detail about the intermediate categories is that they contain the highest number of formativeless original weak class 3 verbs, that is, forty-one out of a total fifty-four formativeless forms. So, while the discussion about infinitives and subjunctives in sections 6.2.1. and 6.2.2. stressed how transferred verbs such as *giwian* 'ask for', *lifian* 'live', *losian* 'die' or *þolian* 'suffer' were almost exclusively attested retaining the formative, these exact same verbs – which were considerably conservative due to their high token frequency –, show increasing numbers of formativeless forms in the intermediate categories (cf. Tables 10 and 11 in section 6.2.3.). This fact further supports the view that the implementation of the loss of the -i- formative was more advanced in these intermediate categories than in the more conservative ones, the morphological justification for which was presented in section 6.2.1.

[99] The appearance of these factors as conditioning the loss of the -i- formative in Figure 9 is the result of the dominance of the Lindisfarne data in the regression analyses, as mentioned in section 5.3. This dominance was justified when realising that more tokens were collected from Lindisfarne than from Rushworth^2 (see section 5.2. for the reasons). Moreover, the Lindisfarne data present more variation in terms of rates of -i- formative deletion, but also number of contributing factors. Thus, the Lindisfarne dataset is more informative about the process of -i- formative deletion and, as a consequence, features more heavily in the statistical model.

Moreover, it is logical that the loss of the formative in original weak class 3 verbs is felt more widely in the intermediate categories, that is, those which displayed the highest variation between formativeful and formativeless forms. Original weak class 3 verbs are peculiar amongst the transferred verbs for showing slightly higher rates of -i- formative deletion. This scenario is the result of competing analogical processes (see further section 6.3.2.b.) and their effects on the morphology of these verbs, which had acquired weak class 2 inflections in the prehistoric period and were, in the historic period, losing the -i- formative. Because of the chronology of these analogical processes and its effects on transferred verbs – for which see the following section – original weak class 3 verbs showed more variation in its morphological expression than original weak class 1 verbs, where variation is understood as presence of both formativeful and formativeless forms. Thus, the greater variation displayed by original weak class 3 verbs, which overall emerge as a considerably conservative sub-category in my data, fits well with the mixed nature of the intermediate categories.

The complexity of the implementation process with its gradual nature, subsequent synchronic variation in the form of multiple admissible variants which are affected by numerous potential factors – as in the case of the deletion of the -i- formative in weak class 2 verbs – was succinctly put by Vogt (1954: 367)

> at any moment, between initiation and the conclusion of these [sound] changes, we have a state characterised by the presence of more or less free variants, so that the speakers have the choice between alternative expressions. In each case the choice will be determined by an interplay of factors, some linguistic, some esthetic and social, an interplay so complex that most often the choice will appear as being due to pure chance (…) What therefore in the history of a linguistic system appears as a change will in a synchronic description appear as a more or less free variation between different forms of expression, equally admissible within the system.

6.3.2.b. -i- formative deletion and the interference of competing changes

The main change analysed by this thesis is the loss of the -i- formative in weak class 2 verbs. From a synchronic perspective, this development represents a morphological innovation where both a formativeful and formativeless form is a valid grammatical

option for a number of categories. Diachronically, it is expected that the innovative variant gradually spreads until it has affected all possible lexemes and contexts, as represented in Table 4 (section 3.3.). Synchronically, the existence of additional paradigmatic variation can result in apparent irregularity. In terms of the paradigm of weak class 2 verbs, an apparent irregularity would be the appearance of innovative formativeless forms in those categories where the -i- was etymologically expected. This variation of forms, however, is simply evidence of a linguistic change in the making. Section 6.3.1.a. revealed that my data included several instances of weak class 2 verbs where an unetymological -i- formative was found in categories which originally lacked it, specifically the third person singular present indicative and imperative singular. These forms arose as a result of a concurrent and competing levelling process affecting the paradigm of weak class 2 verbs. Because the general trend visible in my data (with parallel phenomena happening in a specific sub-class of weak class 1 verb, for which see sections 2.5. and 6.3.1.b.) entails the ironing out of intraparadigmatic variation by means of generalising the formativeless stem variant, the concurrent, competing process which was analogically re-inserting the formative back into the system constitutes a source of "true residue" or irregularities (cf. Wang 1969). My data, therefore, support the view that paradigmatic irregularities are indeed the result of concurrent and competing changes affecting the same pool of items (cf. Wang 1969: 17). Related to this point, it is logical to wonder which of the variants stemming from these competing changes constituted the regular variant in the system – an "interesting terminological question", according to Wang (1969: 16 fn14). On this regard, my data are clear. For, out of the two analogical processes attested, only the one which was removing the -i- formative from the paradigm of weak class 2 verbs brought about paradigmatic regularity, as argued in section 6.3.1.a. The success of such process can be established not only on a diachronic level, for it is evident that reflexes of original weak class 2 verbs no longer carry the -i- formative (cf. *hope*, *lose, love* or *make*), but also from a synchronic level. In terms of sheer numbers only, the competing change re-inserting the -i- formative back into the system is found in seventy-two tokens only, while the primary change attested in my data is found in 337 tokens (out of a total of 848 tokens) – see section 6.3.1. for details.

There is one further concurrent and competing change evident in my data which is also producing irregularities. This change involves the analogical extension of features proper to weak class 2 verbs, such as the -i- formative and back inflectional

vowels, to members of the other two weak categories. This process was diachronically contextualized in section 2.5. and discussed in the context of my data in section 6.3.1.b. Section 6.2.2. revealed that, in general, transferred verbs were much more conservative than original weak class 2 verbs, as a comparison between Figures 11 and 13 demonstrates. It has already been established that their intrinsic conservatism, particularly that of original weak class 3 verbs, was enhanced when these verbs were highly frequent (see section 6.2.3.). However, this conservatism is also the result of the competing processes affecting these verbs. Conservatism is understood in this thesis as resistance to the loss of the -i- formative. However, since the general trend evinced by weak class 2 verbs is increased rates of -i- formative deletion, the resistance of transferred verbs to lose the formative can be framed as representing a source of synchronic irregularity. This irregularity is indeed caused by the concurrent, competing analogical process which was extending features proper to weak class 2 verbs into the other two weak conjugations. Such irregularity can be accounted for from a chronological perspective. Because original weak class 1 and 3 verbs were being affected by two concurrent changes, the more recent of the two changes, namely the loss of the -i- formative, initially showed a restricted scope of operation and, as a result, very early signs of implementation. On the other hand, the earliest change, namely the adoption of weak class 2 features, is much more widely attested in my data.

In the context of this discussion, it is worth addressing a related point mentioned in section 6.2.2. which was revealed upon closer inspection of the data. This point involves the apparent slight discrepancy of rates of -i- formative deletion in original weak class 3 verbs as opposed to class 1 verbs, where the latter presented a slightly higher rate of deletion than the former verbs, specifically in Lindisfarne. To this end, it is worth remembering that the transference of the majority of original weak class 3 verbs into the second weak conjugation happened in the prehistoric period, since the majority of the proposed, original weak class 3 verbs already appear in the historic period inflecting according to the second weak conjugation type. On the other hand, weak class 1 verbs are gradually transferred, for the most part, during the historic period (see section 2.5. for details). The chronological aspect of this gradual membership shift is reflected in my data in terms of the number of verbs collected which used to belong to either weak class 1 or 3. The great majority of transferred verbs originate from the third weak class (198 tokens), whereas only twenty tokens in

my datasets originate from the first one. The reason behind the small number of original weak class 1 verbs is a direct consequence of my methodological approach in relation to transferred verbs. As explained in section 4.3.1.b., identifying which of these verbs were inflecting according to the second weak conjugation was a complex task, since, many times, verbs were either ambiguous in their morphology or showed no clear signs of adoption into the new conjugation type. As a consequence, I erred on the side of caution and only included in my datasets those verbs which showed very clear signs of weak class 2 inflection. The ambiguity and inconsistency displayed by weak class 1 verbs in terms of morphological expression clearly indicate that these verbs are still undergoing the gradual transferral process by the tenth century. Weak class 3 verbs, on the other hand, commenced their transfer much earlier and, as a result, show much more convincing signs of weak class 2 inflection, resulting in higher numbers of these verbs in my dataset.

This chronological aspect comes into play, too, in relation to the loss of the -i- formative, as mentioned earlier. This fact is, expectedly, more visible in Lindisfarne than in Rushworth[2], a point already stated in section 6.2.2. The higher number of formativeless original weak class 3 verbs demonstrate that the implementation of the loss of the formative is more advanced in this verbal class because the competing change, namely the analogical adoption of weak class 2 features, was no longer operative in this particular pool of verbs by the tenth century. This is because, for these verbs, the transferral process had already started in the prehistoric period and, by the tenth century, it was nearing its end, as demonstrated by my data. This is true for the original weak class 3 verbs outside the very highly frequent *habban* 'have', *hycġan* 'think', *libban/lifian* 'live' and *secġan* 'say' which, by virtue of their high token frequency, had survived as the only representatives of this conjugation type by the historic period. However, even these verbs are starting to adopt weak class 2 features, as seen in my data (see section 6.3.1.b.). Original weak class 1 verbs, on the other hand, are clearly affected by two concurrent, competing processes, as visible in my data. In the context of competing processes, it is expected that irregularities occur. In this case, they do so in the form of reluctance to lose the -i- formative, where the expected norm is for these verbs to behave like weak class 2 verbs (by virtue of having been transferred), and to show a preference for the deletion of the formative. The apparent divergent behaviour of original weak class 1 verbs in the context of transferred verbs is no longer so if the chronology of the competing changes affecting this particular pool of verbs is

considered. Thus, it becomes apparent that these verbs are more resistant to the loss of the -i- formative (in comparison to the other sub-category of transferred verbs) because they are still being affected by an earlier competing analogical process, namely transference to the second weak conjugation. The more recent process, namely the loss of the -i- formative, is barely felt within this sub-category because it is at its very infancy of the implementation process, as the very low number of formativeless original weak class 1 verbs suggest. Based on the behaviour displayed by transferred verbs, it can be concluded that, from a synchronic perspective, original weak class 3 verbs were better assimilated into the second weak conjugation than original weak class 1 verbs, hence why slightly higher numbers of the former sub-class behave like weak class 2 verbs and lose the -i- formative. This deeper assimilation into the weak 2 verbal class is due to their earlier analogical transference.

Finally, the behaviour of original weak class 2 verbs, which show the highest rates of -i- formative deletion in comparison to the other two etymological classes, is easily justifiable. These verbs, unlike transferred verbs, were not affected by any other major competing process, other than the scantly attested generalisation of the stem variant carrying the formative (see section 6.3.1.a.). It is, therefore, logical than this class was more susceptible to the loss of the formative and shows a much more advanced stage of the implementation process.

6.3.2.c. Lindisfarne's innovative nature and Rushworth's conservatism as a result of different rates of diffusion

At several points throughout this thesis, it has been claimed that the language in Lindisfarne is more innovative in nature and presents a more advanced stage of implementation of grammatical change than the language of Rushworth^2. The latter text in comparison is, for the most part, more linguistically conservative (cf. section 2.4.). When considering the loss of the -i- formative in weak class 2 verbs, the exact same description can be provided of both texts. It has been proven in section 5.2. that the highest rates of -i- formative deletion are found in Lindisfarne, whereas Rushworth^2 drags behind (cf. Figures 1 and 2). Given the gradual nature of the loss of the -i- formative, it can be concluded that the difference in linguistic nature between Lindisfarne and Rushworth^2 is a manifestation of different stages of the

implementation process which was generalising the formativeless stem variant. Thus, Lindisfarne, with its higher rates of -i- formative deletion, represents a more advanced implementation phase. Rushworth^2, on the other hand, represents a more initial phase, hence its more conservative language.

Several peculiarities encountered in the two texts under study can be justified after having established the different stages of implementation which these texts testify to. Firstly, the previous section highlighted how the process of -i- formative deletion was conditioned by more contributing factors (both primary and secondary) in Lindisfarne than in Rushworth^2 (cf. Figures 7 and 8 in section 5.3.). This is to be expected, for the longer a linguistic change takes to spread and the more advanced it is, the more likely it is to become conditioned by a growing number of factors. In terms of morphosyntactic categories, it was established that the spread of the loss of the -i- formative had already reached some of the most conservative categories, like in the infinitives and singular present subjunctive. Although formativeless forms are found in both texts in these conservative categories, Lindisfarne presents a slightly higher deletion rate, a fact which tallies with the claim put forward by this thesis that the language of Lindisfarne attests to a more advanced stage of linguistic change.[100] Finally, in the context of the transferred verbs and their rate of -i- formative deletion, the previous section concluded that Lindisfarne presented slightly higher number of formativeless forms for original weak class 3 verbs than for weak class 1 verbs, and a justification to this apparent discrepancy was given invoking the chronology of competing changes and their effects on the morphology of these verbs. Comparing the behaviour of these transferred verbs in Rushworth^2 unveils similar patterns to those already established. For, quite expectedly, Rushworth^2 shows very little variation when it comes to rates of formative deletion, where both original weak class 1 and 3 verbs show very low formativeless rates (cf. Figure 12 in section 6.2.2.). As the data in these said figures indicate, the loss of the -i- formative in transferred verbs, particularly original weak class 3 verbs, is barely felt in Rushworth^2 because this text attest to an earlier phase of the implementation of the loss of the -i- formative. In this

[100] Combining the infinitives and subjunctives, there are a total of 156 tokens in Lindisfarne, eight of which lose the formative (5%). On the other hand, there are ninety such tokens in Rushworth^2, three of which lose the formative (3.3%).

regard, the higher numbers in Lindisfarne are congruent with the more advanced stage of the implementation of the loss of the -i- formative evident in this text.

6.4. Summary

The loss of the -i- formative in weak class 2 verbs is a conceptually and analogically motivated change contributing to increased paradigmatic regularity, and constitutes a clear case of paradigm levelling affecting the low token frequency items first. The deletion process is lexically diffusing across lexemes, morphosyntactic categories and speakers (i.e. datasets) at varying speeds, where the more innovative contexts represents those environments where the loss of the -i- formative was at a more advanced stage: inflected infinitives, present participles and the Lindisfarne dataset. The opposite is true for the more conservative categories and for Rushworth^{2}. Competing and concurrent analogical processes are attested which affect both original weak class 2 verbs and transferred verbs, and which have been shown to produce irregularities. The clearest case was the analogical process re-inserting the -i- formative into the paradigm of weak class 2 verbs, an unsuccessful process due to the lower type frequency of the stem variant carrying the formative. Finally, it is important to highlight that, from a synchronic perspective, the loss of the -i- formative is one of the several changes affecting the whole weak verbal system. Other comparable changes were taking place elsewhere in the system, including the transferral of other weak verbs into the second conjugation, which contributed to the simplification of the verbal system. These reductive processes already attested in late Northumbrian herald the state of affairs later found in the Middle English period.

Chapter 7

Implications of the study

7.1. Introduction

Given the results presented in chapter 5 and discussed at length in chapter 6, it is possible to address a couple of issues of scholarly interest in relation to the language in Lindisfarne and Rushworth^2. These issues are the contentious topics of the authorship of the Lindisfarne gloss and the source of the similarities between Rushworth^2 and Lindisfarne. These topics are discussed in sections 7.3. and 7.4., respectively. Before these discussions are tackled, however, it is important to establish the level of internal variation that exists within these glosses. This point has been raised at several points throughout this thesis, most notably when introducing the results of the statistical analyses in chapter 5, and when accounting for the different rates of -i- formative deletion in Lindisfarne and Rushworth^2 (cf. section 6.3.). Thus, the following section addresses the issue of inter- and intratextual variation in order to establish which of the two glossators, that is, Aldred or Owun, presented higher levels of morphological variation in their language. The results shared below demonstrate that it is Aldred who seems to be more accepting of linguistic variation.

7.2. The effects of inter- and intratextual variation on the overall incidence of the -i- formative

It was already established in section 5.3. that the Lindisfarne dataset displayed considerable variation in comparison to the Rushworth^2 dataset, and it was claimed in that section that these differing levels of variation were partially responsible for the structure of the inference trees. Figures 7, informed by the Lindisfarne dataset, presented two major primary contributing factors and four secondary factors, while Figure 8, based on the Rushworth^2 dataset, only featured two major primary factors and a secondary one which was a repetition of the most significant primary factor, that is, morphosyntactic category. Sections 5.3. and 6.3. also highlighted how the combined inference tree given in Figure 9 represented a combination of both datasets but was greatly influenced by the complexity and variation of the Lindisfarne dataset, hence the very similar lay-out between Figure 7 and Figure 9. Section 6.3.2. argued that the complexity of the Lindisfarne model (Figure 7) was not simply the result of

internal variation, but also partially produced by the fact that this text attests to a more advanced level of -i- formative deletion. This sub-section aims to illustrate how much more varied the Lindisfarne data are by means of an in-depth comparison of the scribal practice of Aldred and Owun.

McIntosh (1973), in his in-depth study of early Middle English manuscripts, established that there are three main scribal approaches to translating and glossing a text. The first one is to translate and/or copy the language as closely to the original as possible, a phenomenon which, according to McIntosh does not occur very often in medieval manuscripts. The second approach is to accommodate and approximate the language found in the text to be either translated or copied to the variety of the scribe, hence making numerous modifications to the grammar, orthography and lexicon. The final main approach consists of a mixture of the first two approaches. These last two methods of scribal practice are very commonly found in medieval manuscripts (McIntosh 1973; Benskin and Laing 1981: 56). An important observation made by McIntosh in relation to these methods of scribal copying and translating is that a scribe need not solely adopt one technique across the whole text. A commonly occurring scenario involves scribes changing scribal methods throughout a text, a phenomenon termed 'translation drift' (McIntosh 1973; Benskin and Laing 1981: 56).

In terms of scribal practice, Aldred admits much more variation in his active repertoire than does Owun. This phenomenon becomes evident when analysing in detail some of the behaviours of these two scribes when it comes to the representation of certain morphological features. In order to illustrate this discussion, three morphological features have been selected. The first feature involves the alternation between *-ð* and *-s* ending as the inflections of the third person singular, plural present indicative, and imperative plural categories. The second one is the presence of weak preterite forms in originally strong verbs, while the final one concerns the incidence of the -i- formative in weak class 2 verbs. With regard to the first feature, it is estimated that Lindisfarne contains an approximate total of 2884 verbal forms attesting the innovative alveolar *-s* ending, while Rushworth^2 contains an approximate 1360 forms (Holmqvist 1922; Ross 1934 – cf. Table 3 in section 2.4.2.). It should be mentioned that neither in Ross' (1934) paper on the emergence of *-s* verbal ending, nor in his book on the accidence of Lindisfarne (Ross 1937), nor in his later detailed paper on the accidence of Rushworth^2 (Ross 1977) does he mention the total number of verbal forms with final *-ð* for these two texts. There are 112 weak class 2 verbs ending in *-s*

in Lindisfarne and seventy-nine ending in *-ð* (n=542) in my dataset. In Rushworth^2 there are fifty-nine instances of innovative final *-s* as opposed to thirty-seven instances of final *-ð* (n=306). Cole (2014) carried out an extensive analysis of the variation between *-s* and *-ð* verbal endings in Lindisfarne, where a total 1504 *-s* forms are attested, as well as 1549 *-ð* forms. Cole's figures indicate that considerable variation is present in Lindisfarne in terms of the realisation of the third person singular, plural present indicative, and imperative plural inflectional consonant, hence the very similar number of verbs attested in Lindisfarne where etymological *-ð* and innovative *-s* are chosen. My data, although limited in this particular regard because only one sub-class of weak verbs is considered, indicate that there is quite an even distribution of *-s* and *-ð* verbal endings in both Lindisfarne and Rushworth^2, with a slightly higher incidence of both variants attested in Lindisfarne. This is an expected observation, given that more total verbal forms have been collected from Lindisfarne than from Rushworth^2 (see section 5.2. for a justification). In light of the numbers presented in Table 3, it becomes clear that Rushworth^2 does not display such great morphological variation and innovation as Lindisfarne does, since much fewer verbs are attested with *-s* ending, suggesting that *-ð* ending was still the dominant one in Rushworth^2.

A similar trend is observed when analysing the appearance of weak preterite verbal forms in originally strong verbs in the glosses to Lindisfarne and Rushworth^2 (cf. Costa Rivas 2020). As summarised in section 2.4.2., Lindisfarne attests to a more advanced stage of this regularising phenomenon due to its higher number of innovative weak forms. All twenty-three lexemes analysed by Costa Rivas (2020) presented alternation between original strong and innovative weak preterite forms in Lindisfarne. Rushworth^2, however, features only sixteen of the analysed verbs with very low numbers of innovative weak forms: twelve out of 271 total instances (4.4%). Thus, these low numbers indicate that the preferred means of preterite formation in Rushworth^2 remained change of the root vowel, resulting in less morphological variation which, in turns, translates into a more conservative text (cf. section 2.4.).

The final morphological feature to be explored in this section is the incidence of the -i- formative in weak class 2 verbs. A comparative analysis of all the weak class 2 forms collected for this thesis was carried out in order to establish which morphological variant was preferred by Aldred and Owun, either the verbal stem retaining the -i- formative or losing it. All these data can be found in Appendix A.

In over 200 instances, comprising approximately 400 tokens, the same form of the verb has been chosen by both Aldred and Owun, either a form carrying the -i- formative etymologically or an innovative form without it. Examples of the former scenario include: infinitive *bodiga* 'preach' glossing Latin present infinitive *predicare* 'to preach' found in MkGl (Li & Ru) 5.20; second person plural present indicative forms *giuiað* and *giowigas* 'you beg' found in LkGl (Li & Ru) 11.9, respectively, and which gloss Latin second person plural present indicative verb *petite* 'you beg, you ask for'; or first person plural present subjunctive forms *uoe deadage* and *we deodige* 'we would die' glossing Latin *moriamur*, that is, the first person plural present subjunctive passive form of the passive verb *mori* 'to die', and which are found in JnGl (Li & Ru) 11.16. Examples of the latter scenario include: present participle forms *wæs milsense* and *wes milsende* 'was feeling sorry' found in MkGl (Li & Ru) 9.22, respectively, and which gloss the Latin perfect infinitive *misertus*, meaning 'have pity or to feel compassion'; first person singular present indicative forms *ic fulua* and *ic gifulwo* 'I baptize' found in LkGl (Li & Ru) 3.16, glossing Latin first person singular present indicative active verb *baptizo* 'I baptize'; or first person singular present indicative form *ic lufa* and *ic lufo* 'I love' glossing Latin first person singular present indicative active *amo* 'I love' in JnGl (Li & Ru) 21.26. In all these cases where comparable forms have been provided by both Aldred and Owun, it is not possible to establish whether one of the glossators is more innovative and accepting of variation than the other.

In eighty-three additional instances, one of the scribes chooses a weak class 2 verb to translate a Latin verb where the other scribe chooses either a different (and, therefore, not comparable) weak class 2 verb, or a verb attesting another class or even conjugation type, hence rendering these instances inappropriate for the specific purpose at hand. Note the following examples: third person singular present indicative form *reafað* in MkGl (Li) 3.27 'he bereaves, he plunders' glossing Latin *diripiet*, that is, the third person singular future indicative active form of *diripere* 'pillage, spoil', as opposed to the infinitive *reofige* 'bereave, plunder' found in the corresponding Rushworth[2] gloss (MkGl (Ru) 3.27); present participles *cunnendo weron* and *cymende werun* attesting respectively the weak class 2 verb *cunnian* 'attempt' and strong class 5 verb *cuman* 'come', forms which gloss the Latin passive adjective *conati* attesting the verb *conari* 'attempt' and which are found in LkGl (Li & Ru) 1.1.

For the purpose of this sub-section, there are fifty comparable instances, however, which help to shed light on the issue of scribal practice and the

representation of morphological innovation. In these fifty cases, the exact same weak class 2 verb has been chosen by both Aldred and Owun, and the only difference between their renderings of the Latin lemma is that one scribe chooses the etymological form of the verb retaining the -i- formative, while the other chooses a formativeless form. In thirteen of these cases, it is Owun who translates a Latin verb by means of a formativeless weak class 2 verb, while Aldred glosses the verb with a form of a weak class 2 verb retaining the formative, as etymologically expected. Instances of this scenario include the plural present indicative forms *wæstmiað* and *wæstmað* 'they bring forth fruit' attested in MkGl (Li & Ru) 4.20, respectively, and which gloss Latin *fructificant* 'they sprout'; present participle forms *wuldrigendo* and *wuldrende* 'glorifying' found in LkGl (Li & Ru) 2.20 and which translate Latin *glorificantes*, adjective and present participle of the verb *glorificare* 'glorify'. However, in the majority of comparable cases, that is, in thirty-seven of these fifty aforementioned cases, it is Aldred who provides the morphologically innovative form of the verb without the -i- formative, while Owun resorts to the more conservative variant of the verb retaining the formative. Some examples include: second person plural present indicative verb *smeas* 'you consider' found in MkGl (Li) 8.17 as a translation of Latin *cogitates* 'you think' as opposed to the more conservative *smeogas* found in MkGl (Ru) 8.17; imperative plural *gearuað* 'prepare!' in LkGl (Li) 3.4 translating Latin imperative *parate* 'prepare!' versus *georwigas* in LkGl (Ru) 3.4; or second person plural present indicatives forms *gie gelufas* and *ge lufigas* 'you love' glossing Latin *diligitis* 'you love', attested both in JnGl (Li & Ru) 14.15, and JnGl (Li & Ru) 14.28.

It should be noted that all of the aforementioned fifty instances attest two particular morphological categories, namely, the plural present indicative and the imperative plural.[101] These are the two categories in my data which display an intermediate level of formative deletion, contrasting mainly with the present participles and the inflected infinitives, which tend to lose the formative, or the infinitives and subjunctives, which tend to keep it (cf. Figures 4 and 5 in section 5.2.). It is, therefore, understandable that variation would be more noticeable in the plural present indicative and imperative plural categories, since these categories still offered some scope for

[101] There is one exception: infinitival forms *getimbra* and *getimbria* 'construct' found, respectively, in LkGl (Li & Ru) 14.30, where the formativeless form in found in Lindisfarne.

variation, not having generalised the formativeless variant of the stem almost entirely, or barely incorporated the change at all.

These figures and examples, as well as all remaining instances presented in Appendix A, lend further support to the two points made throughout this discussion, namely, that in terms of their scribal practices, Aldred emerges as a more innovative glossator, inclined to introduce morphological variants in his glosses. In contrast, Owun seems to be a more conservative glossator whose language does not present as much variation, since he tends to favour forms retaining the -i- formative. In line with McIntosh's (1973) broad classification of medieval scribal and translation practice, both scribes would fall under the second category, namely, scribes who modify to a lesser or greater degree the language they find in exemplars in order to approximate it to their active repertoires. It is clear, therefore, that part of the complexity of the Lindisfarne dataset and its associated representation in Figure 7 stems from the fact that this dataset presents more linguistic variation, as opposed to the Rushworth^2 dataset which presents considerably less variation (see Figure 8). This state of affairs is a direct consequence of the more advanced stage of the spread of -i- formative deletion in Lindisfarne than in Rushworth^2, as argued in section 6.3.2.

7.3. Lindisfarne and the authorship debate

The linguistic variation proper to Lindisfarne was first discussed in the context of the authorship debate of the glosses in section 2.3.1.a. Since my Lindisfarne dataset also presents considerable variation in terms of the incidence of the -i- formative, it proves a fitting testing ground for said debate.

In terms of the overall distribution of the -i- formative across individual gospels, Figure 6 in section 5.2. demonstrated that rates of -i- formative deletion remained considerably similar throughout, with slightly fewer formativeless forms in John (37%). It will be recalled that previous studies on the linguistic variation in Lindisfarne identified sections within the individual gospels with marked differences in terms of the incidence of these variants (cf. section 2.3.1.a.). A presentation of my data arbitrarily divided into fourteen sections of similar length was given in section 5.2. (Table 7) where it was revealed that, with very few noticeable exceptions, the rate of -i- formative deletion remained very regular across divisions. My data do not align with existing scholarship (Brunner 1947- 1948; van Bergen 2008; Cole 2014 and 2016) in

presenting a change in language around MkGl (Li) 5.40, since rates of -i- formative deletion are very similar after this point. A similarity between my findings and those of previous studies, however, is that John also emerges as the most conservative of the four gospels in Lindisfarne (see Figure 6 and Table 7 in section 5.2.). For the purpose of this section, it must be recalled that the slight conservatism proper to John was not statistically significant, as a Chi-square test revealed in section 5.2.

In light of my data, therefore, it is not possible to entertain the idea that more than one glossator was responsible for the Lindisfarne gloss, since not enough variation is visible in terms of -i- formative deletion. Section 7.2. above demonstrated that variation is very much a feature of the language in Lindisfarne. This variation stems from preferred scribal practices and the more advanced stage of spread of the analogical change removing the -i- formative from the paradigm of weak class 2 verbs. Naturally, the more recent proposal ascribing the variation in Lindisfarne to Aldred's use of different translations of the gospels cannot be ruled out (cf. section 2.3.1.a.).

7.4. Rushworth^2 and the copying debate

This thesis has demonstrated that the language in Lindisfarne and Rushworth^2 are considerably different, since the former text presents more variation and a more advanced grammatical system than the latter (cf. chapters 2, 5 and 6). However, in line with traditional studies (Skeat 1871; Bibire and Ross 1981) which identified numerous similarities between these two texts, I carried out an exhaustive analysis of each of the verbal instances collected for this thesis (Appendix A). As mentioned earlier in this chapter (section 7.2.), my data do show many similarities between Lindisfarne and Rushworth^2. For example, in over 200 cases, covering more than 400 tokens, both Aldred and Owun provide a gloss featuring the same weak class 2 verb either with or without -i- formative. As the examples given in 7.2. demonstrate, their scribal practice can be considered similar insofar as they opt for a verbal form either with or without -i- formative. However, the spelling is far from identical. Further, their use of double glosses is not identical, and examples are given in Appendix A where Aldred provides a double or multiple gloss while Owun opts for a single gloss instead (and vice-versa). These facts complicate the traditional account positing that Owun must have copied Lindisfarne when working on his own translation. Further complicating evidence is provided by the additional fifty instances mentioned in section 7.2. and presented in Appendix A where one of the scribes (usually Owun) glosses a

Latin lemma with a weak class 2 verbs featuring the -i- formative but the other scribe (usually Aldred) provides the variant without the formative. The most challenging evidence in my dataset is presented by the over eighty instances covering approximately 200 tokens where one of the scribes gives a weak class 2 verb with or without the formative while the other scribe provides a completely different verb, either from a different weak class or verbal conjugation altogether. Selected examples of this scenario were also given in section 7.2. above.

Given these examples and overall figures, the suggestion that the similarities between Lindisfarne and Rushworth^2 are the result of scribal copying on the part of Owun cannot be fully entertained. If this were the case, then Owun made numerous and deliberate changes to the language in Lindisfarne, as demonstrated by the examples in section 7.2. and Appendix A. This scenario grants more agency to Owun than the traditional account does (cf. Skeat 1871; Bibire and Ross 1981). The more probable scenario which accounts for both the similarities and discrepancies found in these two texts still remains the one which posits the existence of additional translations of the gospels to which both Aldred and Owun had access (cf. Kotake 2008a, Kotake 2008b and 2016).

7.5. Summary

Variation is a key feature of late Northumbrian data, since this dialect attests to a number of processes which are gradually spreading in the language. The loss of the -i- formative is one such process. This chapter has provided additional evidence supporting the claim made throughout this thesis that, in the context of the Northumbrian dialect, Lindisfarne presents a more varied language than Rushworth^2. Two main reasons for this behaviour have been put forward. Firstly, greater number of morphological variants in Lindisfarne is the result of the more advanced stage of implementation of linguistic changes in this text. The opposite is true for Rushworth^2. Secondly, individual scribal preference accounts for different rates of internal variation. In this respect, Aldred emerges as the more varied glossator.

In terms of scribal practice, this chapter has also contributed to two topics of scholarly interest, namely the Lindisfarne authorship debate and the copying debate in Rushworth^2. In both cases my data indicate that the traditional interpretations cannot be sustained. Not enough internal variation exists in Lindisfarne to suggest that more than one scribe was involved in the glossing of the gospels. On the other hand,

significant differences (both in number and nature) exist between Lindisfarne and Rushworth^2, therefore problematizing the scribal copying suggestion. The most likely scenario accounting for the variety in Lindisfarne and similarities in Rushworth^2 is to suppose that both scribes shared common material now lost whose language they incorporated into their own renderings of the gospels.

Conclusion

This thesis has presented a detailed study on the status of weak class 2 verbs in the late Northumbrian dialect, specifically on the incidence of their characteristic -i- stem formative. To this end, data from the late Northumbrian glosses to the Holy Gospels (Lindisfarne Gospels and Rushworth Gospels) were manually collected and statistically analysed. Since my interest lay in the late Northumbrian dialect, only the glosses attesting this dialect were analysed, namely Lindisfarne, glossed by Aldred, and Rushworth^{2}, glossed by Owun (cf. section 2.2.). As stated in the Introduction to this thesis, due to the COVID pandemic and the associated closure of libraries, I was unable to access a copy of the edition to Durham, Cathedral Library, MS A.iv.19 (Lindelöf 1901), the other existing text containing late Northumbrian glosses which I initially intended to analyse. The glosses to this manuscript are thought to have been added by the same Aldred who glossed Lindisfarne.

To my knowledge, the present thesis is the first study to offer such an in-depth treatment of the loss of the -i- formative in weak class 2 verbs in Old English. While previous, more superficial studies exist (Ross 1937; Stark 1982; Ramírez Pérez 2017 and 2020), this thesis distinguishes itself from these previous studies by offering a much more specific and detailed account which also benefits from the use of modern statistical tools. It is also set apart from earlier studies in terms of scope. While Ross (1937) briefly approached the loss of the -i- formative on the basis of Lindisfarne data alone, I have included the Rushworth^{2} data for a more comprehensive and dialect-specific study. Stark (1982), on the other hand, treated the loss of the -i- formative in combination with a number of other structural changes affecting the whole of the Old English weak verbal system. To this end, his dataset was informed by more than just Anglian texts, where the loss of the -i- formative is first attested. My earlier work (Ramírez Pérez 2017 and 2020) differs from the present thesis not only in terms of scope, but also methodology. My previous projects constituted a pilot study on which this thesis builds. Data collection was restricted to the glosses found in Matthew's Gospel (Lindisfarne and Rushworth^{1}), and my approach to the data was qualitative instead of quantitative. Because of my focus on this specific gospel, my earlier work offered a dialectal comparison between the status of weak class 2 verbs in Northumbrian and Old Mercian. For this thesis, I decided to restrict the scope to late Northumbrian texts because it is precisely in these texts where the loss of the -i-

formative is first attested, despite earlier claims that this process was a Middle English innovation (Lass 1992a: 127-128). The main distinguishing feature of this thesis in relation to existing scholarship on this topic is, however, its application of quantitative analyses which have facilitated the identification of contributing factors, as well as their relative importance in the overall process.

From a methodological perspective, this thesis aligns with existing scholarship on historical data and concludes that the use of modern statistical tools proves extremely helpful (Cole 2014 and 2016; Fernández Cuesta and Langmuir 2019; Thaisen 2020), especially when investigating complex linguistic processes with numerous, potential conditioning factors, as in the case of the present study. While it is evident that the conclusions put forward in this thesis would not have been arrived at without statistical tools, my discussion in chapter 6 also highlighted the benefits of combining quantitative and qualitative approaches to data analysis. By closely inspecting the statistical results obtained by means of the different regression models carried out and the datasets informing these models, I was able to identify interferences and correlations, for instance in relation to the role played by historical class association and frequency in the process of -i- formative deletion (cf. sections 6.2.3. and 6.2.3.). This qualitative approach proved beneficial, too, when investigating apparent incongruent behaviour in the data. A case in point was the contradictory trend identified in verbs originating from the third weak conjugation which, when compared to the other transferred verbs from the first weak class, were more innovative. A justification for this behaviour was put forward in section 6.3.2.b.

The results obtained by this thesis revealed that the loss of the -i- formative is a gradual process affected by a variety of primary and secondary factors, where the primary ones had a much more evident effect on the fate of the -i- formative than the secondary ones. Amongst the most influential factors, frequency of occurrence (specifically token frequency) and etymological class must be mentioned together, for it was proven in chapter 6 that these two factors slowed down the deletion process, particularly when they happened in combination, for which see sections 6.2.2. and 6.2.3. The most influential factor in the loss of the -i- formative, however, is the level of morphological and phonological complexity of the different inflectional endings of the morphosyntactic categories covered in this thesis (section 6.2.1.).

Concerning the topic of transferred verbs, that is, those verbs which etymologically belonged to the other two weak verbal classes but which, for the

reasons mentioned in section 2.5., acquired the inflections proper to the second weak conjugation during the (pre)historic period, my data unequivocally demonstrate that they are much more conservative in nature, particularly if compared with original weak class 2 verbs. Here, the notions of innovation and conservatism are understood in terms of rates of -i- formative deletion. Thus, original weak class 2 verbs emerge as more innovative by virtue of their higher rate of -i- formative deletion, while transferred verbs are more conservative because they resist the loss of the -i- formative (cf. section 6.2.2.).

In terms of the motivation and means of implementation of the morphological change, this thesis argued that the process of -i- formative deletion was conceptually and analogically motivated, as well as lexically implemented. Ample evidence for this interpretation was found in my data (cf. section 6.3.2.), most significantly the level of variation found in specific lexemes, morphosyntactic categories and even datasets, or the fact that the innovative formativeless variant of the stem was more commonly attested in low token frequency verbs. Such behaviour has been extensively reported in the literature, most commonly in cases of paradigm levelling (Phillips 2001; Bybee 2007; Fertig 2013; Cole 2014; Costa Rivas 2020). My results clearly indicate that the internal variation present in the paradigm of weak class 2 verbs, and which was inherited from Germanic, was in the process of being levelled out in late Northumbrian. The main direction of change consisted in the extension and generalization of the formativeless stem variant across the paradigm. This trend is in place despite concurrent, competing analogical processes affecting the paradigm of weak class 2 verbs, most notably the generalization of the stem variant carrying no -i- formative (cf. section 6.3.2.). Although the loss of the -i- formative is very much a change in progress in late Northumbrian, as demonstrated by the fact that only 40% of all the tokens collected for this thesis attest to this change, I believe the process was conceptually driven in an attempt to achieve greater paradigmatic regularity and, as a result, simplification. Greater paradigmatic regularity and simplification were indeed attested in the Middle English weak verbal system (Lass 1992a; Laing 2009; Fulk 2012), thus, the rather advanced stage of this change in late Northumbrian represents the first stages of this gradual process, so far as written records allow us to see. From a synchronic perspective, however, the innovative formativeless forms occurred alongside the etymological ones carrying the -i- formative in the same morphosyntactic categories, proving that both variants were valid within the system. Such a scenario

with such internal variation is synchronically perceived as more complex and non-transparent, hence leading to simplification in the form of gradual elimination of allomorphic variation.

The competing analogical process re-inserting the -i- formative into the paradigm of weak class 2 verbs (cf. section 6.3.1.) constitutes a clear example of analogical change leading to systemic irregularity. As noted on the literature (cf. Fertig 2013), systemic regularity tends to be the most common outcome of analogy, although synchronic variation leading to irregularity is also a reported outcome of analogy, albeit rarer. These tendencies are visible in my data. For the main analogical process deleting the -i- formative is robustly attested in my data and, as a result, constitutes the process bringing about systemic regularity. On the other hand, the rarer process of analogically re-inserting the -i- formative, which contributes to the creation of internal irregularity, is very timidly attested.

Another source of irregularity resulting from analogy has already been mentioned, namely the distinct behaviour of transferred verbs. An important aspect for this thesis was to establish whether transferred verbs historically originating in the other two weak verbal conjugation types behaved similarly to original weak class 2 verbs, that is, favouring the formativeless variant of the stem. Section 5.3. and 6.2.2. thoroughly demonstrated how these verbs tend to resist the loss of the -i- formative overall (with the caveat already mentioned that original weak class 1 verbs seemed to be even more conservative). Such behaviour contradicts the main direction of change visible in original weak class 2 verbs and, therefore, constitutes a source of interparadigmatic variation leading to irregularity. Section 6.3.1. argued that the reason behind such distinct behaviour stemmed from the fact that these verbs were being subject to a competing analogical change, namely the adoption of weak class 2 inflections, a gradual process which commenced in the (pre)historic period. In the context of these competing changes, irregularities occur, and there is limited scope for the operation of the more recent analogical process, namely the elimination of the stem variant carrying the -i- formative, in the case of the present study. The fact that the earlier analogical process, that is, the adoption of features proper to weak class 2 verbs by transferred verbs, can still be attested in my data (cf. sections 2.5., 4.3., and 6.3.2.) suggests that this is a change in progress in Northumbrian, too. Further, it also proves that the weak class 2 conjugation type is indeed the morphologically productive one, a property resulting from the high type frequency of this verbal class and directly

linked to its considerable paradigmatic uniformity and stability (cf. sections 2.5. and 6.3.).

The loss of the -i- formative must, therefore, be understood as part of a bigger chain of processes bringing about structural change to the weak verbal system in late Old English. The change in class membership of verbs originating in the other two weak verbal classes is one of these changes which has great repercussions for my thesis because it is very clearly attested in my data and it interferes with my main process under study. As argued in section 6.3., all these processes were aimed at producing eventual further regularity and simplification, even if from a synchronic perspective the variation produced by these changes create increased internal irregularities. Such variation and irregularities are congruent with a system undergoing considerable (gradual) change.

On the topic of variation, it is important to remember that section 7.2. indicated that part of the intra- and intertextual variation present in the Lindisfarne and Rushworth^2 glosses stemmed from the glossing practices specific to each of the scribes. However, on a bigger scale, such level of variation is in line with the chronological and gradual aspect of linguistic change (cf. section 6.3.2.). The loss of the -i- formative is a lexically diffused process, and such a gradual process translates in higher levels of -i- formative deletion in particular lexemes, morphosyntactic categories and even datasets in this thesis (cf. chapters 5 and 6). Those lexemes and categories where the loss of the formative is more strongly felt constitute those contexts where the deletion process first started, i.e. inflected infinitives and present participles for the reasons outlined in section 6.2.1. On the other hand, those lexemes and categories where the loss of the formative is barely felt (i.e. high token frequency items or conservative categories such as the infinitive and subjunctives) constitute the contexts where this process shows in its incipient stages. It should be remembered that the loss of the -i- formative is attested in every single morphosyntactic category with the exception of the plural present subjunctive (a rare category in my data, overall), hence demonstrating that this change is already affecting nearly all the possible categories it could affect – see figures 4 and 5 in section 5.2. This gradual view of language change also helps to justify the peculiar behaviour of weak class 1 verbs which, in the context of the very conservative transferred verbs, emerge as even more conservative. I believe this is the case because, bearing in mind the additional, competing change affecting these verbs and the chronology of both processes, the

loss of the -i- formative is barely attested in these verbs because it is in its very early stages. Original weak class 3 verbs, on the other hand, which had started acquiring typical weak class 2 inflection much earlier, behave much more like original weak class 2 verbs and, therefore, show slightly higher rates of -i- formative deletion. Finally, the conservatism proper to Rushworth^2 (notwithstanding the remarks included in section 7.2. in relation to glossing practices) is a direct reflection of the gradual nature of language change, where this text displays a much earlier stage of the spread of the formativeless variant of the stem than Lindisfarne.

While attempting to answer the main research questions posed by this thesis, I came into contact with relevant scholarly topics in relation to the Lindisfarne and Rushworth^2 glosses. The findings in this thesis have contributed to these debates, namely the Lindisfarne authorship debate and the scribal copying debate for Rushworth^2. With regard to the first topic, it was demonstrated in section 4.2. that, unlike in previous studies into internal variation in Lindisfarne (Brunner 1947-1948; van Bergen 2008; Cole 2014; Costa Rivas 2020), the analysis of -i- formative deletion in the four gospels revealed no significant deviation, as the Chi-squared test for statistical significance confirmed. It was noted, however, that John was indeed more conservative than the preceding three gospels, an expected finding in light of previous scholarship. My data, therefore, do seem to support the traditional view that the gloss in Lindisfarne is the work of a sole glossator. The internal variation attested in Lindisfarne was justified in two ways in section 7.3. The Aldred that emerges from the analysis of the glosses is a very conscientious glossator who is very aware and even perhaps accepting of linguistic variation. This attitude translates not only in terms of morphological variants attested in the glosses, but also in the form of double and multiple glosses to single Latin lemmata. Intratextual variation could then be the result of Aldred's more inclusive and less conservative glossing practice. The second interpretation aligns with more recent scholarship in presupposing that the variation in Lindisfarne is the result of contamination from additional sources Aldred must have consulted while compiling his own translation or rendering of the Holy Gospels.

A very similar dual conclusion is arrived at for the debate of scribal copying on the part of Owun (cf. section 7.4.). While it is undeniable that considerable similarities exist between Lindisfarne and Rushworth^2, my data, in line with more recent findings (Kotake 2008a; 2008b and 2016), demonstrate that significant discrepancies exist as well, and which were disregarded by the traditional studies which first posited the

copying scenario (Skeat 1871; Bibire and Ross 1981). Thus, I concluded that either Owun indeed used Aldred's Lindisfarne when producing his own version of the gospels but made deliberate major changes, or both scribes based their translations on common sources. Both scenarios account for both the similarities and discrepancies found in the texts. The first scenario grants more agency to Owun than the traditional copying account does.

An additional outcome of this thesis is the fact that it has highlighted avenues of future research which have either not been discussed here or done so very superficially. The main one is an analysis of the glosses in Durham, Cathedral Library, MS A.iv.19 which are also attributed to Aldred, the Lindisfarne scribe (cf. section 2.2.). Although it seems that these glosses were added approximately twenty years after those in Lindisfarne, there are indications in Durham that its language is not more advanced, as it might be expected. In terms of the appearance of weak preterites in original strong verbs, a very similar rate of innovative weak forms are found both in Lindisfarne and in Durham (Costa Rivas 2020: 163-172). Other studies on nominal and verbal morphology indicate that Durham is a more conservative text (cf. Ross 1970 and 1971; Fernández Cuesta and Langmuir 2019). The opposite is true in some other respects. In terms of nominal morphology, for instance, the extension of the *-es* genitive singular ending to nouns which did not originally belong to the masculine or neuter *a*-stem declension occurs in all nouns and modifiers, irrespective of their genders and stems. Such wide adoption of the possessive marker is unparalleled in Lindisfarne (Rodríguez Ledesma 2018: 626, 641; Jones 1967: 107). It is evident that the Durham glosses present considerable linguistic variation, an unsurprising observation given the fact they attest the very varied late Northumbrian dialect. Because Durham, Cathedral Library, MS A.iv.19 is the remaining extant text attesting late Northumbrian not analysed by this thesis, it could provide further evidence into the loss of the -i- formative in weak class 2 verbs. In line with previous scholarship on verbal morphology in this text, it would be expected to find a lower degree of paradigmatic simplification and, therefore, lower rates of -i- formative deletion.

From a diachronic perspective, I would also like to investigate the fate of the weak verbal system in Middle English. As mentioned earlier, it has previously been suggested that the loss of the -i- formative was a Middle English development, a statement the findings in this thesis contradict. Because chapter 6 highlighted how the loss of the -i- formative cannot be treated in isolation when attempting to provide an

informative picture for its motivation and spread, it would be beneficial to extend the scope of the analysis in Middle English to encompass the whole weak verbal system, and not just the fate of the second weak conjugation, as this thesis, and existing scholarship, do (Warner 2017; Goering 2021).

Further, given recent scholarship which has identified a language external motivation for some structural changes in late Old English (Dawson 2003; Lutz 2010; McColl Millar 2016), I intend to explore the possibility of linguistic contact with Old Norse as providing the impetus for the drive to simplify the paradigm of weak class 2 verbs. It should be noted that the Norse cognates to these verbs lacked the -i- formative etymologically: compare OE *lician* versus ON *lika*, PDE 'like', from Proto-Germanic **likijan*, or OE *hatian* versus ON *hata*, PDE 'hate', from Proto-Germanic **hatjan* (Ringe and Taylor 2014: 94). Thus, the Old Norse grammatical system could have arguably provided the model for the resulting paradigm, that is, a non-alternating paradigm. A priori, I believe this is an interesting avenue of research but not one without problems, hence why a more careful and nuanced study than the one presented in this thesis is required. My findings highlighted that there are numerous language internal processes affecting the weak verbal system as a whole and they are similar to the analogical elimination of the stem variant carrying the -i- formative in weak class 2 verbs; therefore, these findings suggest that this change was language internal in nature. The same is true for the various primary and secondary language internal factors which are conditioning the loss of the formative. Further, cross-linguistic analyses have shown that, from a typological perspective, languages tend to prefer non-alternating grammatical systems (Fertig 2013). The non-alternating paradigm resulting from the elimination of the stem variant carrying the -i- formative, therefore, does not need a language external motivation. However, it cannot be denied that language contact scenarios are conducive to change in the form of grammatical simplification (Trudgill 1986; McColl Millar 2016). In this respect, it could be argued that the presence of and contact with a competing grammatical system, that is, that provided by Old Norse, could have enhanced the process of -i- formative deletion which, remarkably, is first attested in late Northumbrian, a dialect where heavy Norse influence has long been noted (Townend 2002).

Since the previous language contact scenario presupposes a Germanic-specific linguistic system, it would be informative to explore what the fate of the weak verbal

system is in other Germanic languages, particularly Frisian due to its close linguistic ties with Old English (Fulk 2018: 26).

Finally, there were two additional topics touched on by this thesis which could form the basis for a more full-fledged analysis. The first one is to do with the prosodic feature of syllable and stem weight, and the effects it has on vowel deletion processes. Sections 3.2.1.b. and 6.2.1. mentioned how the presence of a preceding heavy syllable can lead to syncope of following vowels, like in the cases of the inflectional endings of the second and third person singular present indicative in strong and weak class 1 verbs. Remarkably, weak class 2 verbs do not show signs of inflectional vowel syncope in these contexts (Laing 2009). Minkova (2011) did not identify any correlations either between the presence of a heavy stem and preference for a back inflectional vowel in the preterite (-*ode* and -*odon* as opposed to -*ede* and -*edon*). Middle English data, however, do seem to be subject to syncope after a heavy stem, as Goering's (2021) analysis of Middle English reflexes of weak class 2 verbs in the AB dialect revealed. His data clearly indicated that the inflectional vowel following the ME reflex of the -i- formative (usually <e>) tended to be lost more readily when preceded by a heavy stem than if preceded by a light stem. In terms of my Northumbrian data, it should be remembered that it is only in Lindisfarne where very subtle evidence of -i- formative deletion after a heavy stem is found (cf. section 3.2.1.b. and the discussion therewith in relation to Figure 7). The low numbers in my data could indicate that the weight of the verbal stem is timidly and gradually becoming a contributing factor, hence providing earlier evidence for the constraint identified by Goering on the basis of Middle English data.

The final topic I would like to research further and which was inspired by this thesis is related to the notion of scribal practice, and it pertains to the use of double consonants by Aldred to mark a preceding short vowel (cf. section 4.2.). My discussion in section 4.2. was strictly concerned with the interpretation of these double consonants for the purposes of identifying and classifying light and heavy verbal stems. It was mentioned in passing, however, that the presence of these unetymological double consonants in Lindisfarne could be an early indication of the disintegration of geminates. It would, therefore, be worth investigating further whether this is indeed the case in Lindisfarne, since this process is generally discussed in relation to Middle English data (Minkova 2014: 80; 93), with the spelling conventions of the *Ormulum* being the most well-known example.

These areas where further research can be carried out explain the growing, recent scholarly attention which the late Northumbrian dialect has received (cf. sections 2.2. to 2.4.). This dialect is a fascinating and informative source for the study of linguistic variation and change, for it has been demonstrated that many innovations generally dated to later periods in the history of the English language can already be seen, albeit timidly, in late Northumbrian. The loss of the -i- formative in weak class 2 verbs is one such example. Therefore, it is worth continuing the investigation into late Northumbrian because not only can it reveal further developments (like the potential ones outlined in the previous paragraph), but it can also provide further insight into the incipient stages of the actuation and implementation of linguistic change.

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Appendix: scribal practice in Lindisfarne and Rushworth^2

1) Number of instances where both Aldred and Owun provide the same translation for a given Latin lemma. These forms in Lindisfarne and Rushworth^2 are considered similar insofar as they present weak class 2 verbs either featuring the -i- formative or not, but they are certainly not identical.

Lindisfarne form followed by Rushworth^2 form. X ł Y implies the presence of a double or multiple gloss:

1. Losiga vs loesiga MkGl 3.4
2. Losiga vs loesiga MkGl 3.6
3. Gegearuagað vs gi-geowigað MkGl 4.30
4. Bya ł Wunia vs bya ł wunige MkGl 4.32
5. Slepende vs slepende MkGl 4.38
6. Herað ł edmodað ł hersumiað vs herað ł edmodað MkGl4.41
7. Cliopende vs cliopende MkGl 5.5.
8. Halsigo vs halsigo MkGl 5.7
9. Milsande vs milsende MkGl 5.19
10. Bodiga vs bodiga MkGl 5.20
11. Hilifige vs lifge MkGl 5.23
12. Wunað vs wunað MkGl 6.10
13. Giuge vs giowigo MkGl 6.24
14. Unrotsige vs unrotsiga MkGl 6.26
15. Milsanðe vs milsende MkGl 6.34
16. Gewidlige vs giwidliga MkGl 7.15
17. Gewidlige vs giwidliga MkGl 7.18
18. Gewidlegas vs giwidligas MkGl 7.20
19. Wiðlað vs widlas MkGl 7.23
20. Milso vs milsa MkGl 8.2
21. Costendo vs constende MkGl 8.11
22. Geðoliga vs giðoelge MkGl 8.31
23. Geðreadtaige vs giðreatiga MkGl 8.32
24. Ðola vs ðolo MkGl 9.19

25. Milsende vs milsende MkGl 9.22
26. Seofende vs seofende MkGl 10.22
27. Geniðriað vs giniðrias MkGl 10.33
28. Bismerageð vs bismerigas MkGl 10.34
29. Willniað vs wilnias MkGl 10.35
30. Willniað vs wilnigas MkGl 10.36
31. Giwigeð vs giowigas MkGl 10.38
32. Wuræðia vs wraðiga MkGl 10.41
33. Cliopia vs cliopiga MkGl 10.47
34. Costages vs costigas MkGl 12.15
35. Mænsumiað vs mænsumigað MkGl 12.25
36. Duolages vs gidwoligas MkGl 12.27
37. Lufa vs lufa MkGl 12.33
38. Wilcymogie ł gegroeta vs wilcumiga ł groeta MkGl 12.38
39. Endanne ł ł hia se geendado vs endanne ł sie geendado MkGl 13.4
40. To bodanne ł to fore-sægcane ł þte he sie boden vs to bodanne MkGl 13.10
41. Slepende vs slepende MkGl 13.36
42. Gegearwiga vs geowige MkGl 14.12
43. Unrotsia vs unrotsiga MkGl 14.19
44. Forhtiga vs forhtiga MkGl 14.33
45. Longiga vs longiga MkGl 14.33
46. Ge-ðoligas vs giðoeligas MkGl 14.34
47. Sleppende vs slepende MkGl 14.37
48. Slepende vs slepende MkGl 14.40
49. Slepað vs slepas MkGl 14.41
50. Willnias vs wilnigað MkGl 14.63
51. Gefremðiga vs fremðiga MkGl 14.71
52. Cursendo ł slægendo vs slænde ł cursende MkGl 15.17
53. Gefrohtiga vs forhtiga MkGl 16.6
54. Hlinigendum ł ræstendum vs hlionigendum MkGl 16.14
55. Bodigas vs bodigað MkGl 16.15
56. Gegearuiga vs gigeorwiga LkGl 1.17
57. Gebodage vs gibodige LkGl 1.19

58. Gemyndga vs gimyndge LkGl 1.72
59. Gearuiga vs georwige LkGl 1.76
60. Bodigo vs bodigo LkGl 2.10
61. Wundrando vs wundrende LkGl 2.33
62. Cliopende vs cliopende LkGl 3.4
63. Smeandum vs smeandum LkGl 3.15
64. Fulua vs gifulwo LkGl 3.16
65. Bodia vs bodiga LkGl 4.19
66. Gelecnæge ł wosa gelecned vs mæhte gihæla ł lecniga LkGl 8.43
67. Cuaccende vs cwacende LkGl 8.47
68. Bodia ł to bodianne vs bodiganne LkGl 9.2
69. Bodande vs bodende LkGl 9.6
70. Đola vs ðolo LkGl 9.41
71. Giuiað vs giowigas LkGl 11.9
72. Giuendum ł biddenda vs giowendum ł biddendum LkGl 11.13
73. Clænsað vs giclænsas LkGl 11.39
74. Somnigo vs somnigo LkGl 12.17
75. Somniga vs somniga LkGl 12.18
76. Wilnað vs wilnað LkGL 12.20
77. Aldagiað vs aldigað LkGl 12.33
78. Scortende vs scortende LkGl 12.33
79. Druncgnia ł (þte) se druncenig vs druncniga LkGl 12.45
80. Willniað ł ł giuað vs wilnigað LkGl 12.48
81. Gecunnia ł (þte) see gecostad vs gicunniga LkGl 12.56
82. Đrowendo weron ł biðon vs ðrowende werun LkGl 13.2
83. Losiga vs losige LkGl 13.3
84. Losiga vs loesga LkGl 13.5
85. Eft-lociga ł gesea vs locgiga ł gisea LkGl 13.11
86. Lecnegeð vs lecnigað LkGl 13.14
87. Cnylsiga vs clyniga LkGl 13.25
88. Hlinigað ł hræstað vs hlionigað ł restað LkGl 13.29
89. Losia vs losiga LkGl 13.33
90. Gesomnia vs gisomniga LkGl 13.34
91. Ge-lecnia vs gilecniga LkGl 14.3

92. Hlingendum vs hlingendum LkGl 14.10
93. Hlingendum vs hlioniendum LkGl 14.15
94. Cunnanne vs cunnanne LkGl 14.19
95. Ge-endanne vs giendanne LkGl 14.28
96. Ge-endiga vs giendiga LkGl 14.29
97. Bismeria vs bismeriga LkGl 14.29
98. Ge-endia vs giendiga LkGl 14.30
99. Gefeande vs gifeande LkGl 15.5
100. Efne geðoncaiges vs efne giðongias LkGl 15.6
101. Efne geðongigas vs efne-giðonccigas LkGl 15.9
102. Geondspyrne vs ge-ondspyrne LkGl 17.2
103. Sinngigað vs synnige LkGl 17.3
104. Gesynngiga vs gisyngað synnige LkGl 17.4
105. Ic hriordege vs has ic giriordige LkGl 17.8
106. Wilnias vs wilnigas LkGl 17.22
107. Geðrouia ł geðolia vs gi-ðrowiga LkGl 17.25
108. Sceomigo vs scomiga LkGl 18.4
109. Clioppendra vs cliopendra in LkGl 18.7
110. To wunianne ł gewunia vs to wuniganne LkGl 19.5
111. Gefeande vs gifeaande LkGl 19.6
112. Ceapigas vs ceopigas LkGl 19.13
113. Gerixage vs rixige LkGl 19.14
114. Ic giude ł walde giuge vs ic giowade ł giowigia LkGl 19.23
115. Rixage vs rixiga LkGl 19.27
116. Clioppogað vs cliopigað LkGl 19.40
117. (Efne-)gehaðrigas vs gihaðrigað LkGl 19.43
118. Hlosnende vs hlosnende LkGl 19.48
119. Bodande vs bodende LkGl 20.1
120. Costages vs costigas LkGl 20.23
121. Deadage vs deadiga LkGl 20.36
122. Hlifigiendra vs lifgendra LkGl 20.38
123. Hlifigað vs lufigað LkGl 20.38
124. Lufas vs lufas LkGl 20.46
125. Forhtiga vs giforhtiga LkGl 21.9

126. Gie ondsuariga ł onduarde vs ge ondsworigað LkGl 21.14
127. Gefeandо vs gifeande LkGl 22.5
128. Đafandо woeron vs gifeande werun LkGl 22.5
129. Gearuia vs georwiga LkGl 22.9
130. Ic ðrowiga ł ic ðolega vs ðrowigo LkGl 22.15
131. Sceortiga vs scortige LkGl 22.32
132. Were sceaunde vs wæs scomende LkGl 22.56
133. Ondsuariges vs gi-ondsworiað LkGl 22.68
134. Willnigas vs wilnigas LkGl 22.71
135. Ic ðrea vs ic ðria LkGl 23.22
136. Lifiende vs lifgende LkGl 24.5
137. Woeron spellendo ł gespelledon vs werun spellende LkGl 24.15
138. Lifiga ł lifde vs lifga LkGl 24.23
139. Geðrouia vs giðrowiga LkGl 24.26
140. Clioppendes vs cliopende JnGl 1.23
141. Fulguande vs fulwende JnGl 1.28
142. Wunigendæ vs wuniende JnGl 1.33
143. Gefeage ł ofersuiða vs gifeage ł ofer-swiðe JnGl 3.14
144. Fulwuande vs fulwende JnGl 3.23
145. Ic lytlege vs lytlige JnGl 3.30
146. Gie geuorðias vs worðigas JnGl 4.22
147. Ue uorðias vs worðigað JnGl 4.22
148. Geuorðias vs geworðigas JnGl 4.23
149. Geuorðias vs worðigas JnGl 4.24
150. Ic ge-endigo vs ic endigo JnGl 4.34
151. deadege ł gesuelta vs ongunnun deoðiga JnGl 4.47
152. Syngige vs gisyngiga JnGl 5.14
153. Gie wundria vs ge wundrige JnGl 5.20
154. Worðaiges vs worðigas JnGl 5.23
155. Worðiað vs worðigas JnGl 5.23
156. Lifias vs lifgas JnGl 5.25
157. Uundraige vs wundriga JnGl 5.28
158. Gefeage vs gifeaga JnGl 5.35
159. Somnias vs somnigas JnGl 6.12

160. Losia vs loesige JnGl 6.12
161. Ne ic losige ł ic ne spillo vs loesge ic JnGl 6.39
162. Lifiende vs lifgende JnGl 6.57
163. Ic liofo vs ic lifo JnGl 6.57
164. Mæge gefiage vs mæg gi-fioge JnGl 7.7
165. Gie wundriað vs wundriað JnGl 7.21
166. Gie iorsiges vs ge iorsigas JnGl 7.23
167. Clioppande uæs vs cliopende JnGl 7.28
168. Cuico ł lifigiendo vs lifgende JnGl 7.38
169. Smeage vs smeoge JnGl 7.52
170. Ic geniðro vs ic gi-niðro JnGl 8.11
171. Nælleðu synngega vs nelle ðu syngiga JnGl 8.11
172. Deadegeð ł gie biðon vs deodigað JnGl 8.21
173. Lufiga vs lufiga JnGl 8.42
174. Ic uorðigo vs ic worðigo JnGl 8.49
175. Ic uuldria vs ic wuldrigo JnGl 8.54
176. To uundranne ł uundorlice vs to wundranne JnGl 9.30
177. Gelosage ł to spillanne vs to losanne ł to spillanne JnGl 10.39
178. Uoe deadage vs we deodige JnGl 11.16
179. Tæherende uæs vs teherende wæs JnGl 11.35
180. Losaige vs loesige JnGl 11.50
181. Ic berhte vs ic berhte JnGl 12.28
182. Gie lufaige vs ge lufige JnGl 13.34
183. Gie lufaiga vs ge lufige JnGl 13.34
184. Ge-geruiga vs gi-georwiga JnGl 14.2
185. Fore-gearuiga vs fore georwigo JnGl 14.3
186. Ic liofo vs lifo JnGl 14.19
187. Lifias vs lifgas JnGl 14.19
188. Ic lufa vs ic lufo JnGl 14.21
189. Ic lufo vs ic lufo JnGl 14.31
190. Geuuniga vs giwuniga JnGl 15.4
191. Gesomnas hia vs gisomnað hia JnGl 15.6
192. Gie wunias vs ge wunigas JnGl 15.7
193. Hia gewunias vs ic wunigo JnGl 15.7

194. Ic uuno vs ic wuno JnGl 15.10
195. Gie lufiga vs ge lufige JnGl 15.12
196. Gie lufiga vs ge lufige JnGl 15.17
197. Walde lufia vs walde lufiga JnGl 15.19
198. Gie ne ondspyrniga vs ne ond-spyrnige JnGl 16.1
199. Fisciga vs fisciga JnGl 21.3
200. Lufa vs lufo JnGl 21.16
201. Lufa vs lufa JnGl 21.17
202. Geuuni ł (þte) he gewuniga vs (ic willo) giwuniga JnGl 21.22
203. Ne deadige ł nere dead vs deodige JnGl 12.23
204. (Ic willo) uuniga vs (ic willo) wunige JnGl 12.23

2) Number of instances where Aldred and Owun provide different glosses, either in terms of morphological categories or verbs attested:

Lindisfarne form followed by Rushworth[2] form. X ł Y implies the presence of a double or multiple gloss:

1. Geræston ł linigiendo vs gereston ł hleonadun MkGl 2.15
2. Hyngerde vs hycrende MkGl 2.25
3. Geteldon ł Niðria vs teldun ł niðradun MkGl 3.2
4. Weron clioppende ł cliopadun vs cliopadun MkGl 3.11
5. To niommanne ł genioma ł gereofa vs to niomanne ł ginioma ł gireofiga MkGl 3.27
6. Reafað vs reofige MkGl 3.27
7. Worðade vs worðanne MkGl 5.6
8. Clioppende vs cliopade MkGl 5.7
9. Mæniende vs mænende (W1 transfer) MkGl 5.38
10. Sceware (n) vs sceawere (n) ł sceawende MkGl 6.27
11. Geðolas ł scile ðoliga vs giðolas MkGl 9.12
12. Gefraignas ł frasias vs gi-fregnas MkGl 9.16
13. Clioppende ł friende vs cliopende MkGl 9.36
14. Sceaude vs sceowende MkGl 10.27

15. Ic beom gefulwuad (ł) se gie gefulwuad vs ic biom gifulwad ge gifulwiað MkGl 10.39
16. Fore-ðence vs bodiga ł ðence MkGl 13.11
17. Gefeando vs gefeonde MkGl 14.11
18. Gebloedsendes vs gibletsade MkGl 14.61
19. Ongunnun efne-gespitta ł gehorogæ vs ongunnun efnegispita ł hyra MkGl 14.65
20. For-geafa vs forgeorwiga MkGl 15.6
21. Geebolsadon ł ebolsande vs gieofulsadun MkGl 15.29
22. Clioppende vs cliopade MkGl 15.39
23. Cunnendo vs cymende LkGl 1.1
24. Ge-ecnande vs giecnade LkGl 1.31
25. Lecnande vs lecnadun LkGl 9.6
26. Geðolia ł geðrowia vs giðolas LkGl 9.22
27. Undrandu vs wundradun LkGl 9.43
28. Cnyllsað vs cnyllað LkGl 11.9
29. Cnylsanda vs cnyellende LkGl 11.10
30. Gie agnegeð ł agon vs habbað LkGl 12.33
31. Gehriordagæ vs giriordinge (noun) LkGl 12.37
32. Hrendas ł scearfað vs ceorfas ł rendas LkGl 13.7
33. Gesomnandum vs gisomadum LkGl 15.13
34. Wallað vs wilnað LkGl 16.26
35. Ofwyrtrumia vs wyrtrumum LkGl 17.6
36. Ofer-plontia ł gesette vs of plontum gisette LkGl 17.6
37. Foedende ł lesuande vs foedende LkGl 17.7
38. Scimande vs scinende LkGl 17.24
39. Ic ah ł agnigo vs ic ah LkGl 18.12
40. Gefeadon ł gefeande vs gifeadun LkGl 19.37
41. Lædeð ł fatas vs ne lædas ł ne ł foas LkGl 20.35
42. Wið-stonda vs giondsworia LkGl 21.15
43. Gie byeð ł gie agnigað vs settas ge LkGl 21.19
44. Geonwældad biðon ł rixað vs gionwælded bioðon LkGl 22.25
45. Ebalsadon ł ebolsande vs eofol-sadon LkGl 22.65
46. Willnade vs wilnende LkGl 23.8

47. Basnende vs basnade LkGl 23.35
48. To sceawanne vs sceawunga LkGl 23.48
49. Unglossed word in Lind vs to wunanne LkGl 24.29
50. Wundrandum vs wundrade werun LkGl 24.41
51. Woeron lofando vs herende LkGl 24.53
52. Gebloedsando vs bletsadun LkGl 24.53
53. Fulguande ł to fulguanne vs gifulwad wæs JnGl 1.31
54. Stigende vs stigende 7 wuniende JnGl 1.32
55. Fulguia ł ic fulgode vs to fulwanne JnGl 1.33
56. No gloss in Lind vs lufende JnGl 1.34
57. Oeðað vs will oeðiga JnGl 3.8
58. Geuorðage vs giworðade JnGl 4.20
59. Worðares vs weorðigas JnGl 4.23
60. Uorðia vs to worðanne JnGl 4.24
61. Ic ge-endia vs ic gi-endade JnGl 5.36
62. Uuniande vs wunað JnGl 5.38
63. Nallað huæstria ł misspreca vs hwispriga ł misspreoca JnGl 6.43
64. Cuic ł lifiende vs cuic JnGl 6.51
65. Uorðade vs to worðanne JnGl 9.38
66. Ebolsongas vs eofolsende JnGl 10.36
67. Fulguande ł clænsande vs gefulwad JnGl 10.40
68. Gie bledtsigas vs gibletsad JnGl 13.13
69. Geuna vs giwunað JnGl 14.6
70. Wuniende vs wunað JnGl 14.25
71. Ic lufade vs ic lufo JnGl 15.9
72. Ic lufad vs ic lufo JnGl 15.12
73. Ic bebeado vs ic worðo JnGl 15.14
74. Gie gibiddeð vs ge giowigas JnGl 15.16
75. Geberhtna vs berehtnað JnGl 17.1
76. Uuldur vs ic wuldrigo JnGl 17.22
77. Mið ðær lufu ł ðu lufades vs ic lufo & ðu lufades JnGl 17.26
78. Ne spild(ic) ł ne losade vs ne spil ł ne losa JnGl 18.9
79. Cliopadon ł uoeron cliopendo vs cliopadun JnGl 19.6
80. Gefeadon ł glæde ueron vs gifeande werun JnGl 20.20

81. Hlingindi ł ræstendra vs ðengnum JnGl 21.12
82. Gifrægna ł frasiga vs gifregna JnGl 21.12
83. Ic lufo vs ic lufade JnGl 21.15

3) Number of instances where Aldred and Owun's glosses contain one form of a weak class 2 verb which loses the -i- formative and the other form keeps it. These instances might include forms from different morphosyntactic categories:

Lindisfarne form followed by Rushworth[2] form. X ł Y implies the presence of a double or multiple gloss:

1. Bodiga vs bodanne MkGl 3.14
2. Gecunnas ł cunna vs gicunniga ł magun gicunniga MkGl 4.13
3. Wæstmiað vs wæstmað MkGl 4.20
4. Bycges ł ceapas vs byccas ł ceopias MkGl 6.36
5. Worðiað vs worðas MkGl 7.7
6. Gewidlas vs giwidligas MkGl 7.15
7. Gelosað vs giloesigas MkGl 8.3
8. Smeas vs smeogas MkGl 8.17
9. Giuað vs giowigas MkGl 11.24
10. Duolas vs dwoligas MkGl 12.24
11. Lornas vs liornige MkGl 13.28
12. Smiriane vs smiranne MkGl 14.8
13. Gearuas vs georwigas MkGl 14.15
14. Wærmigende vs wermende MkGl 14.67
15. Telende ł bismerigende vs telende ł bismerende MkGl 15.31
16. Wuldrigendo vs wuldrende LkGl 2.20
17. Gearuað vs georwigas LkGl 3.4
18. Bodianne vs bodanne LkGl 4.18
19. Wunað vs wunigað LkGl 9.4
20. Wunað vs wunigað LkGl 10.7
21. Teigðas vs tegðigas LkGl 11.42
22. Lufað vs lufigas LkGl 11.43
23. Timbras vs timbrias LkGl 11.47

24. Behofað vs bi-hofigas LkGl 12.30
25. Cunnað vs gi-cunigas LkGl 12.56
26. Afearrað vs afearriað LkGl 13.27
27. Ic ðerh-doe ł endigo vs ih ðerh-wuno LkGl 13.32
28. Hlaðas vs gilaðiga LkGl 14.12
29. Gehlaðas vs giladigas LkGl 14.17
30. Getimbra vs getimbria LkGl 14.30
31. Ondsuaraide ł ondsuareð vs giondsworigað LkGl 20.3
32. Eft-locað vs eft-loccigað LkGl 21.28
33. Gearuas vs georwigað LkGl 22.8
34. Ge-gearuað vs gegeorwigað LkGl 22.12
35. Grapað vs grapiað LkGl 24.39
36. Ic fulgugia vs ic fulwo JnGl 1.26
37. Birleð ł dæleð vs biriligað JnGl 2.8
38. Smeas gie vs smeogas JnGl 5.39
39. Genyht-sumiað vs gi-nyht-sumað JnGl 6.7
40. Gie gewunas vs ge ðerh-wunigas JnGl 8.31
41. Losað vs loesigað JnGl 10.28
42. Gie gegiuað vs ge giowigas JnGl 14.14
43. Gie gelufas vs ge lufigas JnGl 14.15
44. Gie gelufas vs ge lufigas JnGl 14.28
45. Uunas vs wunigas JnGl 15.4
46. Gie gewunige vs ge wunað JnGl 15.4
47. Giuas gie ł biddeð vs ge welle ge giowiga JnGl 15.7
48. Uunað vs wunigo JnGl 15.9
49. Gie wunias vs wuneð JnGl 15.10
50. Gie getrymies vs gitrymmas JnGl 15.27
51. Gie gegiuað vs ge giowigas JnGl 16.23
52. Giuað vs giowigas JnGl 16.24
53. Ge giuað vs giowigas JnGl 16.26
54. Gie lufað vs lufigað JnGl 16.27
55. Ic halgiga vs ic gihalgo JnGl 17.19
56. Hriordað ł eatas vs riordigað JnGl 21.12