Prosody in Medieval English and Norse

NELSON GOERING

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For my parents.

空山不見人
但聞人語響

In the hollow hills I see no one.
I only hear an echo of human voices.

Wang Wei, *Deer Park* (鹿柴), lines 1–2 (Rouzer 2020, 106)

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Acknowledgements

Nū sceal ic hergan hold-wina fela:
liss-ge·steallas and lār-smioðas,
þā-ðe mec æfre mid ār-stafum,
mōd-hæbbende, miltse hēoldon.[1]

This small verse applies to an enormous number of beings. My first and deepest debt of gratitude goes to Aditi Lahiri, *sēo æglæcan lærestre*. I also received assistance and advice from Elan Dresher, Rob Fulk, Rick Russom, Donka Minkova, Kristján Árnason, Rafa Pascual, Nikolay Yakovlev, Don Ringe, Patrick Stiles, Heiner Eichner, Michael Schulte, and Ricardo Bermúdez-Otero, all of whom kindly made their work available to me. I have also benefitted from discussions with Wolfgang de Melo, Robert Murray, Martin West, Tom Shippey, Alex Foreman, Catalin Taranu, Eric Weiskott, Ilya Sverdlov, Roxanne Taylor, Ryan Sandell, Alan Reynolds, and David Doughan.

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There are innumerable others who deserves my thanks, from close friends to the members of the TeX Stack Exchange who generously helped me with

[1] Roughly: 'I now have to praise many true friends: companions in happiness and smiths of knowledge who, possessed of good spirit, have always treated me with kindness and goodwill'.

[2] British Academy project *Norse Influence on Early Middle English Prosody*, grant number pf170159, and FWO project *Little Words in Early Germanic*, grant number 1281622N.

numerous technical issues. I'm particularly grateful to my parents, for everything, but especially for making sure I have never run out of maple syrup from their trees. My cat Minim has been literally my closest companion, and the vast majority of this book was written while he napped on my lap. Erika is my greatest inspiration and ally.

Abbreviations and Symbols

Abbreviations

Acc	Accusative
C	Consonant
Dat	Dative
DR	Danmarks runeindskrifter
F	Foot
Fem	Feminine
Gen	Genitive
H	Heavy syllable
KJ	Krause & Jankuhn (1966)
L	Light syllable
LAEME	Linguistic Atlas of Early Middle English
Masc	Masculine
Neut	Neuter
Nom	Nominative
Ög	Östergötland
Pl	Plural
Pres	Present
Pret	Preterite
S	Lift
s	Half-lift
Sg	Singular
Sm	Småland
Sö	Södermanland
SR	Sveriges runinskrifter
Subj	Subjunctive
S^w	Resolved lift
V	Vowel
$\breve{V}$	Short
$\bar{V}$	Long
Vg	Västergötland
w	Dip
X	Light or heavy syllable
μ	Mora
σ	Syllable
ϕ	Prosodic phrase
ω	Prosodic word

Symbols

( )	Foot boundaries
[ ]	Phonetic transcription
⟨ ⟩	Extrametrical element
>	Phonologically becomes
<	Phonologically comes from
→	Morphologically becomes
←	Morphologically comes from
*	Reconstructed form
x	Invalid or incorrect form
-	Syllable boundary
·	Unstressed prefix boundary
=	Clitic boundary
#	Word boundary
|	Metrical/other boundary

Chapter 1

Introduction: Bones and the Beast

Reconstructing historical languages from texts is a bit like trying to recreate a dinosaur on the basis of fossilised bones. A surviving skeleton – not necessarily complete – may give the rough outline of the animal, but to go further a palaeontologist needs to fill in the gaps between what survives: add on the sinews and muscles and organs and skin. The results will be a combination of fairly straightforward inference and more speculative guesswork, informed by the analogy of how living creatures today are put together.

In the realm of medieval languages, the bones are the surviving written forms. In the languages I treat in this book, these writings are in various alphabetic scripts, which give some idea of what sounds were said in what sequence: elements which can be arranged to give the basic skeleton of the sound inventory. But these scripts typically give no direct indication of units such as syllables or features such as stress, the prosodic connective tissue of phonology. These features can sometimes be inferred and reconstructed more indirectly, often from the effects they have on vowel alternations and changes, or from the roles they play in the metrical systems of poetry.

This is the kind of reconstruction I will attempt in this book. Most of the chapters start with a synchronic approach, using phonological or metrical evidence to build up a picture of the prosodic system of a particular linguistic variety at a particular period: trying to get as good a picture as possible of *Tyrannosaurus Rex* or *Albertosaurus*, each on its own terms. This is only the first step, however, and the larger story I want to trace is diachronic, concerning the prosodic history of certain Germanic languages over time: to reconstruct the evolutionary history of the Tyrannosauridae family over time, as it were. This historical dimension will be more or less in focus depending on the chapter, but with an overall synthesis attempted in the conclusion.

1.1 Norse and English

In this book, I deal with the prosodic systems of several stages of English and Norse between roughly 500 and 1300, with an eye to what comes before and after this span. These two languages are historically related, both developing from Proto-Germanic, a language that has left no written documents, probably spoken sometime in the last half-millennium BC.[1] There are a number of other Germanic languages, some with extensive medieval records, but I largely limit myself to these two for a couple of reasons. I do turn to Gothic, as the only substantive East Germanic language, as needed, but since this language does not have a long history of reliable records, it is impossible to trace its later prosodic history. It also lacks any useful texts in verse, which means I can't take my preferred approach of comparing phonological and metrical developments. For these reasons, I rely on Gothic mainly for what it can tell us about the Proto-Germanic point of departure for Germanic prosody in general.

This leaves two other major branches within Germanic: North and West. The former was spoken at first largely between the North and Baltic seas, eventually spreading across much of Scandinavia and the islands of the northern Atlantic. The earlier stages of North Germanic are known primarily through alphabetic inscriptions, especially on stone and metal objects, surviving examples of which date back as far as the 2nd century AD. Only about a millennium later, from the 12th century on, do substantial manuscript records start to appear. In manuscript sources, West Norse is the best attested variety, with Iceland in particular producing by far the greatest volume of surviving texts – including those recording the vast majority of attested alliterative verse.

The term 'Norse' is potentially vague or ambiguous. Some use it to refer to any variety of North Germanic before the modern period, while others limit it much more narrowly to western dialects from after the Viking Age. Typical Anglophone use tends to allow 'Norse' to take in the Viking Age as well as the later Middle Ages, and to cover all dialects of North Germanic (hence terms such as 'East Norse' and 'West Norse', the latter being tautological under more restrictive definitions). I am more interested in linguistic continuity than arbitrary periodisation, but in general, by 'Norse' I mean the language of the later Viking Age through that of the later medieval manuscripts – in practice, roughly 900–1300. The periods before this may be called 'Early Runic' (until the 6th century) and (though this is not a standard term) 'Transitional Runic'. For the later stages, I do concentrate on West Norse evidence, as this is where most of the poetic evidence happens to come from. I sometimes use the terms 'classical' or literary Norse to refer to the language attested in West Norse manuscripts of, especially, the 13th century. Because of the

[1] For modern overviews of Proto-Germanic, see Bammesberger (1986, 1990), Ringe (2017), Fulk (2018), and chapters 53–59 in Klein, Joseph & Fritz (2017).

nature of the surviving sources, I follow standard practice in taking the Icelandic variety as my default point of reference for classical Norse.

Among the West Germanic languages I deal almost exclusively with English, a language attested in this period mainly from the island of Britain. To cover all of the West Germanic languages in appropriate detail would be a vastly grander project, and English has several features that recommend it as a representative case study within this sub-family. For one thing, it has the longest history of attestation (though High German comes in a close second), with useful records reaching back to the 7th century. It also has by far the most substantial tradition of alliterative poetry of any Germanic language, with direct attestations of poems found from the early 8th through the 16th centuries. This allows for a relatively full treatment of both phonological and metrical developments over a lengthy span of time. Beyond these general considerations, there are several points where English happens to provide specific interesting evidence of prosodic behaviour.

With English as with Norse, I should add a brief note on labels. The term 'medieval English' is meant to emphasise the basic continuity across the period, but conventionally a strong division is made between 'Old' and 'Middle' English, with the dividing line being drawn anywhere between 1066 and 1200. I do use these traditional labels in a neutral chronological sense, since they are so deeply entrenched in the scholarship, but conceptually these terms should not be taken seriously in the slightest. The appearance of a sharp break between the periods is an illusion created by changing philological contexts and the appearance in writing for the first time of dialects whose earlier history is poorly attested. In many ways, changes within the 'Old English' or 'Middle English' periods are often far more significant, and I frequently distinguish 'early' and 'late' stages of both periods. These are not intended as sharp breaks, and their exact import depends on what aspect of the language is under discussion, and in what dialect, but roughly the following scheme will serve for this book: 'early Old English' is anything before 750 or so, and 'late Old English' most things after 850; 'early Middle English' is before around 1250, and 'late Middle English' after roughly 1350. The gaps between these phases are intentional, to highlight that I am trying not to speak of sudden breaks and transitions.

1.2 Plan of Attack

This book falls into three broad parts. After this short introduction, there are two further introductory chapters: one on the phonological frameworks that I use to understand prosody in these languages (chapter 2), and another on the metrics of alliterative verse in English and Norse (chapter 3). These are both rather technical fields whose frameworks and terminology may not be familiar to non-specialists. Since not every reader is likely to be a specialist in both, and since I would like this book to also be useful to scholars of English and Norse who may not be

familiar with either, I have tried make these introductions slightly fuller than they might have been.

After these introductory chapters, I deal with medieval English first. One pair of chapters investigates early Old English: chapter 4 dealing with the evidence of phonological change and chapter 5 turning to the testimony of alliterative verse as found in *Beowulf*. This is followed by a similar pair of chapters, 6 and 7, on early Middle English, again dealing respectively first with phonological evidence and then with metre. Finally, chapter 8 carries the discussion in fairly broad terms slightly beyond my main chronological focus and into later Middle English.

The final portion of the book turns to Norse. After a short preliminary on syllable structure (chapter 9), I cover the evidence of phonological changes from Early Runic through to classical Norse (chapter 10). I then follow this with two chapters on metre, one focusing on the general prosodic evidence provided by the *fornyrðislag* metre (chapter 11), and the other concentrating on one specific set of parallel metrical restrictions found in both skaldic *dróttkvætt* and *fornyrðislag* (12).

Throughout the book, I follow the trail of the prosodic unit known as the *bimoraic trochee*, which is in some ways the main character in the diachronic story that emerges. If you are not already acquainted with the bimoraic trochee, it will be introduced shortly, in the next chapter, and elaborated on extensively for the remainder of the book. By way of conclusion in the final chapter, 13, I outline the general fortunes and fates of this prosodic form from Proto-Germanic down through the later medieval period.

As indicated above, my intent is that this book will be in conversation with several different readerships: linguists studying the diachrony or synchrony of prosodic systems in general, metricists (whether comparative or Germanic), and those whose interests lie in the poetics of medieval English and Norse literatures. That there is something to be gained on all sides by considering all such apparently disparate approaches together is well demonstrated by the excellent recent study of Viking Age poetry by Heslop (2022), or the comparative approach to Norse and earlier English verse-craft and aesthetics taken by Frank (2022). In the words of Roman Jakobson (1985: 375), 'I believe in the mutual salutory significance of *linguistics and philology*' (*italics* original), and that the 'interplay of linguistic theory and philological art', perhaps above all in the realm of poetic metre, can still be a source of inspiration and inquiry.

Chapter 2

The Toolkit: Syllables, Moras, Feet, and Words

In the main body of this book, I'll be tackling a number of questions about poetry and language. Take the following observations, which are typical of the sort of thing I will try to demonstrate and explain:

- The *Beowulf* poet is happy to write a verse such as *fyll cyninges*, meaning 'the fall of the king', but not one such as **fyll hæleðes* 'the fall of the hero'.
- In the early Middle English *Moral Ode*, the anonymous poet is willing to end the opening of a line with a word such as *dede* 'did', but not with a word such as *dēde* 'deed'.
- In some kinds of Norse poetry, poets will conclude lines with nouns such as *stǫð* 'bank, shore', but avoid using nouns such as *strǫnd* 'shore' in the same metrical context.

In order to understand and explain things like this, we need the right conceptual toolkit. Some of the essential ideas will already be familiar, in a basic form, to any child in school, including things such as syllables and stress. For appreciating most English poetry from roughly the time of Chaucer right on through to the present day, you wouldn't need much more linguistic structure to scan lines and see how the language and verse structure interact. It is enough to know how many syllables there are, and which ones count as stressed.

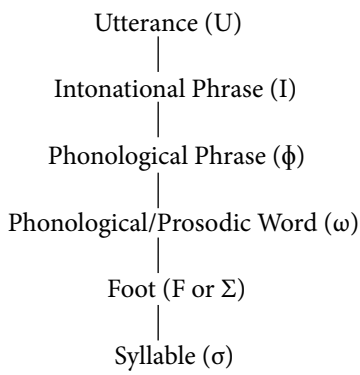
But for the kinds of observations just listed, and other similar issues in this book, we need an expanded toolkit, one that includes not just syllables, but syllables of different *weight*: some that are 'light', such as the start of *de-de* 'did', others that are 'heavy', such as the start of *dē-de* 'deed', and even ones that are *overheavy*, such as the Norse *strǫnd*. Other concepts, such as the grouping of syllables into linguistic *feet*, will also play a central role. Though these things may be less familiar to many anglophones today, they are just as crucial as stress or syllable counts for a proper understanding of the poetry and phonology of medieval English and Norse.

Notions such as *stress*, *heavy syllable*, and so on all fall under the broad umbrella of *prosody*. This is something of a bridge term, referring both to rules of poetic metre – things such as the principles of iambic pentameter – and to the intonational and rhythmic features of language in general. In this chapter, I concentrate on the linguistic side of things, laying out the basic toolkit of syllables, stress, feet, and words. In chapter 3, I will turn to the more poetic sense of prosody, and use these linguistic tools to examine how some of the more important metres of medieval Norse and English work. These two approaches, linguistic and metrical, will open the way to discussing questions of prosody, in both its senses, in these languages.

2.1 Prosodic Units

In language, we can divide the flow of speech into units or pulses of various kinds (Cutler 1994). This includes (in popular terms) larger-scale divisions into sentences, mid-level pulses of words, and the very basic beat of syllables. Linguistic terminology makes more precise distinctions: the largest unit of speech is called an *utterance*, which contains one or more *phrases*. Both of these are groups of *words* that form an intonational group. Popular schoolroom teachings divide words directly into syllables, but it is possible – and for the aims of this book absolutely essential – to divide words first into units called *feet*, which can be made up of usually one to three *syllables*. This set of nested units is called the *prosodic hierarchy* (Nespor & Vogel 2007), each layer of which has a conventional symbol used to abbreviate it:

(1)



In its classic form, this hierarchy is meant to be universally applicable to all spoken languages in precisely this form (Nespor & Vogel 2007; Vogel 2019). Whether this scheme should be applied rigidly to all languages has certainly been questioned (see §2.7), but the prosodic hierarchy does provide a set of terms that seem to work well enough in discussing and comparing a wide range of languages. As a

practical set of labels and concepts, it is a useful toolbox for understanding the rhythms of spoken language.

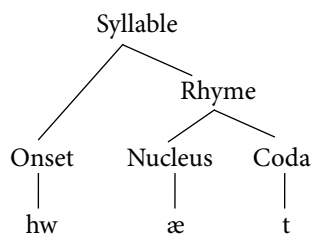
Three of the following sections deal with the lower end of the prosodic hierarchy: syllables (§2.2), feet (§2.5), and (prosodic) words (§2.6). Two further sections deal with concepts that are crucial to understanding these prosodic units. §2.3 introduces the *mora*, a measure of how 'heavy' a syllable is: this will be a fundamental concept for the remainder of the book. §2.4 briefly outlines the notion of *stress*, which might seem intuitive, but still needs some introduction for its technical usage. Since the focus of this book is on word-internal rhythms, and especially on feet, I will not say more about prosodic entities larger than the prosodic word, such as the phonological phrase or the utterance.

2.2 Syllables

Human speech consists of air passing from the lungs and through the vocal tract, causing vibrations in the air that will (typically) strike the ear of a listener and (hopefully) be interpreted as meaningful. As it flows through the vocal tract, this flow of speech is alternately allowed to travel relatively freely (points of greater sonority), and obstructed to some degree (points of lower sonority). Most, if not all,[1] spoken languages structure these pulses into *syllables* (van der Hulst & Ritter 1999, Goldsmith 2011). Each syllable centres around a sonorous peak (prototypically a vowel), where the airflow is relatively open, with points of greater obstruction of the air (consonants) around this peak.

This internal structure is important in distinguishing different kinds of syllables. The part of the syllable before the sonorous peak, the *onset*, will not be of central interest in this book, but the remainder of the syllable, the *rhyme* (or *rime*), will be. This includes any vowels, which constitute the *nucleus* of the syllable, as well as any consonants that occur after this (these form the *coda*). This traditional anatomy of the syllable can be illustrated with the Old English monosyllable *hwæt* 'what; indeed':

(2)



[1] Occasionally there are claims that certain languages do not have syllables, though no really convincing examples have been brought forward. To take one famous case, Labrune (2012) argues that Japanese has no syllables, but his theoretical arguments are not convincing (Kiparsky 2018: 81–82), and there are empirical and theoretical supports for the syllable in Japanese (Kubozono 2003; Tamaoka & Terao 2004; Starr & Shih 2017).

2.2.1 Dividing Words into Syllables

In words of more than one syllable, the question arises of exactly where the boundaries between the syllables occur. An Old English word such as *hreþre* 'chest, breast (DAT.SG)' clearly has two syllables, one containing at least *hre-*, and the other containing at least *-e*. But in which syllables do the *þ* and *r* belong? The answer to this depends on the specific rules of the language in question.

The rules for syllable division, or *syllabification*, vary from language to language, though certain basic principles are very widespread. I will here briefly outline the way things work for Old English, which is a good and relatively uncontroversial representative of syllable division in most early Germanic languages (for the more contested case of Norse, see chapter 9). In Old English, the most basic principle of syllabification is the *onset requirement*: where possible, a syllable ought to start with a consonant. This means that in words that show one consonant between two vowels, such as *ba͟na* 'slayer', this consonant will always go in the onset of the second syllable: *ba-na*.[2] A word such as *æþelu* 'nobility' divides as *æ-þe-lu*.[3]

With consonant clusters, division is more complicated. In the example of *hreþre* mentioned above, the onset requirement would put the *r*, at least, in the second syllable, but the *þ* remains unclear. Is this *hre-þre* or *hreþ-re*? Evidence, above all from metre and sound changes but supported by the placement of line breaks in manuscripts (Lutz 1986), points firmly to the second option, with the syllable division falling between the two consonants when these follow a short vowel (or short diphthong).[4] The two consonants are *heterosyllabified* – a fancy word to say that they are placed in different syllables.

[2] For more intuitive clarity, I use the hyphen rather than the dot to mark syllable boundaries. In this book, at least, there should be little practical confusion with the use of the hyphen to mark morphological boundaries. In International Phonetic Alphabet transcriptions, enclosed in square brackets, I do retain the use of the dot.

[3] The first syllable, which seems to lack an initial consonant, may well have begun with a glottal stop, [ʔ], supplied precisely to satisfy the need for an onset (Minkova 2003: 135–165).

[4] The metrical evidence comes from words such as *hreþre* being treated metrically as having an initial heavy syllable (on syllable weight, see immediately below), e.g. at *Beowulf* 2328a, 3148a (Goering 2016b: 179–180). Phonological evidence comes from words such as *feðer* 'feather', which comes from **feþru*. Chapter 4 will cover the loss of the unstressed **u*, the patterns of which clearly point to a syllabification as **feþ-ru* (such as **wor-du*, contrasting with **sci-pu*). The evidence of manuscript line breaks has to be used carefully, since convention, purely orthographic concerns, and morphological structure can all influence how scribes split words. What Lutz's study shows – and similar things hold for other studies of comparable evidence in other languages, such as Fix (1995), Fix & Birkmann (1998), and Riad (2004) – is that when these other factors are taken into account, scribes break words across lines in ways that coincide remarkably well with where syllable divisions might be expected to fall on linguistic grounds. This both suggests a general corroboration of the linguistic views of syllable divisions, and allows this kind of scribal evidence to (cautiously) be used in clarifying some details of syllabification.

To those familiar with other languages, this division as *hreþ-re* may seem surprising. There is a general principle in languages that a syllable is likely to begin just before the point of greatest closure or obstruction of the airflow, before the least sonorous consonant (Hermann 1923: 280–281; Murray & Vennemann 1983: 516–517). The fricative *þ* is relatively low on the sonority scale, while the liquid *r* is somewhat higher and more vowel-like, so the principle of sonority might predict a syllabification such as *ˣhre-þre*. In this case, however, the sonority principle competes with the desire to make syllables weightier or more prominent by putting consonants in the coda. There are two competing pressures: one to follow the sonority principle (*hre-þre*), and the other to follow the syllable-weight principle (*hreþ-re*), so as not to leave the first syllable ending in a short vowel (*ˣhre-* is not preferred). Clearly the second pressure is more important than the first, at least in Old English.

This gives us three rules for assigning consonants to syllables in Old English, given in order of importance:[5]

1. The onset requirement: where possible, each syllable should have a consonant in the onset.
2. The syllable-weight requirement: where possible, a syllable should not end in a short vowel.
3. The sonority requirement: where possible, a syllable should begin before the least sonorous (most obstructing) consonant.

In *ba-na*, the overriding principle 1 places the *n* in the onset of the second syllable. This means that principle 2 is violated, since the first syllable, *ba-*, ends in a short vowel, but this is less important than ensuring an onset for the second syllable. In *hreþ-re*, principle 1 puts the *r* in the onset of the second syllable, and principle 2 puts the *þ* in the coda of the first syllable. Principle 3 is left violated, as the least important factor. It does come into play, however, in a word such as *ǣfre* 'ever', which probably should be divided as *ǣ-fre*.[6] Principle 1 ensures that the *r* is definitely in the onset of the second syllable. Principle 2 is already satisfied by the long vowel *ǣ* in the first syllable, so there is no need to assign the *f* one way or the other by this principle. It is left to 3 to give us the division *ǣ-fre*, putting the syllable break before the consonant of least sonority, the *f*.

[5] These principles are adapted from Lutz (1986: 195), Hogg (2011: 95–98), Murray & Vennemann (1983), and Riad (1992: ch. 2, 2004). I am particularly influenced by Riad's work on Gothic syllabification in how I have framed the principles at work, but the general facts of syllable division in Old English are not particularly controversial.

[6] This division, unlike the others discussed here, is not confirmed by metrical evidence, and relies only on the weaker evidence of how words are divided across line breaks in manuscripts (Lutz 1986: 202–204).

2.3 Moras

The concept of *syllable weight* from syllabification principle 2 is a fundamental one to the prosody of all early Germanic languages. A syllable such as *ba-* or *hre-*, ending in a short vowel, would not be considered as 'weighty' as one ending in a long vowel or with a consonant in the coda. This notion of syllable weight can be discussed much more precisely using the notion of the *mora*.[7] The basic idea is that each sound in the syllable rhyme counts as one mora, or unit of syllable 'heaviness' (or length). Each short vowel, short diphthong,[8] or consonant counts as one mora, and each long vowel or long diphthong (these can both be thought of as two units of vowel-ness) counts as two moras (or morae). In Germanic, unlike some languages, syllable onsets are entirely irrelevant for syllable weight, so that *ǣ* 'law', *sǣ* 'sea', and *hrǣ* 'corpse' all count as having two moras.

Syllables with just one mora are *light*, namely syllables such as *ba-* in *ba-na*, or unstressed words such as *ne* 'not' and *be* 'about, beside'. A syllable with two or more moras is *heavy*, including *hwæt*, *ǣ*, *hreþ-* in *hreþ-re*, and *frō-* in *frō-fre* 'comfort (ACC.SG)'. Syllables which end in a consonant are said to be *closed* by that consonant, which makes them heavy – this is also sometimes referred to in Classical terms has having *weight by position* (that is, the weight comes from the *position* of the consonant in the syllable coda).

Beyond the binary light-heavy contrast, it can also sometimes be useful to distinguish a syllable with exactly two moras as *plain heavy* (including all the heavy syllables just mentioned) from those with more than two moras. Both the syllables in *ǣg-hwylc* 'each, every'[9] contain three moras: in *ǣg-*, two are from the long vowel and one from the coda *g*; in *hwylc* one is from the short vowel *y*, and one each from the two coda consonants, *l* and *c*. These can be called *overheavy* (or *superheavy*, or *ultraheavy*) syllables. Unless specified otherwise, the term *heavy* will cover both plain heavy and overheavy syllables, and I will use the more specific terms only when a further distinction needs to be made.

It's often useful to refer to syllable weight schematically, symbolising light syllables as L and heavy ones as H. So *bana* is (at least in late Old English) a word of the shape LL, while *hreþre* is HL, and *cy-ning* 'king' would be LH. If a syllable's

[7] On this concept, see Jakobson (1962), Trubetzkoy (1939: 169–179), Hyman (1985), Hayes (1995), Lahiri (2001), Gordon (2006) and Zec (2011).

[8] These are typologically unusual, and their exact nature – including whether the digraphs in question actually represent diphthongs at all – is much debated. Perhaps they were rising diphthongs (as suggested by Alex Foreman, personal communication), though this view too may involve complications. In citations of linguistic forms, I mark English short diphthongs with a breve mark (*i͡e*, *i͡o*, *e͡o*, *e͡a*), especially as a reminder to linguists who may naturally assume that a 'short diphthong' is still bimoraic.

[9] The syllable division would probably fall here on phonological grounds, with rule 3 placing the break before the very non-sonorous voiceless fricative *h*, but the real reason for the syllable break is morphology: the syllable boundary has to fall at the juncture between the two elements of this compounded formation.

weight is irrelevant, it can be presented as X, so that LX would refer to any word of two syllables, the first of which is light, including both *bana* and *cyning*.

2.4 Stress

Not all syllables are equally prominent in speech: more prominent syllables are said to be *stressed*, and less prominent ones *unstressed*. It is not clear that stress is a useful concept in all languages, but it is very widely found, including in all Germanic languages. The standard pattern in Proto-Germanic, which is retained in the older Germanic languages, is that word-initial syllables tend to be stressed, while other syllables are either unstressed, or have a more middling level of prominence that can be called *secondary stress* – and some would divide up levels of stress into finer grades still.

Stressed syllables are often physically more prominent: they may be said louder, last longer, and have a higher pitch compared to unstressed syllables. The phonetics of stress in early Germanic are very hard to reconstruct in detail, but it's surely safe – if not very significant – to assume that these general characteristics of stress were present to some degree.

Stress is also tied up with the general phonological patterning of sounds in a language. One classic indicator of a stressed syllable is that it may (depending on the language) allow a greater range of vowels or phonological characteristics. In modern Standard Chinese,[10] only stressed syllables can have contrastive tones (Duanmu 2007: ch. 6). In a two-word phrase such as 大意 *dà yì* 'main idea', both syllables are stressed:[11] they both have long vowels – phonetically [taː.iː] – and tones, as well as a notable degree of relative phonetic loudness. But in the single word 大意 *dàyi* 'careless', there is a clear stress difference: the first syllable is phonetically considerably louder and longer, while the second has a shorter vowel – [taː.i] – and bears no tone (Duanmu 2007: 129–132).

Similar phonological dimensions to stress are readily apparent in early Germanic. In both older English and Norse, stressed syllables can display a wide range of vowels, including front-rounded vowels, distinctions of vowel length, and long and short diphthongs. Fully unstressed syllables, on the other hand, are extremely restricted, with both late Old English and classical Norse allowing just three simple short vowels (written as *e/i*, *a*, and *o/u*). Words such as *ȳðe* 'waves' (Old English) or *skjǫldum* 'with shields' (Norse) are typical of the much greater range of contrasts permitted in stressed syllables compared to unstressed ones.[12]

[10] Also known as Putonghua, Guoyu, or Huayu.

[11] This is not to say they are equally prominent in connected speech, since relative prominence plays out in phrases as well. But both words count as lexically stressed, even if one may receive further phrasal prominence.

[12] This kind of contrast was less striking in Proto-Germanic, where most vowels could occur in unstressed syllables as well as stressed. Perhaps the only vowel not found contrastively in unstressed

2.5 Feet

The word *foot*, like so many prosodic terms, goes back to the terminology of poetry, where it describes regular groupings of syllables used in verse. Metrical examples range from the dactyl – a heavy syllable followed by two light syllables, i.e. the arrangement HLL – of certain classical Greek and Latin metres,[13] to the stress-based iamb (*da-DAH*) of Chaucer, Shakespeare, and Barrett Browning. Linguists have adopted and adapted the term *foot* for general phonological use in spoken language, where it refers to groupings of small numbers of syllables that provide the framework for (potentially among other things) assigning stresses within a word.[14] In general, a given language will use just one basic foot type.

The number of possible linguistic foot patterns is much smaller than the traditional roster of poetic feet. In a classic survey of a very wide range of languages, Hayes (1995) tried to substantiate the traditional view that there are just three types of foot used in spoken language: the *iamb*, the *syllabic trochee*, and the *bimoraic trochee*. Occasional attempts have been made to expand this inventory by proposing new foot types for certain languages or groups – including the *Germanic foot* posited especially for Old English and Gothic by Dresher & Lahiri (1991), which I will mention from time to time – but by and large Hayes's three types seem sufficient.

When picking apart the foot structure of a language, there is a short checklist of questions to ask, with the type of foot being only the first:

1. What foot type is used?
2. Are feet made from the start of the word towards the end, or from the end back to the beginning? (Direction of parsing)
3. Which foot takes the main stress, when there is more than one? (End-rule)

Questions 2 and 3 are fortunately fairly straightforward to answer for early Germanic languages: feet are made from left to right (starting at the beginning of the word), and the first foot is the most prominent (end-rule left). Since the foot type is trochaic, these principles together produce the rigid pattern of word-initial stress seen in the early Germanic languages.

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syllables was **e*, though even this point is debated. Liberman (1990: 10–17) suggests that if Proto-Germanic (or perhaps, one might say, a stage slightly prior) had no distinctions in the vowels permitted in any kind of syllable, then it had no stress. This probably goes too far, elevating one important characteristic of stress to its sole defining feature, but his discussion is worth reading.

[13] Note that the classical dactyl was genuinely based on syllable weight, *not* stress. For example, *cum Iúno* 'when Juno' (*Aeneid* I.36) has a stress pattern of *da-DAH-da* (the same as *when Júno* does in modern English), but a syllable weight pattern of HLL. It is the latter that matters, making this sequence a dactyl by Latin rules.

[14] See Liberman & Prince (1977), Halle & Vergnaud (1987), Hayes (1995), van der Hulst (1999, 2010) and Kager (2007).

Taking the bimoraic trochee for granted for the moment – I will return to it shortly in §2.5.1 – the general style of Germanic foot structure can be seen in a couple of Old English examples. Let's start with *æþelu* 'nobility', which is stressed on the first syllable. I use round brackets/parentheses to enclose feet:

(3) (ǽ-þe)-lu[15]

This word shows that the direction of parsing is left to right. The first two syllables are grouped into a trochee, but after that there is no more room, and the final syllable is not heavy enough to serve as a second foot on its own: it is left *unfooted* or *stray* (a common sort of thing to happen). If the parsing direction were the other way around, then the final syllables of the word would be grouped into a foot first, giving:

(4) ˣæ(-þé-lu)

If this were how feet were formed in Old English, then the stress would end up on the medial syllable, not the initial one, since that would be the head of the word's only foot. Such a way of doing things is well within the realm of linguistic possibility. For instance, Fijian, an Oceanic language, also uses the bimoraic trochee, but parses from right to left (from the end of the word backwards), resulting in words such as *bu(-tá-ʻo)* 'steal', with exactly the kind of medial stress that Old English doesn't have (Dixon 1988: 16–18; Hayes 1995: 142–149).

Many words in Old English are fairly short, and have just one foot, but longer words with multiple feet aren't exactly rare either. With such multi-foot words, we can see that the first foot is the strongest – illustrating the *end-rule left* principle. Take *æþelingas* 'princes':

(5) (ǽ-þe)(-lìn)(-gas)

This word divides out nicely into three bimoraic trochees, each of which has two moras. I have not infrequently heard this word rendered by modern anglophones as *æþelíngas*, with the main stress on the penultimate syllable, but this is certainly not how it was said in Old English. Rather, the primary stress is on the first syllable of the word, as shown by metrical rhythm and alliteration, as well as by the fact that the relatively complex vowel *æ* doesn't get reduced at all. Metrical evidence does show that the syllable *-lin* carries a degree of stress as well, but this is a secondary stress, less prominent than the first. Weak final feet such as *-gas* seem to get no stress at all, a point I will explore further in §4.5.2.

[15] On the earlier foot structure of this word, see note 16 in chapter 4.

In technical terms, this prominence on the first foot is what *end-rule left* means: the strong mora of the leftmost (first) foot in a word gets the primary stress.[16] If Old English had an end-rule favouring the rightmost foot instead, this word would be stressed as *ˣæþelingás* – a kind of rhythm that some languages might favour (Fijian, for example), but which is not found in early Germanic.

2.5.1 The Bimoraic Trochee

The *bimoraic trochee* as a basic foot type will feature constantly in the following chapters, and is in many ways be the protagonist for much of this book. It is worth taking a slightly closer look at what makes it distinctive. Its definition is simple enough: it is a foot ideally containing exactly two moras (hence *bimoraic*), of which the first is stronger (hence *trochee*). A crucial point to emphasise is that these two moras can come either from two light syllables (with one mora each) or from a single heavy syllable (with two moras) – that is, there is a pervasive equivalence of LL = H, with either option being able to make a full foot. This is one of the fundamental diagnostic features of the bimoraic trochee.[17]

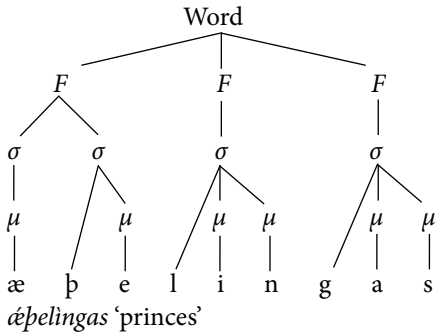
This kind of equivalence plays out in all sorts of ways. In *æþelingas* (5), it doesn't matter that the first foot has two syllables, *(æ-þe-)*, while the other feet are just one syllable each *(-lin)* and *(-gas)*. What matters is that each foot consists of either (LL) *or* (H). A foot made of two heavy syllables, (HH), would be impossible, and a foot of a single heavy syllable, (L), would be – well, not impossible, as we will see in §5.5.1, but certainly suboptimal, and only permitted by special licences. The equivalence of LL and H means that a word such as *Scyldingas* 'Scyldings, Danes' has precisely the same foot contour – *(Scyl)(-din)(-gas)* – as does *æþelingas* despite their different syllable counts. The two words behave identically in terms of poetic rhythm.

To see how moras group into feet regardless of syllable counts, it can be useful to use a tree structure rather than the more compact bracket notation. Here is *æþelingas* again, this time putting the princes in a (pear) tree. Remember that *F* stands for *foot*, *σ* for *syllable*, and *μ* for *mora*:

[16] More precisely, the *head* of the foot gets the stress. In a bimoraic trochee, the head – the stronger element – is the first mora. In a classic iamb, by contrast, the head would be the second syllable of a two-syllable foot.

[17] As Bermúdez-Otero (2018: 3) points out, it is possible to find examples of a very limited equivalence of LL = H even in languages using a foot type such as the syllabic trochee. He cites the example of Anguthimri, a Paman language of Australia, where a word must contain at least one heavy syllable or two light syllables, but which is otherwise best analysed as employing the syllabic trochee (Hayes 1995: 103, 198). This issue is limited to the use of minimal-word requirements – the desire to avoid a having a full content word consist of a single light syllable – which are more generally at best a weak indicator of foot structure (see further §13.1.1). In other contexts, the LL = H equivalency is a very strong diagnostic of the bimoraic trochee.

(6)



æþelìngas 'princes'

This tree notation is not terribly space-efficient, but it has the advantage of spelling out the hierarchy of how moras fit into feet in a way that is difficult to clearly represent in any other way. I will use both brackets and trees as needed in this book.

There is certainly more to foot structure, and to the bimoraic trochee specifically, than I have covered so far, and much of the rest of the book will be spent not only arguing for the widespread use of the moraic trochee in medieval English and Norse, but developing various further licences and caveats affecting such feet.[18] In particular, though a bimoraic trochee ought to have exactly two moras in every foot, some bimoraic-trochee languages do allow feet with a different number of moras, due to other prosodic pressures. I have already hinted at the existence of feet with just one mora, which are known as *light* or *degenerate* feet,[19] a kind of variant that is widely known from a variety of languages (Hayes 1995: 86–105). I will also discuss *overheavy* feet, with three or more moras, which seem to play an important but restricted role in both English and Norse. A final potential quirk is that some languages systematically ignore certain elements, such as word-final consonants or syllables, for prosodic reasons (Hayes 1995: 56–60, 105–110). This is called *extrametricality*, and most often occurs at the very edges of a (prosodic) word.

2.6 Words

In the previous section, I referred repeatedly to *words*, and it may have seemed like it was a clear and obvious what this term meant. The word *word* is, however, among the least self-evident of popular linguistic terms, and can potentially refer to any of a number of fairly distinct things.[20] For instance, *hold* and *held* might be considered the same 'word' in the dictionary (the same *lexeme*), but are

[18] There are further issues still that will not be particularly relevant to any part of the current book, such as whether recursive feet are possible (Jensen 2000; Davis 2004).
[19] The rather odd term *degenerate foot* refers to any foot that is smaller than normal.
[20] See Dixon & Aikhenvald (2002), Hall, Hildebrandt & Bickel (2008), and Aikhenvald, Dixon & White (2020).

morphologically distinct forms. From the point of view of meaning, the verb *hold up* can reasonably be considered a single word, but its syntactic behaviour is that of two words, as seen in a sentence such as *That cat walking across the keyboard really held the meeting up*. We might say that *held … up* is a single *lexeme*, and two syntactic *words*.

But even this distinction between lexemes and (syntactic) 'words' is not really enough. How many 'words' are involved in a sequence such as *they'll* (contracted from *they will*)? The finer details of how to analyse such a sequence will vary between linguistic theories, but it's basically useful to see in something such as *they'll* two *grammatical words* but one single *phonological* or *prosodic* word (Dixon 1977: 25–29; Nespor & Vogel 2007: 109–144; Hildebrandt 2015).

There is no general or universal definition for a prosodic word that applies to all languages, but most languages seem to have a unit of some kind that can reasonably be called a prosodic word. Many languages have phonological processes that apply at the edges of words, which suggests that in those languages, at least, the prosodic word is a real phonological entity. A classic example is the word-final devoicing in Dutch *hand* 'hand', which despite the spelling is pronounced as [ɦɑnt] with a final voiceless stop. This does not occur word-internally in the plural *handen*, pronounced [ɦɑndən] with a voiced *d*. Even without this kind of phonological operation, things such as word-stress patterns can give a good idea of the prosodic word in many languages.

Many of the thorniest questions about prosodic words are posed by *clitics*, small, unstressed units that 'lean' on (this is the etymological sense of *clitic*) or attach to an accented element.[21] These are things such as *the* and the possessive marker (not suffix!) *'s* in English, as in *The Wife of Bath's Tale*. The basic issue is this: how are weak associated elements related phonologically to prosodic words?

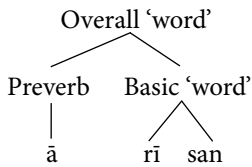
In early Germanic, the questions surrounding clitics and 'words' come up especially with regard to 'preverbs', elements such as the reflexes of Proto-Germanic **ga-* (commonly marking telicity on verbs) or **uz-* 'up, out' – the latter is seen in Gothic *ur·reisan*, Old English *ā·rīsan* 'go up, arise'.[22] These elements are low stress, as evidenced both by phonological developments (e.g. the vowel of **ga-* being reduced to *gi-*, and then later *ge-* in Old English) and by their behaviour in alliterative verse (Minkova 2008). Such 'prefixes' also form the only exception to the rule that the initial syllable of a 'word' is stressed in early Germanic.

It seems that 'preverbs' in some way stand outside of the basic prosodic word, and are some kind of clitic attached to it. I show this possibility in the following tree:

[21] This is a phonological description of clitics. What syntacticians refer to as clitics are not necessarily unstressed (Lowe 2016).

[22] I generally use the interpunct to separate preverbs from what follows, mainly as a reminder that such elements are unstressed and prosodically distinct. This is not a mark used this way in the original orthographies.

(7)



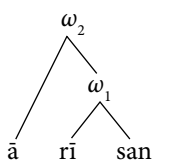
ā=rīsan 'to arise'

There are two main questions presented by a complicated structure like this. First, what is the most useful thing to call the various layers in question? Should we call any of them (prosodic) words? Should we assume multiple layers of prosodic words? Should one layer be called the word, and any others called something else?

When the idea of the prosodic hierarchy was being developed, it included an entity called the *clitic group*. The idea was fairly simple: languages formed prosodic words – such as *rīsan* or modern *cat* – and then attached clitics to them, making a new kind of entity: *ā=rīsan* or *the=cat*, both clitic groups. This notion has generally been abandoned, largely because this model rigidly limits the number of prosodic levels, making the more complicated structures observed in some languages harder to explain (Schiering, Bickel & Hildebrandt 2010; Hildebrandt 2015).

An alternative view, which can now fairly be regarded as mainstream, is to see prosodic words as being *recursive*. That is, it would be possible to see *rīsan* as a *minimal prosodic word*, while allowing that this could potentially be just one component within an even larger prosodic word – with, potentially, as many levels of prosodic word as might be needed. I show this possibility in the following tree, using the Greek omega *ω* to symbolise the prosodic word, with the subscript numbers indicating the level, from the smallest up:[23]

(8)



ā=rīsan 'to arise'

The main disadvantage of this view, from the standpoint of the classical strict-layer hypothesis, is that it involves *recursion*: one type of element being nested within another of the same type. But there is now ample evidence for recursive

[23] This symbol is used rather whimsically because it happens to resemble *w* – a bad visual pun that has become entrenched in linguistic notation.

prosodic words from a number of languages, and the concept is also useful in describing compound words.[24]

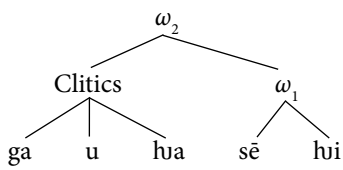
The other major question is what the status of clitic or clitic-like elements might be. Is *ā* yet another prosodic word in its own right? And when there are multiple clitics in a row, how do they all fit together? The answers to these questions might potentially vary considerably from language to language (Selkirk 1996; Peperkamp 1997; Anderson 2005).

Within Germanic, this problem can be illustrated by the following relatively lengthy clitic chain in Gothic, found in Mark 8:23:[25]

(9) ga= u= ƕa= sēƕi
TEL Q INDF SEE:PST.SBJV
'(he asked him if) he saw anything'

This implies that in the verb *ga·saihƿan* 'see, catch sight of', there is a very loose connection between the preverb and the verbal root. That seems to fit well with the idea that *sēƕi* stands on its own as a prosodic word, to which *ga-*, though part of the same grammatical word, is only loosely attached as a clitic. But the status of *ga*, and how all the elements in the sequence of clitics, *ga=u=ƕa=*, combine is difficult to say on the available evidence.[26] For the present purposes, the fact that the clitics stand outside the (minimal) prosodic word is the most important thing, and a basic structure such as the following – leaving the exact status of the clitic sequence vague – can suffice:

(10)



ga=u=ƕa=sēƕi '(he asked him if) he saw anything'

[24] An Old English compound such as *hond-ge·wĕorc* 'handiwork' might potentially have three levels of prosodic word, depending on just how the *ge-* is fit into the scheme. For more technical considerations of prosodic word recursivity, see especially Ito & Mester (1992, 2021), Revithiadou (2011), Bennett (2018), and the essays in Grijzenhout & Kabak (2009), as well as the further literature cited there.

[25] Following the Leipzig Glossing Rules (https://www.eva.mpg.de/lingua/resources/glossing-rules.php), TEL = *telic*, marking a completive verbal aspect; Q or *question* is an interrogative particle; INDF is an *indefinite* pronoun; PST is *past tense*; and SBJV is subjunctive (also called the *optative* in Gothic).

[26] Possibly they combine into another prosodic word. This is suggested by the occurrence of devoicing on preverbs in formations such as *us=iddja* rather than **uz=iddja*, since this devoicing is typical of word-ends in Gothic. This would make them *p-word clitics* (or *free clitics*, if they combine not into a second prosodic word, *ω*, but directly with the prosodic phrase, *ϕ*) in the terminology of Selkirk (1996). But I am not sure whether all the clitics in this long chain join to create a single prosodic word, or whether there is a more complicated internal structure to the clitic chain. The Gothic situation may also not be precisely the same as other Germanic languages. For a compelling argument that prefixes vary in how they're footed in medieval English, see Molinaeux (2012). For an argument that unstressed prefixes do not form any kind of prosodic word in English (but stressed ones do), see Minkova (2008).

The really important point is the mismatch between the grammatical word (such as *ārīsan*) and the prosodic word (*ā=rīsan*), and the relatively independent status of 'prefixes' as clitics of some type. This view of clitics is not only useful for explaining the stress patterns of verbs, but also has potentially very significant consequences for the metrical system of alliterative verse (Russom 1987: 8–9).

2.7 Using the Tools

Like most linguists, I have expressed this toolkit in universalist terms: syllables, feet, bimoraic trochees, and so on are entities we think we can identify in very many spoken languages around the world. Syllables really might be absolutely universal to spoken language, though as noted above the matter is disputed. But for higher levels of prosodic organisation, it might be better to see, not universal elements employed in language-specific ways, but rather a universal tendency to organise speech prosodically into hierarchical units (Schiering, Bickel & Hildebrandt 2010; Hildebrandt 2015). The moraic trochee in Fijian may not be quite the same thing as the moraic trochee in Old English.

A comparative and typological approach to prosody is nonetheless important. Even if the bimoraic trochee is not something hardwired into the human linguistic potential, there are moraic-trochee-like structures found in many, many languages: they represent, one might say, a very common type of strategy adopted by humans attempting to arrange the babble of speech into useful units. There is much to be learned about Old English prosody by applying a perspective shaped by how other languages do things. This kind of comparison is made vastly easier by using terms such as 'foot' and 'mora', even if these refer to only approximately the same thing in various languages.[27]

[27] For a non-prosodic example of this issue, think of the Korean stop system. Should we posit universal features to account for a three-way contrast of *tense*, *lax*, and *aspirated* stops (Renaud 1974: ch. 1), even though such a system isn't known from any other language – raising the question of why such a configuration of the relatively small set of universal features is so extremely rare? Or should we reinterpret this as really a phonetically variant manifestation of more apparently universal features: say, *voiced*, *voiceless*, and *aspirated* (Kim & Duanmu 2004; Duanmu 2016: 85–86), or reinterpreting the tense series as underlyingly geminate (Han 1996: ch. 2)? Or should we see all specific features as being distinctive to each language, arising due to the interplay of phonetics and language transmission over time (Mielke 2008; Dresher 2009)? As should be clear, I lean towards the last option, which is in line with what has been called a 'substance-free' approach to phonology (Hale & Reiss 2008; Iosad 2017). This is not a strict theory, but a family of approaches that, to varying extents, consider only the broadest mechanisms, frameworks, and constraints to be to linguistically universal, with most cross-linguistic similarities emerging from interactions of general constraints on speech production and perception operating over time (Blevins 2004). A substance-free (or substance-lite) approach could consider the existence of phonological features to be universal, but specific features to be language-specific creations (Dresher 2014). But even from such a perspective, typological data is essential, since it is the easiest way to gauge how the interaction of universal cognitive processes and the production and perception of human language tends to play out. This typological work is often aided by reference to notions such as *voicing* or *aspiration*, even if these are inexact abstractions across various languages.

The remainder of this book will not be primarily typological, and I will only occasionally turn to parallels from languages such as Cahuilla (of the Uto-Aztecan family) when they seem particularly instructive. But it should be understood that when I refer to properties of the bimoraic trochee (or the prosodic word, or clitics), I really mean that, in other languages that seem to have a roughly comparable unit of prosodic organisation, that unit has been observed in the linguistic literature to behave in such and such a manner, and so it is likely (barring evidence to the contrary) that the same would be true of the moraic trochees (prosodic words, clitics) of the early Germanic languages. My basic approach here is to use the conclusions and perspectives of linguistics to illuminate the prosodies of medieval English and Norse, and in turn to use the developments of these closely related languages to better understand how prosody shapes and is shaped by linguistic change.

2.8 Theories and Frameworks

A final short note on my theoretical orientation is probably in order; those coming at this book from the study of older Germanic may safely skip this part. A constant issue in linguistic work today is what to do with the multitude of theoretical frameworks that have grown up for describing how languages work and change. For phonology, a central question is whether or not to use some form of *Optimality Theory*, OT (McCarthy 2003; Prince & Smolensky 2004). I do not. My doubts about classic OT are not original, and are basically in line with the critiques of Vaux (2008) and Hale & Reiss (2008), among others. Stratal OT – which reckons with multiple levels of constraint-based interactions – overcomes quite a few (but not all) of the problems involved with classic OT, and there is much excellent work on Germanic prosody that has been done in a Stratal OT framework. The introduction of these levels comes, however, at the cost of losing much of the theoretical elegance and simplicity that are the main attractions of OT in the first place. I avoid tableaux and (with some regret) the delightful manicules of OT in my analyses in this book.

My approach is rather to invoke both rules and constraints as need be, assuming that a language learner's brain is able to make either kind of generalisation when building a phonological system.[28] I try to avoid the excessively deep rulesets of older generative phonology, which could verge on recreating the entire known phonological history of any given language in its synchronic phonology. I am also particularly wary of concepts such as 'rule loss' or 'constraint loss': such phrasing

Problems can arise when phonological theory treats such abstractions too rigidly, but the comparison as such is often useful.

[28] That said, most of the analyses here should be relatively easy to rewrite within an OT framework, should you wish to do so.

may be an acceptable abstraction in some contexts, but usually is a shorthand for something that should be spelled out in much more detail, involving the failure of a new generation of learners to reconstruct a phonological generalisation from the linguistic input they are given (Hale 2007). Phonological change happens partly as new generations attempt to phonologise a mass of phonetic input, constrained (most likely) only by the most general and universal factors of the human mind and body – compare, despite important differences in outlook, Ohala (1993, 2005), Blevins (2004), Samuels (2011), and Dresher (2014) – and partly as different languages and varieties come into contact with one another. This is, I think, now a relatively mainstream view (though hardly a universal one) among historical phonologists, but one worth stating explicitly.

Chapter 3

Rum, Ram, Ruf: The Prosody of Alliterative Verse

Trying to reconstruct the prosody of long-ago languages is hard. Without being able to listen to speech directly, we have to take our evidence wherever we find it: in the patterns of sound changes, in commentaries and treatises, in spelling systems (when these are kind enough to mark prosodic units of any sort), and in the structures of poetry. In the case of medieval English and Norse, all of these sources of evidence are available to some extent, but poetic metre provides by far the largest data set across the longest span of time. A good deal of evidence in this book will come specifically from the prosody of alliterative verse, different forms of which are attested in medieval English from the late 7th century to the 16th century (Weiskott 2016: ch. 6, 2020: 341; Russom 2017), and (disregarding a few Early Runic inscriptions that may or may not actually contain verse) in Norse from perhaps the 9th century on, without a clear end date (Gade 2002; Clunies Ross 2005; Kristján Árnason 2011).

The most conspicuous feature of alliterative metres is in the name. Famously satirised by Chaucer as mere *rum, ram, ruf*,[1] alliteration is the matching of prominent initial sounds. In most alliterative poetry, each line divides into two parts, called *verses* or *half-lines*, editorially marked with extra whitespace. The first of these is the *on-verse* or *first half-line*, the second the *off-verse* or *second half-line*.[2] The most common alliterative pattern – though not adhered to in all varieties of alliterative verse – is that the first stressed syllable in each part must have the same sound:[3]

[1] *But trusteth wel I am a southren man: / I kan nat geste 'rom, ram, ruf ' by lettre.* (*The Parson's Prologue*, lines 42–43, Peniarth MS 392D, folio 235v: https://www.library.wales/discover-learn/digital-exhibitions/manuscripts/the-middle-ages/the-hengwrt-chaucer).

[2] Sometimes the on-verse is called the *a*-verse, and the off-verse the *b*-verse. Since it is also usual to use letter-labels for rhythmic types (§3.1.2), this practice is needlessly confusing, and I won't use that terminology here.

[3] In English, line numbers refer to the entire long line, with the on- and off-verses being indicated by a following *a* or *b*, respectively. In Norse, most poetry is cited by stanza, with each half-line being given its own number (this means that an odd verse-number indicates an on-verse, and an even one an

(11) Wē synt gum-cynnes Gēata lēode
'We are by lineage people of the Geats' (*Beowulf* 260)[4]

(12) Þen carppez to Sir Gawan þe knyȝt in þe grēne
'Then the knight in green speaks to Sir Gawain' (*The Green Knight* 377)[5]

(13) Hon beð broddi gaf blóð at drekka
'With blade she gave the bed blood to drink' (*Atlakviða* 41.1–2 [43.1–2])[6]

Low-stress words – such as pronouns (*wē* 'we', *hon* 'she'), grammatical particles (*þen* 'then'), articles (*þe* 'the'), and (with more complications) finite verbs (*synt* 'are', *gaf* 'gave') – all tend to be ignored for the purposes of alliteration in all these varieties. This tells us something about lexical and phrasal stress, and the patterns of alliteration can supply a certain amount of phonological information about the languages in question.[7]

off-verse). Poem titles are traditionally cited in an abbreviated form, typically following Mitchell, Ball & Cameron (1975) for Old English, and Neckel (1914) for Old Norse. Space is, however, generally not at a premium in these examples, and for clarity I avoid abbreviations as much as I can. For certain particularly long titles, I do condense things a bit, hopefully avoiding any undue ambiguities. By *The Green Knight*, for instance, I mean *Sir Gawain and the Green Knight* (Tolkien & Gordon 1968), since the only other poem with a similar name is a rhymed ballad rather than an alliterative poem. Note that especially for English poems, most titles are given by modern editors.

[4] Quotations from Beowulf are my own, made with particular reference to Fulk, Bjork and Niles (2008) and the digital facsimile of the sole medieval manuscript, Cotton Vitellius A xv, by Kiernan (2015). This manuscript dates to around the year 1000, but the text of Beowulf is likely two or three centuries older than this surviving copy (Fulk 1992: 390, Russom 2002b, Neidorf 2014, Ecay & Pintzuk 2016).

[5] The poem is traditionally dated to after 1348, and before the sole surviving manuscript, Cotton Nero A x, which was probably copied in the later 14th century, or perhaps the early 15th (Doyle 1982: 92–93). The manuscript may be found online at https://digitalcollections.ucalgary.ca/Browse/Collections/Gawain-Manuscript/.

[6] Citations of eddic poetry are my own, made with reference to Bugge (1867), Neckel (1936), Neckel & Kuhn (1983), Dronke (1969, 1997, 2011), Jónas Kristjánsson & Vésteinn Ólason (2014a, 2014b), Tolkien (2010), Finch (1965) and Heusler & Ranisch (1903), as well as facsimiles and diplomatic editions, most notably Wimmer & Jónsson (1891), Guðvarður Már Gunnlaugsson, Haraldur Bernharðsson & Vésteinn Ólason (2019) and Jón Helgason (1924). Stanza and line numbers are after the widely used system of Bugge (1867), though where the recent numbering of Jónas Kristjánsson & Vésteinn Ólason (2014a, 2014b) differs, I provide this as well in parentheses: here, the cited stanza is 41 in Bugge (1867, 290) and most other editions, but 43 in Jónas Kristjánsson & Vésteinn Ólason (2014b, 381).

Most eddic poetry is preserved in the Codex Regius (MS GKS 2365 4ᵒ), dated to roughly 1270 (Lindblad 1980, building on Lindblad 1954). While exact dates of composition for the individual poems are often difficult to pin down (Fidjestøl 1999), there is a reasonable case to be made that much of the eddic corpus dates to the 10th and 11th centuries (Sapp 2022).

To make Norse citations friendlier to readers whose primary background is not in Norse, I normalise poetic texts. I follow a system of normalisation very close to that of the *Ordbog over det norrøne prosasprog* (https://onp.ku.dk/onp/onp.php). Most notably, I rewrite the typographically ambiguous *œ* as *ø*, and mark length on both this and *æ* explicitly, using an acute (for a comparison of different normalisation systems, see https://www.menota.org/HB3_ch10.xml#sec10.3). Note that in general, by convention acutes take the place of macrons in representing vowel length in Norse.

[7] For classic studies in this tradition, see Kuhn (1933), Kendall (1991), Momma (1997), Minkova (2003) and Suzuki (2008).

Alliteration is, however, only the tip of the metrical iceberg, and other aspects of the poetic system give us considerably more insight into the word-internal prosody of medieval English and Norse. It is the patterns of syllable combinations and quantitative regulation that provide a potential bridge between the poetic notion of prosody (metre) and phonological units such as the foot. In the remainder of this chapter, I will sketch out how these metrical systems seem to work, using Old English to introduce many of the fundamental concepts. I will more briefly outline the differences between the usual Old English form and two of the many Norse metres (*fornyrðislag* and *dróttkvætt*), and end with the rather innovative system found in later Middle English.

3.1 Old English Metre

When trying to understand Old English metre, the only evidence and testimony is that of the poems themselves. There are no metrical treatises to turn to for guidance, and of course it's not possible to ask a medieval scop directly about their metrical habits (and even if we could, they might not give any useful answers). Nonetheless, modern metricists have had a good deal of success in working out metrical features of Old English alliterative verse. For an excellent introduction to Old English metre in general, see Terasawa (2011).

The first thing to say is that this really is *poetry*. Fabb & Halle (2008: 1) give a definition of poetry that's pretty unromantic, but very useful for technical work: a poem is a linguistic production that divides into definable lines. This doesn't necessarily mean literal lines on a page.[8] A great deal of poetry in human existence has been purely oral, and even Old English poetry is not written out line by line in the manuscripts (though Latin verse from the same cultural milieu is). Rather, it means that there is something about the linguistic structure that divides the text up into units beyond those of ordinary, prosaic speech or writing.

Old English alliterative texts have this linear structure. The alliterative scheme is used together with syntactic patterning in a way that makes identifying the lines and half-lines of verse very clear, even in non-lineated manuscripts. These divisions were apparent to editors of Old English poetry well before the metrical patternings were worked out, and their validity is further shown by the fact that some scribes used interpuncts to mark out each half-line. Even if the scribes didn't write out the poetry line by line (most likely they wanted to save on parchment), they could recognise the half-line as a basic poetic unit.

Just because a text is a poem, however, doesn't necessarily mean it has *metre*. If poetry is the division of a text into lines, metre is the regulation or limitation of the

[8] In some highly literate traditions, graphic line breaks may indeed be the only or primary way of marking verse lines, as is the case in some free verse. See further Cutler (1994) on boundaries, writing, and poetic markers.

arrangement of linguistic material (stresses, moraic patterns, tonal contours, etc.) within those lines. Poetry without metre certainly exists, and is even found in Old English. The homilist Ælfric, who flourished in the decades around the year 1000, had an extensive body of alliterating work that falls out very naturally into lines (Pope 1967: 105–136). These texts are, however, entirely without metre, and show no discernible regulation within the lines.[9] Though often unfortunately termed 'rhythmical prose', Ælfric's works can be more precisely described as alliterative poems without metre.

The classic corpus of alliterative verse, however – poems such as *Beowulf*, *Genesis A*, or the *Riddles* – does have metre.[10] Specifically, each half-line (more or less independently of the other half-line it is paired with) must satisfy some basic requirements to be a metrically valid verse. Let's start with a simple example of a perfectly metrical half-line:

(14) folces hyrde
'shepherd of the people' (*Beowulf* 610a, etc.)

This exact half-line is found some seven times in Old English, and verses like it – basically two trochees – are extremely common in the corpus.[11] But the same is not true of something like:

(15) *wera hyrde
'shepherd of men'

It is not simply that this particular half-line never occurs, but half-lines with this particular patterning of syllables are vanishingly rare in the poetic corpus. (14) and (15) are strikingly similar in many ways: both have four syllables, in two words, each of which is trochaic (with the pattern *strong–weak*). The only significant difference between them is in the weight of the first syllable (cf. §2.3).

[9] Bredehoft (2004) tried to find metrical structure in Æflric's homilies, but this not a very convincing analysis (Pascual 2014). Note that both Bredehoft and Pascual operate with definitions of 'poetry' that conflate verse with the presence of metre, leading to a bit of running around the terminological mulberry bush.

[10] This corpus is largely edited in the *Anglo-Saxon Poetic Records* (Krapp & Dobbie 1953), though non-specialists should be aware that emendations are not marked in any way in the main text, and need to be proactively identified by comparison with apparatus. Many individual poems can be found in better, more focused editions. The full corpus has also recently been made available online through the *Consolidated Library of Anglo-Saxon Poetry (CLASP)*: https://clasp.ell.ox.ac.uk/.

[11] The remaining instances of *folces hyrde* are: *Beowulf* 1832a, 1849a, 2644b, 2981a; *Finnesburg* 46b; *Metres of Boethius* 10.49b. Hutcheson (1995: 175) finds 4,200 instances of comparable half-lines in his corpus of some 16,088 verses, a sample amounting to about 40 per cent of the total Old English poetic corpus (Hutcheson 1995: xiii). That makes the overall rate of occurrence of this most basic type of verse about 16 per cent, the most common verse pattern in Hutcheson's corpus by a very considerable margin.

In the former, the first syllable is *fol-*, which is heavy: it has one mora from the short vowel, and a second from the consonant in the coda. This contrasts with (15), where the initial syllable is *we-*, a light syllable (with just one mora, from the short vowel).

This tells us two things right off the bat. First, that classical Old English verse has metre. There are patterns which are extremely common, but small, seemingly almost trivial deviations from these patterns render a verse type extraordinarily uncommon. Verses such as (15) would be very easy to form given the linguistic and formulaic material available in Old English poetry, and the only ready explanation for their absence is that they were avoided by poets for metrical reasons. Second, that this metrical system is at least in part *quantity sensitive*. Syllable weight matters. If the addition or removal of one single mora can turn a pattern from the most common in the corpus to one that is seemingly prohibited outright by the metre, then that one small mora is pretty important. For want of a mora, the verse was lost.

To get beyond these initial impressions of the metre, there are essentially two tasks confronting metricists. On the one hand, a good empirical description is needed: what kinds of combinations of syllables (and of what weight and stress) are common, which ones are less common but still robustly present, and which ones are absent or so very rare as to be suspect (see further §3.1.6). On the other hand, it would ideally be good not just to describe, but to explain the variations and limits of half-line patterns, to actually offer a theory of the metre that accounts for *why* some metrical contours are allowed and others not. To date, Old English metrical studies have had much more secure success on the first count, description. A number of specific metrical rules and licences have also been confidently identified as well, which must form a part of the metrical ruleset, but the overall explanation for the system as a whole remains uncertain, with two competing, incompatible theories worth considering.

I will focus mostly on the description of Old English metre, including some of the most widely accepted rules, and leave the deeper questions of fundamental principles to one side at first. For more on the fundamentals of metrical theory, see §3.1.6. I also concentrate on the 'standard' or normal metrical system that holds for the vast majority of lines. There is one alternative metrical mode, where poets can employ a slightly longer and expanded type of half-line, which is known as *hypermetric* verse, on which see Hartman (2020).

3.1.1 Resolution

The foundations of modern metrical study were laid in the late 19th century by Eduard Sievers (1885b,c, 1887, 1893), and the most important thing to come out of his work was the description of *resolution* in Germanic verse. The details of resolution as outlined by Sievers are the foundation of all theories of Old English

metre with any claim to theoretical adequacy.[12] Resolution is the heart of the mainstream Sieversian tradition of metrics.

I have already mentioned that Old English verse (this will be true of Norse as well) makes distinctions based on syllable weight: *folces hyrde* is common; *wera hyrde* is not (see 14 and 15). Sievers (1885b: 219–220) noted this feature of the metre, and observed beyond this that verses such as the following are also found, and are indeed fairly common in the corpus:

(16) weroda drihten
'lord of armies' (*Genesis A* 1369a, etc.)[13]

Just like *we-ra*, *we-ro-da* begins with a light syllable, but this time it's followed by two more syllables, not just one. The explanation, as Sievers demonstrated, is that the two light syllables, *we-* and *-ro-*, *resolve* together. Each on its own has one mora, but together they have two, and so are the equivalent in mora count to the single heavy syllable *fol-*. This gives *weroda* sufficient weight to fill out the verse in a way that *wera* can't.

More generally, *any* stressed, heavy syllable in Old English verse may potentially be replaced by a pair of light syllables, and the result will still be metrical. But the substitution of a heavy syllable by a single light syllable will often (depending on the context; see chapter 5) render the verse unmetrical. This can be shown, for instance, with the second stress of (14). If we replace *hyrde* 'shepherd' with *wine* 'friend' – replacing the heavy syllable *hyr-* with the light syllable *wi-* – the result is not metrical:[14]

(17) folces wine
'friend of the people'

On the other hand, if we replace *hyrde* with *æþeling* 'prince', which has two light syllables for the single heavy one of *hyr-*, the result is perfectly metrical, and

[12] A representative, though by no means comprehensive, list of discussions or endorsements of resolution might include Cable (1974: 7, 1991: 9, 16–20, 141–145), Russom (1987: 11–13, 44–46, 1995, 2002a, 2017: 57), Fulk (1992: ch. 6, 1995, 2002), Terasawa (1994, 2011: 55–56), Hutcheson (1995: ch. 3), Suzuki (1995a, 1996: ch. 5), Stockwell & Minkova (1997), Getty (2002: 9–10) and Yakovlev (2008: 47).

[13] This appears 23 times, sometimes with slight spelling variations. The further examples are: *Genesis A* 1411b; *Exodus* 92a; *Christ and Satan* 197b; *Andreas* 173a, 435a, 727b, 1206b, 1663b; *Soul and Body I* 14b; *Homiletic Fragment I* 7b, 10b; *Elene* 896b; *Guthlac A* 134b; *Descent into Hell* 120b (damaged), 133b; *Paris Psalter* 79.16.4a, 83.3.1b, 88.5.1b; *Metres of Boethius* 20.86b; *Psalm Fragments* 50.13.3b; *Kentish Psalm 50* 94b; *Instructions for Christians* 193b. There are three more instances with the dative *drihtne*: *Paris Psalter* 103.29.1b; *Kentish Psalm 50* 30a, 121a. I have not counted *Genesis B* 255b, 386b, translated from Old Saxon.

[14] Or at least marginally metrical; see further §3.1.6 and §5.4.

Hutcheson (1995: 177) finds over 250 examples of verses such as the following in his partial corpus:

(18) wuldres æþeling
'prince of glory' (*Christ A* 158a)

This kind of exercise could be repeated ad nauseum: syllabically minimal metrical patterns always involve at least one, often two syllables that must be both stressed and heavy, and such a syllable may be generally replaced by two light syllables – but not, except in particular circumstances, by a single light one. This equivalence of one heavy syllable and two light ones is fundamental to any tenable analysis of Old English verse.

Resolution is one of the core topics of this book as a whole. The prosodic basis for resolution in Old English will be the topic of chapter 4. There are also some cases where resolution does not apply, called *suspension of resolution*. This too is systematic and conditioned, at least in *Beowulf*, but since it is the topic of chapter 5 I postpone discussion of this matter until then.

3.1.2 Notation

It's a bit cumbersome to always be talking about 'verses such as (14)' and so forth. Sievers adopted from Latin scansion a notation for marking up verse patterns schematically, but I've learned the hard way that this is difficult for modern typesetters to deal with. Instead, I mark a heavy, stressed syllable with *S*, a light one by adding a breve or short mark (*S̆*), and a weak or unstressed syllable with *w*. It's also useful at times to mark a secondary metrical stress, which I do with a lower-case *s*. Since I often need to draw attention to resolved sequences, I do this by putting the *w* as superscript, S^{w}. For a comparison of this system, which is largely taken from Stockwell (1996), to other notations used in the literature, see appendix C.1.

The use of metrical notation in the scholarly literature is sometimes ambiguous as to whether linguistic or metrical units are being indicated. *S* or its equivalents can potentially stand either for a heavy, stressed syllable (a linguistic unit, equivalent to H) or for a strong metrical position, a metrical prominence usually called a *lift* (*Hebung*). Similarly, *s* represents at once a secondary stress, and the metrical *half-lift* (*Nebenhebung*) prototypically occupied such a linguistic half-stress. And *w* can indicate both a weak syllable, and a weak metrical unit, a *dip* or *drop*. Very often, linguistic material and metrical status correspond pretty well, but there is room for mismatch. Sometimes linguistic primary stresses are taken by metricists as occupying a half-lift, or conversely, a linguistic secondary stress may be taken as metrically serving as a full lift. Such mismatches are acknowledged under the metrical theories of both Cable (1974, 1991) and Russom (1987, 2017), and are

widely accepted by most metricists.[15] I generally use this notation for metrical contours, and favour using the symbols H and L when I want to more precisely discuss linguistic syllables, indicating primary and secondary stress where needed by the use of acute and grave accents, respectively. This distinction is, of course, a bit fuzzy, and strictly speaking symbols such as *S*^{w} and *Š* are metrically equivalent to *S*, but are used to more efficiently indicate what kind of linguistic material is being used (H = *S*, LX = *S*^{w}, L = *Š*).

Here are the verses cited so far, with metrical mark up added:

(19) folces hyrde
SwSw
'shepherd of the people' (*Beowulf* 610a, etc.)

(20) weroda drihten
S^{w}wSw
'lord of armies' (*Genesis A* 1369a, etc.)

(21) wuldres æþeling
SwS^{w}w
'prince of glory' (*Christ A* 158a)

3.1.3 Metrical Feet

Some metrical systems would subdivide half-lines even further, into metrical feet, and mark the foot boundary with either | or /. The exact placement of these boundaries varies considerably from theory to theory: Sievers (1893) places them differently from Bliss (1962), and both in turn differ from Russom (1987). I am somewhat partial to Russom's view on the matter, but as it happens metrical foot boundaries won't matter in the slightest for any of the arguments of this book, and I won't complicate the notation by adding them.

Do note that the concept of the *metrical* foot should not be confused with the *phonological* foot discussed in §2.5. For instance, for metricists who work with (poetic) feet, a word such as *gold-wlanc* 'proud in gold' could often be a single metrical foot, while linguistically it would (under most views) divide into two distinct phonological feet. I will very often refer to *feet* in this book, and

[15] The notable exception is Yakovlev (2008). His central argument is that the metrical system only cares about two kinds of metrical position: *strong* (*S*) and *weak* (*w*). The linguistic distinction between primary and secondary stress is, for him, irrelevant. This argument is intriguing, but also creates certain new problems, and in any case takes us into highly technical territory beyond the scope of this book. I consider these issues further in Goering (2020b: 145–147), and give an overview in appendix E.1.1.

unless clearly specified otherwise, I always mean this term in its phonological sense.

3.1.4 Additional Weak Syllables

The verses cited so far are minimal. Take away any syllable – or even reduce any of the stressed heavy ones to light syllables – and they become unmetrical. Some half-lines, however, are considerably longer, usually through the addition of extra low-stress syllables in the earlier parts of the verse. For instance, alongside the basic pattern *SwSw* (and its resolved variants) cited above, we find plenty of verses such as the following:

(22) beddum and bolstrum
'with beds and bolsters' (*Beowulf* 1240a)

Or with one weak syllable more:

(23) syllic æfter sunne
'marvellous behind the sun' (*Exodus* 109a)

That is, alongside *SwSw*, the configurations *SwwSw* and *SwwwSw* are both acceptable half-lines. Sievers (1893: 28) set the tone for metrical study by regarding this additional low-stress material as relatively incidental to the overall metrical structure of a verse. Verses such as (14), (22), and (23) are all basically of the same 'type', or share the same basic skeleton – in this case, two trochees – and the addition of an extra weak word or two in the middle is a matter of relatively small consequence metrically. As Russom (1987: 19–20) puts it, these extra weak syllables or words are extrametrical.

This is not to say that all weak syllables are metrically irrelevant. A *SSw* half-line such as the following is no more common or generally acceptable than is the $S^{w}Sw$ of (15):

(24) folc hȳrde
'the people heard'

One weak syllable between the stresses is necessary to make the minimally metrical *SwSw* pattern. But with this single required syllable in place, any further adjacent to it are essentially optional add-ins, walnuts added to a chocolate-chip cookie.

Generally speaking, extra weak syllables can't be freely added except next to a metrically necessary weak syllable. There are a few exceptions to this generalisation, such as:

(25) ge·sīgan æt sæcce
'fall down in combat' (*Beowulf* 2659a)

This half-line has the overall pattern *wSwwSw*, with two syllables beyond the minimal *SwSw* skeleton: both the preverb *ge* and the preposition *æt* have been added. The latter is a normal kind of additional weak syllable, next to *-gan*, but *ge* is not next to any other weak syllables. This kind of additional weak syllable, isolated and changing the overall rhythmic contour of the verse, is regarded as an *anacrusis*, or extrametrical upbeat to the half-line (Cable 1971). Poets tend to be fairly restrained in using anacrusis, and the syllables added this way are most often preverbs or the negative particle *ne*: that is, tightly bound proclitics are preferred. This contrasts with 'normal' additional weak syllables, adjacent to a required one, which can freely be any kind of weaker word, from prepositions to pronouns to adverbial particles.

That said, even 'normal' extra weak syllables are a bit limited in certain ways. The most important restriction is that they can only be added freely to the earlier parts of a half-line. Compare the following two verses:

(26) wið stēapne rond
wSwS
'beside the tall shield' (*Beowulf* 2566b)

(27) Hē under rande ge·cranc
wwwSwwS
'he fell beneath the shield' (*Beowulf* 1209b)

(26) shows a minimal verse with a rhythm *wSwS*. No syllable of this can be removed, nor could either of the strong syllables be light, without making the half-line unmetrical. (27) shows a similar pattern, but with three more syllables added in: two (the preposition *under*) neart the start, and a third (the closely bound proclitic *ge*) in the later part of the verse. This is typical. The start of the verse can be expanded by weak syllables fairly freely, including by disyllabic prepositions. By contrast, extra syllables late in the verse tend to be treated like anacrusis: they occur less commonly, are limited to a single extra syllable, and are usually clitics that are particularly closely associated with a following stress (Yakovlev 2008: 59–60). This kind of pattern of greater restriction towards the end of the verse is common in various sorts of poetry; see further §3.4.2.

Exactly why weak syllables can be added like this, and what the reasons for the various restrictions are, is something that the various theories of metre try to explain in different ways, sometimes with important differences in analysis (see appendix E). But there is general agreement that this is a real metrical process: weak syllables can, within certain limits, be added to more basic rhythmic

skeletons without altering the fundamental metrical structure of a verse. Along with resolution, this is one of the major points of general agreement between all Sieversian metrical theories.

3.1.5 Types

Old English half-lines vary immensely in terms of syllable counts and the distribution of stresses. The two features discussed so far – resolution and the ability to add extra weak syllables – allow this massive range of variation to be reduced to a much smaller range of minimal metrical skeletons. For example, six of the verses cited so far would all reduced to the basic skeleton of *SwSw*, varying either in the replacement of *S* by S^{w} (resolution), or in the addition of extra *w* syllables (under the limitations discussed above):

(14) folces hyrde
'shepherd of the people' (*Beowulf* 610a)

(16) weroda drihten
'lord of armies' (*Genesis A* 1369a, etc.)

(18) wuldres æþeling
'prince of glory' (*Christ A* 158a)

(22) beddum and bolstrum
'with beds and bolsters' (*Beowulf* 1240a)

(23) syllic æfter sunne
'marvellous behind the sun' (*Exodus* 109a)

(25) ge·sīgan æt sæcce
'fall down in combat' (*Beowulf* 2659a)

Sievers (1893: 31) labelled this basic pattern – the most common of those he identified, amounting, with only those variations discussed so far taken into account, to roughly a third of all Old English half-lines (Hutcheson 1995: 175–183, 192–198) – as *type A*. He also included under this label verses that instead of a true weak syllable had a secondary or subordinated stress, a sequence *Ss* instead of *Sw*:

(28) SsSw
drync-fæt dēore
'a costly drinking vessel' (*Beowulf* 2254a)

(29) SwS<u>s</u>
Grendles gūð-cræft
'Grendel's battle-power' (*Beowulf* 127a)

(30) S<u>s</u>S<u>s</u>
gūð-rinc gold-wlanc
'the battle-warrior proud in gold' (*Beowulf* 1881a)

Note that in such verses, further weak syllables can't be added freely next to the secondary stress: only actual weak dips, *w*, can be expanded, not half-lifts (which might be better termed half-dips or strong dips).

Using these same principles, including this variation between *s* and *w*, Sievers reduced the large majority of Old English half-lines to just five basic skeletons, his famous five types. Here are minimal examples of each of these, without any extra weak elements, secondarily stressed syllables (except in the last type), or resolved sequences:

A: SwSw

(14) folces hyrde
'shepherd of the people' (*Beowulf* 610a)

B: wSwS

(26) wið stēapne rond
'beside the tall shield' (*Beowulf* 2566b)

C: wSSw

(31) be·lēan mihte
'could dissuade' (*Beowulf* 511b)

D: SSww

(32) fĕorh ĕalgian
'defend his life' (*Beowulf* 2668a)

E: SswS[16]

(34) Bīowulfes bĭorh
'Beowulf 's burial mound' (*Beowulf* 2807a)

There are a number of verses in Old English poetry that do not boil down to one of these five types – at least not without further principles or caveats; see appendix E.

[16] Note that neither *SwwS* nor *SwsS* are regular verse patterns.

Different schemes, such as that of Russom (1987: 20–23) or Yakovlev (2008: 74–75), sometimes cross-cut Sievers' typology in various ways. Nonetheless, Sievers' labels are in such very widespread use that there's really no point in trying to quibble with or revise them in any substantial way: they are thoroughly baked into the language of Old English metrical scholarship.

In addition to these five basic letter types, Sievers (1893: 33–35) elaborated his basic typology with extra letters, numbers, and symbols to produce over two dozen specific subtypes. For instance, type A verses with secondary stresses, such as (28–30), are called *type A2* in his system, and the three verses can be further distinguished as A2a, A2b, and A2ab respectively. That is, A2 means 'A with *s* instead of *w*', and the lower-case letter indicates which *w* is replaced: *a* the first (*SsSw*), *b* the second (*SwSs*), and *ab* both (*SsSs*). Since this kind of referencing system can be rather confusing to those not steeped in it, I include an outline of the whole scheme, very slightly adapted from Sievers, in appendix D.

It may be worth mentioning that, while Sievers' five types remain essential points of reference, there have been attempts to significantly revise the identification and labelling of subtypes. By far the most famous of these is the complicated alphanumeric soup devised by Bliss (1962), where innumerable fine features of metrical or linguistic variation are encoded into such labels as 1A*1b (referring to 23 above), 2A3a(i) (28), and 2C1a (31). All told, his lengthy table II on pages 123–127 lists some 130 detailed subtypes under 50 broader headings. This is an extremely cumbersome system, and many of the features that Bliss chooses to encode are not of any obvious metrical relevance (Pascual 2016). I make no use at all of Bliss's system in this book. Nor do I draw on the more useful, but still far too detailed system of subtypes proposed by Hutcheson (1995).

It's worth emphasising that the types are not now generally seen as having any real significance of their own: hardy anyone really thinks that Old English poets walked around with these five types in their heads, or used them as metrical primes in composition. They are seen as important common rhythmic skeletons, but all modern metrical theories agree that these skeletons are themselves generated by more basic metrical principles. The 'types' are just a sort of mid-level abstraction. They are a way of cutting through the noise of things such as resolution and weak-syllable addition, but they don't boil things all the way down to the really basic metrical fundamentals – whatever those are. I use Sievers' typology in this spirit, as descriptive tools for getting a practical handle on the messiness of Old English metrical variation.

3.1.6 Metricality and Metrical Theories

The features outlined so far constitute the core set of principles and terminology agreed on in mainstream metrical work on Old English today. They do not amount to a full metrical theory. You can't use them to scan a verse, or to compose your own poetry, or to check whether any poetry you've composed follows 'the rules'.

To get 'the rules', you have to turn to one or another of the major metrical theories currently in use: either some variant of the *four-position theory* (Sievers 1893; Cable 1974, 1991; Suzuki 1996; Yakovlev 2008) or the *word-foot theory* (Russom 1987, 1998, 2017, 2022; Bredehoft 2005). Both approaches have their merits. The four-position approach is theoretically more elegant and easier to learn and teach. For its part, the word-foot theory is more descriptively adequate and applies better to a broader range of Germanic verse forms. Trying to decide which of the two is preferable is a daunting task that could easily take us into the densest weeds of metrical theory – I have ventured into this undergrowth in Goering (2016b: ch. 1, 4; 2020b), and lay out some of the basics of the two approaches in appendix E.

The good news is that in practice, the exact metrical framework doesn't matter too much for my current purposes, since both approaches almost always agree about whether or not a particular verse is metrical, even if they don't agree on *why*. For example, both the major current theories of metre agree that the following verse is perfectly metrical, a type that may be termed Da*:

(34) salte sǣ-strēamas
'salty sea-currents' (*Andreas* 749a)

On the other hand, the following syntactically plausible variant is considered to be unmetrical as a half-line under both theories:

(35) ˣsǣ-strēamas salte
'salty sea-currents'

Both theories start from the empirical observation that that the configuration *SwSsw* is robustly attested throughout the corpus (Hutcheson 1995: 237–239, 242–243, 245–247), while *SswSw* is not. That is, both theories rest on the same kind of basic descriptive work that justifies the principle of resolution, or the addition of weak syllables.

Each theory has to then try and explain, in its own terms, why *SwSsw* should exist, since it clearly does. Russom (1987: 28–31) accepts *SwSsw* as a basic type, and generates it in the same way he generates all the other basic types (for a summary of these principles, see appendix E.2). Cable (1991: 143) and Suzuki (1992, 1996: 23–35, 103–107, 110–112), by contrast, attempt to reduce this type down to the more basic skeleton of *SSww*, type D, by positing new metrical principles for disregarding the first *w*. Others, including Sievers (1893: 183) and Yakovlev (2008: 65–67), accept such verses as real, but anomalous, arguing that they are fossilised exceptions to the usual rules, tolerated because the pattern was inherited from an older Germanic metrical system.[17]

[17] Under this view, the reason why *SwSsw* would be metrical but ˣ*SswSw* would not would lie in the prehistory of Old English metre, not in any living principles.

The larger point here isn't the details of how different metrical approaches handle verses such as (34), but that for most practical purposes, those differences don't matter. What's really important is determining whether a particular pattern is metrical or not, and all Sieversian approaches handle that basic question in much the same way. This isn't a purely empirical matter, since the principles of resolution and weak-syllable addition inform such judgements. For instance, the following verse is, in a Sieversian view, considered good evidence for the same overall Da* pattern of (34):

(36) locene lĕoðo-syrcan
'joined limb-armour' (*Beowulf* 1505a)

This of course has seven syllables to the five of (34), but there are two instances of resolution of light syllables: *lo-ce-* and *lĕo-ðo-*. Remember that short diphthongs such as *eo* count as a single mora. The overall contour of the verse is therefore, in Sieversian terms, *S*^{w}*wS*^{w}*sw*, which is in most cases fully equivalent to *SwSsw*. All current mainstream metrical theories handle (36) like this, and see it as an equivalent to (34), regardless of how the overall pattern is dealt with in the theory.

There are occasionally some difficulties with this kind of methodology. Often, a particular pattern will be attested hundreds of times in the corpus, and its metrical validity is very secure. Other times, a pattern will be absent entirely, or appear only a few times in contexts where there are some other grounds for supposing an error in scribal transmission. Such cases are clearly unmetrical. There are, however, also borderline cases, patterns that only occur a few times in the corpus, but aren't otherwise under obvious suspicion of being due to scribal errors. Some of these types might be better described as *marginally metrical* rather than strictly *unmetrical*, and different metricists sometimes make different judgements about them. For the present purposes, this distinction won't usually matter too much. Looking back to (17), ^{x}*folces wine*, there are a smallish number of *SwS* and *SwS*^{w} (or perhaps *SwŠw*) verses scattered around the corpus (Schabram 1960; Pascual 2013; Suzuki 2017).[18] But they are rare, and compared to both the very high frequency of *SwSw* and the ease of making *SwŠw*/*SwS*^{w} and *SwS* sequences in Old English, it is clear that there is metrical pressure to avoid half-lines of this type. It doesn't really matter that much whether this pressure is absolute (meaning that all apparent *SwS* and *SwS*^{w} verses should be regarded as corrupt) or gradient (meaning that the pattern is avoided, but could be tolerated from time to time).[19] What matters is

[18] For possible examples in *Beowulf*, see §5.4.

[19] Possibly the standards varied from poem to poem, but only a few poems are actually long enough to get a fairly reliable picture of their metrical limits. As a whole, the corpus of 'classical' verse does broadly follow the same set of distributional patterns – and so presumably the same rules to generate them – but that doesn't preclude some minor variations in borderline cases from poet to poet.

that the metrical pressure is clearly there, and helps us justify both the importance of syllable weight and the principle of resolution.

When the evidence of metre really involves genuine uncertainties or complications, or where the adoption of one or another theoretical framework would really matter, I will try to make this clear. Otherwise, I will concentrate not on the fuzzy limits of metricality, but on trends that are robustly attested in the corpus. The most important of such trends for my present purposes is resolution, which is fortunately very reliably demonstrable.

3.1.7 Resolution and Sieversian Metrics

Since I am taking a broadly 'theory neutral' approach to Old English metre, one point needs some special emphasis: that resolution is not closely dependent on any specific theory of the metre. This issue is a fairly technical one, and those looking for a general overview of matters metrical need not concern themselves with this section, but it's an important point in the climate of current metrical study. Even so, I will here touch only briefly on what are considerably more complicated questions of fundamental metrical methodology and theory (appendix E).

Currently, the four-position theory of metre is the most popular framework in use (Cable 1974, 1991; Suzuki 1996; Yakovlev 2008; Terasawa 2011). This theory, originally one aspect of Sievers' somewhat complex set of rules and factors, basically holds that Old English metre is a matter of counting to four: resolved sequences and runs of non-final weak syllables are reduced to single metrical *positions*, and there ought, ideally, to be four of these positions in every half-line.

It has been repeatedly claimed that resolution has some inherent link to the four-position theory of metre (Fulk 2002: 337–340; Yakovlev 2008: 62–64; Pascual 2016: 29–30). The suggestion is that, since resolution is an essential rule in this four-position approach – you can't begin to make the four-position theory work without resolution – the reverse is also true: that the four-position theory is fundamental to justifying resolution.

This is simply not true. I have already explained what Sievers' own original arguments were for resolution, and they in no way depended on a four-position scansion. It's also worth noting that resolution is generally assumed even in verses such as the following:

(37) þā-þe for geogoðe
'those who because of their youth' (*Exodus* 235a)

The initial three syllables are all low-stress words of the sort that are routinely elided together into a single metrical position. The first full stress is *geo-* (the *ge* here is a digraphic spelling of [j]), a light syllable. To get four metrical positions out of this verse, one would have to assume that *geo-*, *-go-*, and *-ðe* each constitute

a distinct metrical unit, without any resolution. This is not what metricists usually assume. Rather, the rules of resolution are so robust that we notate this verse as *wwwS*^{w}*w*, with the two light syllables *geo-go-* resolving together – even though this makes for a half-line with only three metrical positions.

This scansion with resolution is confirmed, not by any specific theory of the metre, but by the same analogical comparison that forms the basis for all sound metrical argumentation in Germanic verse (Fulk 1992: 55–56; Stockwell & Minkova 1997; Goering 2020b). Compare (37) with the following verse, which is of a pattern reasonably well attested in the corpus:

(38) ðe mē se gōda
'which that good one (decides to give) to me' (*Beowulf* 355a)

This has the metrical contour *wwwSw*, again with only three apparent metrical positions. Sievers (1893: 33) labelled this type as A3. Just how such A3 verses are best accounted for is debated,[20] but it is clear that resolution is something worked out on its own terms, not merely a convenience in hunting out exactly four positions in every half-line.[21]

Beyond this, resolution is just as essential to the word-foot theory of metre developed by Russom (1987, 2017, 2022) as it is to the four-position theory. Should we then say that the reality of resolution proves that the word-foot theory is correct? Of course not. Neither theory has the right to claim resolution as support, and metricists today are in some danger of closing off fundamental questions of metrical theory by prematurely committing to the more popular four-position framework on the basis of a serious misconception about what resolution is: it is a distributional feature of Old English verse, something *to be explained* by a metrical theory. Any adequate metrical theory has to account for resolution. But since multiple metrical theories can do so, resolution is *not evidence* for any one such theory.

In my view, the biggest methodological issue here is that metricists may lose sight of what the real basis of the Sieversian approach is: not counting to four, but analogical and comparative argumentation based on verses from throughout the corpus. This is the only basis on which resolution – or any other feature of the verse form – can be really established. Sievers' great achievement was in rigorously

[20] Contrast the views of Sievers (1885b: 283), Cable (1974: 24), Neuner (1920: 33–48), Bliss (1962: 61–62), Suzuki (1996: 47–59) and Russom (1987: 35–36, 2017: 86–87).

[21] This point can be made even more acutely when we bring suspension of resolution – the topic of chapter 5 – into the picture. It would be very convenient for a four-position metricist to scan a verse such as *mǣre mearc-stapa* 'famous walker of the borderlands' (*Beowulf* 103a) with resolution of the final two syllables: *SwSs*^{w} would make for four metrical positions. But this is not usually done, and the mainstream view is that resolution does not take place in this particular context, leaving the verse with five positions, *SwSs̆w* – a type D* in Sievers' labelling, and akin to verses such as (34).

applying this methodology, and using it to discover the principle of resolution (and its conditioned non-application). Anyone who accepts this fundamental approach has a key to analysing Old English verse patterns, no matter what metrical framework for explaining those patterns they endorse. In my own case, I lean (with reservations) towards the word-foot approach, but I can see the very real merits of the four-position approach as well. Nothing in this book will depend on either metrical theory specifically. For those interested in following these issues up, I do include a brief overview of both these frameworks in appendix E, to make it easier to see how much (or rather, how little) the choice of a specific underlying theory matters.

3.2 Norse Metres

The metrical world of Norse poetry is considerably more varied than that of Old English. Among the several major and many minor metres of Norse verse, I will focus largely on the evidence of two: *dróttkvætt* and, especially, *fornyrðislag*. The first is the most prominent of the skaldic metres, and shows an intricate patterning of linguistic form on a number of levels. The latter is one of the main metres used for eddic poetry, and bears a striking resemblance to the metre of the standard half-line of Old English (though with some differences of detail). I will also make some use of evidence from the other main eddic metre, *ljóðaháttr*, but as the regularities and rules of this form are much less widely agreed on, I will introduce only such relevant features as come up.

Both *fornyrðislag* and *dróttkvætt* are reasonably well attested – though neither as copiously as Old English verse – enough so that arguments can be based on their workings and structures. There are also native metrical treatises available, though these have to be used with major reservations since their information does not always match or describe actual metrical practice very well.

3.2.1 The Basic Eddic Metre: Fornyrðislag

I begin with *fornyrðislag*, which is on the whole simpler than *dróttkvætt*; for a fuller overview, I recommend Fulk (2016). There are some obvious general differences between this metrical form and Old English verse, the most striking of which is that it, like most Norse metres, is stanzaic: groups of (most often) four poetic lines form distinct quatrains. This difference is important in many ways, including for the study of narrative structure and stylistics, but doesn't have any really strong bearing on the metrical system of half-lines.

On the level of individual verses, *fornyrðislag* generally resembles the classical Old English metrical system fairly closely. Poetic half-lines (verses) are bound into long lines by alliteration, and each half-line has its own rhythm. A number of editions print each half-line on its own printed line, as if the typical stanza

had eight 'lines', but this is just editorial convention, and not representative of the metrical structure (Kristján Árnason 2006).[22] However printed, many of the verses (though not all; see in particular §11.1.2 on three-position verses) can be labelled according to the same system of types used for Old English verse – a task Sievers (1885a) undertook concurrently with his earliest investigations of Old English metre (building on Sievers 1879, 1882):

A: SwSw

(39) lǫndum fjarri
'far from land' (*Helgakviða Hundingsbana I* 27.8)

B: wSwS

(40) í fjánda lið
'in the troop of foes' (*Brot af Sigurðarkviða* 16.8)

C: wSSw

(41) ok bróðr mínum
'and to my brother' (*Oddrúnargrátr* 21.3)

D: SSww

(42) hlýr roðnaði
'(her) cheek grew red' (*Guðrúnarkviða I* 15.4)

E: SswS

(43) Sigrlinnar sonr
'son of Sigrlinn' (*Helgakviða Hjǫrvarðssonar* 35.7)

Much else of what I've said about Old English metre applies to this verse form as well, so I will keep this section brief. Resolution is found, though more restrictedly; this is the main topic of chapter 11, and also of §12.1. Extra weak syllables may be added, though not as freely as in Old English, and the overall syllable counts average lower. True anacrusis (a weak syllable added that's not adjacent to one in the most basic metrical skeleton) is generally prohibited, perhaps in part because the unstressed verbal prefixes that typically fill anacruses had largely been lost in the history of Norse (Kuhn 1933; Haukur Þorgeirsson 2012).

Fornyrðislag also allows some of the same unusual verse structures that have proven more challenging to explain within some theoretical frameworks: the D* (§3.1.6) and A3 (§3.1.7) type of half-line. Examples of each include:

[22] Old English verse could be presented in the same way, and indeed has been. The early work by Kemble (1835), for instance, prints each half-line as a 'line'.

(44) gap var ginnunga
SwSsw (D*)
'there was the void of emptiness' (*Vǫluspá* 3.7)

(45) svá var hon móðug
wwwSw (A3)
'she was so frenzied' (*Guðrúnarkviða I* 2.7)

The same debates about underlying metrical principles are also found for *fornyrðislag* (appendix E), though generally somewhat less ink has been spilled on the theoretical fundamentals for Norse. The massive red tome by Suzuki (2014) represents a major and very useful recent attempt to apply a modern four-position approach to this metre, while an application of the word-foot theory to *fornyrðislag* can be found in Russom (1998). But as with Old English, these underlying metrical principles are of less relevance to my current focus than the kind of analogical argumentation for whether particular configurations are metrical or not.

One major practical issue with *fornyrðislag*, and indeed all Norse poetry, is that most individual poems are rather short. In Old English, long poems such as *Genesis A* and *Beowulf* can be studied more or less on their own terms, without necessarily assuming the metres of the two match in every detail. This is simply not possible with Norse, where poems must be considered in aggregate in order to get a corpus large enough for any robust analysis. This means that unusual features only appearing in some poems can be hard to judge: are we dealing with variations in poetic practice, or possibilities that existed for most poets but which are by chance not attested in every relatively short poem? Such questions are not always at all easy to answer.

3.2.2 The Elaborate Skaldic Metre: Dróttkvætt

Dróttkvætt is one of the most celebrated Norse metres, involving a number of fairly tightly regulated rules and intricacies – for introductions, see Frank (1978) and, more technically, Myrvoll (2016). Despite some complications, at its most basic, the form can be roughly described as an extension of the basic Germanic metre seen in Old English or, especially, in *fornyrðislag*. Pairs of half-lines (often just called and printed as 'lines') or verses are linked together by alliteration. Each half-line consists of a base or core that typically can be understood as showing roughly the same rhythms as a half-line of *fornyrðislag*, but extended with a final trochaic word (Sievers 1885c: 526, 1893: 99; Kuhn 1983: 53, 92–97; Suzuki 2014: 821–822). For example, compare the following lines of *fornyrðislag* and *dróttkvætt*:

(46) Þá gengu regin ǫll (A3) á røk-stóla, (C)
ginn-heilǫg goð, (E) ok um þat gættusk. (A3)

'Then all the powers went to their judgement seats, the very holy gods, and debated about that.' (*Vǫluspá* 6.1–4, etc.)

(47) Ok dauðs vallar (C) dáðar — drekk eigi — mér (E/Db) þekkja;
áðr í bragnings (A3) blóði ben-gjóði nef (E) rjóðum.
'And deeds of the plain of death are pleasing to me; I will not drink before we redden the beak of the wound-osprey [=carrion bird] in the prince's blood.' (Þorkell klyppr Þórðarson, *Lausavísur* 1.5–8; Fulk 2012c)

(47) is a relative simple half-stanza (helming) of *dróttkvætt*. It shows a little of the syntactic interleaving so characteristic of this verse form – the words *drekk eigi* 'I will not drink' goes with the clause of the second long line, but has been placed in the middle of the first – but nothing too complicated is going on. The one kenning of this half-stanza is also simple and transparent: *ben-gjóði* 'wound osprey' does not literally refer to an osprey, but to some other kind of bird (a raven or an eagle) quintessentially portrayed as an eater of carrion.

Metrically, *á røk-stóla* is a fairly typical *fornyrðislag* half-line, of Sievers' type C. This can be notated as having the rhythm *wSsw*, which many would take as metrically equivalent to *wSSw* (bearing in mind that there is often leeway regarding stresses and secondary stresses; see §3.1.2 above). This would then be basically comparable to *ok dauðs vallar*, which has the rhythm *wSSw*, followed by the extra *Sw* of *dáðar*. The whole verse could be notated as *wSSw|Sw*, with | marking the position before the final trochee. Similarly, *ginn-heilǫg goð* and *ben-gjóði nef* both have a very similar rhythmic contour, *SswS* (type E), with the latter again followed by the trochaic *rjóðum*. This could be represented as *SswS|Sw*.

There are, however, a number of characteristic differences between the rhythms of the base of the *dróttkvætt* verse and *fornyrðislag*. In *áðr í bragnings*, the rhythm would seem to be *wwSw*, which is very close to *ok um þat gǽttusk*, *wwwSw*: the difference is just one weak syllable more in *fornyrðislag*. This one syllable is, however, significant, since a third unstressed syllable in this context would be out of place in *dróttkvætt*. If *fornyrðislag* is already more restrictive in terms of unstressed syllables compared to Old English verse, *dróttkvætt* takes things a step further, tolerating extra weak syllables only under very restricted circumstances (Kristján Árnason 1991: 47; Gade 1995: 61–66).[23]

A further difference concerns resolution. This is certainly found in *dróttkvætt*, though not in the half-stanza just cited, but it is more restricted even than in *fornyrðislag* (and so much more so than in Old English). In normal *dróttkvætt*,

[23] It's worth mentioning that further syllables are often found in the manuscripts, but it is usually supposed that various linguistic processes, especially the reduction of clitics, allow many of these to be disregarded in terms of metrical structure.

resolution is possible only in a verse-initial strong metrical position, such as the following (Sievers 1878: 470; Kuhn 1983: 68):[24]

(48) æfr gall hjǫrr við hlífar; hnigu fjǫr-vanir — sigri
'the furious sword sang against shields; (warriors) fell lifeless — (Haraldr gained) victory' (Þorbjǫrn hornklofi, *Glymdrápa* 5.7–8; Marold 2012)

The alliterating *hnigu* 'fell' resolves into a single metrical position, but this is only possible because it stands at the very start of the half-line. This means that a verse-base such as *þá gengu regin ǫll*, scanning as *wwS*^{w}*s* (linguistically *wwS*^{w}*S*), would be exceptional in *dróttkvætt* on two counts: the number of weak syllables at the start, and the resolution of the non-verse-initial *regin*. I will consider the possible reasons for this restriction on resolution in chapter 12.

3.2.2.1 Syllable Divisions and the Cadence

Among the many rules and intricacies of *dróttkvætt*, the final trochee stands out as a distinctive and fundamental rhythmical feature. I will refer to this as the *cadence*, understanding it as a particularly fixed metrical unit at the end of the verse. The way I've explained the verse form so far, it might seem like the metrical structure of the verse is basically bipartite, with an initial section somewhat resembling *fornyrðislag* half-lines – the *base* of the verse – and this cadence as a distinct entity. But it should be clear even from the few examples given so far that the most important syntactic breaks do not always fall immediately before the cadence (see *mér þekkja* and *við hlífar* in 47), and there are verses where the cadence begins inside a compound word:

(49) Hvarf inn hildar-djarfi — hvat varð af Þorgarði?
'The battle-brave one turned — what became of Þorgarðr?' (Þorleifr jarlsskáld Rauðfeldarson, *Lausavísur* 6.1–2; Heslop 2012)

Here *hvarf inn hildar-* and *hvat varð af Þor-* are the pre-cadence bases of the verses, and could be compared to *fornyrðislag* half-lines (as types A and E, respectively, by Sievers' labels). But if the cadence really is a distinct metrical unit added to the end, then we would have to assume that the most prominent metrical juncture in the verse can fall within a compound word or a name.

Probably this is precisely what we should assume, though the matter is not entirely clear-cut. One clue comes from verses such as the following (Myrvoll 2016: 244–246):

[24] There are a small number of exceptions to this, all by poets associated with the court of one specific king (Kuhn 1983: 68), but the general rule is robust.

(50) bitu þengils son ungan
'(spears) bit the young son of the king' (Torf-Einarr Rǫgnvaldsson, *Lausavísur* 3.4; Poole 2012b)

The key here is in the word *son*, occurring immediately before a word beginning with a vowel. Normally in *dróttkvætt*, such sequences are avoided, which Kristján Árnason (1991: 170–172) takes as evidence that syllable divisions can cut across words in this metre. That is, a sequence such as *son ungan* would be divided as *so-nun-gan*, with the final *n* of *son* actually being put at the start of the first syllable of *ungan*. This suggests that *dróttkvætt* employs a high degree of *metrical cohesion*, where word boundaries are weakened or ignored within a metrical unit (see further §3.4.1 below).

This kind of cohesion nicely gives *un-* a syllable onset, but leaves *so-* as a light syllable: too light to serve as a metrical lift under normal circumstances. In most metrical positions, this kind of sequence is simply avoided, and Kristján plausibly suggests that this is done to avoid the light lifts created by this kind of resyllabification.

Verses such as (50), however, form an exception to the usual rule of avoiding placing a monosyllable such as *son* before a vowel. This exception makes sense if we assume that the cadence really is a distinct metrical unit, so that there would be a metrical boundary between the consonant and the vowel. That is, in *son* | *ungan*, the metrical break before the cadence blocks the cohesion that usually operates within a *dróttkvætt* half-line.

This argument is rather inferential: the avoidance of certain sequences of words suggests cohesion, and the presence of those sequences across the cadence in turn suggests a lack of cohesion in that one position. The data is, it should be said, not entirely one-sided: Gade (1995: 68–69) finds three examples where cohesion fails in positions other than before the cadence, though Myrvoll (2016: 246) finds twice this number at the cadence break, and I have found another half-dozen through fairly casual collection.[25] Without a really thorough analysis of the entire corpus, these numbers are just suggestive, but as they stand they suggest that Kristján Árnason's overall argument is probably right, and there was a special metrical break before the cadence. The structure of a *dróttkvætt* verse really was that of a opening or body (comparable to a *fornyrðislag* half-line) followed by a trochaic ending. At any rate, as I discuss in chapter 12, the position immediately before the cadence shows other interesting restrictions on syllable weight (known as Craigie's law), and it is very practical in discussing this to make this kind of division between the base of the verse and the cadence.

[25] Egill Skallagrímsson, *Aðalsteinsdrápa* 1.2, *Lausavísur* 25.2; Hallfreðr vandræðaskáld Óttarsson, *Erfidrápa Óláfs Tryggvasonar* 9.6; Sigvatr Þórðarson, *Flokkr about Erlingr Skjálgsson* 1.3; Þjóðólfr Arnórsson, *Magnússflokkr* 12.8; Þórðr Kolbeinsson, *Eiríksdrápa* 11.4.

There is much else to say about *dróttkvætt*. For more elaboration, see the major works on the metre: above all Kuhn (1983), along with Kristján Árnason (1991) and Gade (1995), and for a shorter but exceptionally clear introduction that does not shy away from technical questions, Myrvoll (2016). As with the other metres discussed, the fundamental metrical principles of *dróttkvætt* are debated, and both word-foot and positional approaches are possible. As usual, I focus on pattern comparison rather than leaning too heavily on any one specific theory, though like most metricists I continue to make use of Sievers' labels to describe the patterns of the bases.

3.3 Middle English Alliterative Metre

Middle English alliterative verse falls into two major chronological periods: an early one, where the main (but not only) source is Laȝamon's lengthy *Brut*, and a later one, traditionally called the period of the Alliterative Revival (though how apt a name this is has been much debated). I will tackle Laȝamon's metre in chapter 7, but it's easier to approach that difficult problem against the background of the later alliterative poems.

Later Middle English poetry clearly has a very different structure compared to the other metres examined so far. As a reminder of what a typical line looks like, here is (12) repeated from above:

(12) Þen carppez to Sir Gawan þe knyȝt in þe grēne
'Then the knight in green speaks to Sir Gawain' (*The Green Knight* 377)

While the alliterative principles are much the same,[26] the individual half-lines do not sort themselves neatly into the same kinds of patterns noted by Sievers, and his letter-based types are not useful labels or categories. Careful metrical study has, however, made it clear that there are regularities to this metre after all, even if the underlying rules remain – as seems to be the case for all these metres – controversial.

The key breakthroughs in describing later Middle English alliterative verse were made rather more recently than those on Old English or Old Norse, only in the later 1980s (Duggan 1986, 1988, 1990; Cable 1990, 1991: ch. 4).[27] The most important general point is that, to a degree much greater than for the other metres described here, there is a really fundamental difference between the on-verse and

[26] The spelling difference between *c-* and *k-* is irrelevant: both letters represent alliterating [k].

[27] For interesting comments on how Duggan and Cable came to independently propose some of the key features of the metre, and what impacts their very divergent approaches had on their formulations, see Cable (1990). Many of the key findings were also made or anticipated long ago by Luick (1889, 1893: 1011–1014), though the significance of his findings was afterwards largely overlooked or forgotten (Putter, Jefferson & Stokes 2007: 7–8).

the off-verse. In the other metres, this distinction can matter, when you dig down into the precise statistical distributions of types and the applications of licences (anacrusis, for instance, is much rarer in the off-verse than in the on-verse in Old English), but broadly speaking the same set of basic rhythmic configurations occur in either half of the line. Not so for Middle English.

The off-verse is the simpler part of the line, being fairly tightly constrained. The basic rules, only slightly supplemented since their classic formulation by Cable (1991: 91–94), can be given as a set of four requirements, adapted here from Russom (2017: 136):

1. The off-verse must contain one and only one long dip.
2. A long dip may not have more than three syllables in the off-verse.[28]
3. The off-verse must contain two and only two lifts.
4. The off-verse must have a strictly trochaic closure.

The practical effects of these rules can be seen straightforwardly in our example line, *þe knyȝt in þe grēne*. First of all, the verse must contain exactly one long dip, a run of either two or three weakly stressed syllables. There are three sets of unstressed syllables here: the first and last have just one syllable each (*þe* and *-ne*), while the middle one has two (*in þe*), and provides the sole long dip. Rule 1, check. This long dip is also less than four syllables long, satisfying rule 2. Beyond the long-dip rules, the verse needs two lifts, relatively prominent stressed syllables. These are provided by *knyȝt* and *grē-*. Rule 3 is thus also satisfied. Finally, much like *dróttkvætt* half-lines, the Middle English off-verse must end in a strict cadence, a single trochaic word. Such a cadence is found in our sample line, where *grē-ne*, /greːnə/, has the most straightforward possible *Sw* word-shape – fulfilling rule 4.

Part of the reason these rules took so long to unravel lies in the problem of final *e* in this period of Middle English. Generally, final schwas are thought to have been dropped in the relevant dialects before the composition of most of the major late alliterative poems. This would mean that our sample ends not with a weak syllable, but with the second stress: /ðə kniçt ɪn ðə greːn/ rather than /ðə kniçt in ðə greːnə/. The question of these schwas has been extensively investigated,[29] and the following conclusions of these detailed studies are essential to bear in mind when dealing with later Middle English evidence:

[28] This rule was added to Cable's original formulations by Inoue (2002, 2009).

[29] Although Duggan (1987, 1990), one of the founders of the current system of scansion, has argued that final *e* was lost in the language of all alliterative poets except Langland, most scholars to look into the topic have generally found that *e* was widely retained in most contexts where it is expected historically. Major studies include Cable (1990, 1991: ch. 3), Putter, Jefferson & Stokes (2007: ch. 2), Yakovlev (2008: 93–141, 2009) and Russom (2017: 136–148).

1. The manuscript spellings are, in any specific instance, a poor guide to the historical or metrical status of *e*.[30]
2. Weak *e* was often pronounced in poetry, even if it was lost or variably realised in ordinary speech, perhaps depending on register (Yakovlev 2009: 156–157).
3. The use of weak *e* is not willy-nilly, but is only possible in particular words and grammatical categories, reflecting the history of its use in English morphology immediately pre-loss.

These principles will be familiar to anyone who has worked with the metre of Chaucer – or who is familiar with modern French poetry and song – and are not fundamentally surprising. Nonetheless, they should remind us that poetic tradition is conservative, and that it may take some real work to relate the features of poetic language to other registers and variants used at the same time.

I won't sketch out the main rules for the on-verse, which involve certain complexities that won't be particularly relevant to my immediate goals.[31] The only point to emphasise is that the on-verse has to contrast with the off-verse. The positive constraints that shape the on-verse may be harder to pin down perfectly, but it must violate at least one of the rules given for the off-verse: by having three lifts, an overlong dip, or not ending in a trochaic cadence.

The fundamental principles of the metre remain highly uncertain. A position-counting approach is difficult to apply to Middle English, particularly to the on-verse. The most extensive attempt to work out a metrical theory for the fundamentals of Middle English alliterative verse is the word-foot analysis of Russom (2017). Although I am personally sympathetic to this approach overall, the descriptive approach is here, as with the other metres discussed, the real basis of linguistic investigation.

3.4 A Step Back: General Metrics

Two of the points mentioned in the discussion of *dróttkvætt* touch on wider issues of how metres tend to work in general. I have already mentioned the notion of *cohesion* as a metrical feature, an important general phenomenon that deserves a closer look. The idea of the cadence takes us to the *principle of closure*, a metrical phenomenon found in all sorts of poetic traditions. Both of these ideas will prove important in trying to relate metrical rules to linguistic structures.

[30] To get an impression of the linguistic status of final *e*, I recommend looking at the excellent edition of the Pearl Poet's works by Putter & Stokes (2014), which normalises the texts' usage of *e* in light of recent research on metre.

[31] Key work on the on-verse includes Cable (1991: 91–94), Inoue (2002), Inoue & Stokes (2010), Putter, Jefferson & Stokes (2007: ch. 5), Yakovlev (2008: 155–179), Russom (2007, 2009a, 2017: 134–136, and ch. 6–9 *passim*).

3.4.1 Cohesion in the Verse

In §3.2.2.1, I reviewed the arguments that words in *dróttkvætt* were run together, so that a consonant at the end of one word might be shifted into the start of the next word for purposes of syllable division. This sort of thing is not uncommon in poetic traditions, and can, following Kristján Árnason (1991: 170–172), be called the principle of *cohesion*: the possibility for elements in a verse to be treated as particularly tightly bound together, and in particular for sequences of multiple words to be treated more as if they belonged to a single word (Kuryłowicz 1970: 7). For a parallel example, take this line from the *Ṛg-veda*:[32]

(51) índrasya nú vīríyāṇi pra vōcam
'I will now speak the manly deeds of Indra' (*Ṛg-veda* 1.32.1.1; van Nooten & Holland 1994)

The metre here is basically a regulation of light and heavy syllables (§2.3), and the sequence *-ṇi prá* needs to scan as *heavy–light* (for a convenient overview of this metre, *triṣṭubh*, see Macdonell 1916: 440–441). On its own, *-ṇi* is a light syllable (it has just one mora from the *i*), but the scansion does work out if we allow the syllable divisions to operate without respect to word boundaries. In *-ṇiprávōcam*, the syllables then work out as *-ṇip-ra-vō-cam*, with the *p* from *prá* counting as belong to the coda of the previous word (Arnold 1905: 6–7). This makes the quantitative rhythm of the final four syllables HLHX, which is the required cadence for this type of verse. Similar cohesion is also known from ancient Greek metres (West 1982: 4, 8–9, 1997: 219–220).

It's worth emphasising that cohesion isn't inevitable. A poetic system does not have to allow syllabification (or indeed any other kind of prosodic process, such as foot formation) to cross-cut words. In both Old English verse and eddic poetry, this particular kind of cohesion – involving resyllabification – doesn't seem to take place:

(52) hwæðre him god ūðe
'nevertheless the deity granted to him…' (*Beowulf* 2874b)

(53) glǫð á golfi
'glad on the floor' (*Sigurðarkviða* 31.5)

[32] Kuryłowicz uses the term *Kohärenz*, which might be rendered as 'coherence' in English – except this term is used by Dresher & Lahiri (1991) for the very different concept that metre and phonology should have a coherent relationship to one another (§3.5). I therefore prefer Kristján Árnason's less ambiguous term of *cohesion*.

If the lifts and following syllables were divided with syllabic cohesion, as *go-dū-ðe* or *glǫ-ðá- go-*, then the lifts would be light syllables – something both metres are generally at pains to avoid (§3.1.1 above, and further §11.1.2). There are also no points in either metre where this kind of resyllabification would improve the analysis of the scansion.

This is rather interesting, as it suggests that *dróttkvætt* involves very tightly bound verses that, apart from the boundary with the cadence, can allow a high degree of syllabic cohesion. On the other hand, this same degree of cohesion is not found in *fornyrðislag*, even though it is a closely related metre, used at the same time and in the same cultural milieu. Cohesion is a matter of metrical convention: a general possibility of any metre, but not necessarily always used, or always used in the same way.

3.4.2 Sticking the Landing: The Principle of Closure

Perhaps the most striking feature of *dróttkvætt* is the cadence: the fixed ending of every verse in a single trochaic word. This makes for a situation where the body of the verse is somewhat flexible rhythmically, but the end is rigidly constrained, and must stick the landing with precision (to use a gymnastic metaphor). This kind of patterning is very common throughout the metres of the world – for instance, in the Vedic verse quoted as (51) above, the final four syllables must form a strict cadence of HLHX, i.e. *heavy–light–heavy–anceps* (*anceps* means the quantity of the syllable is irrelevant). There is much more flexibility in the arrangement of heavies and lights in the earlier portion of the line, but this fixed cadence will occur in every line in this metre (*triṣṭubh*).

The tendency towards cadences can be seen as part of the broader *principle of closure* (Hayes 1983: 373; Russom 2017: 17). This principle holds that the ends of units (especially verses and lines) are more tightly regulated than the beginnings. The rigid cadence of *dróttkvætt* is only one possible manifestation of the principle of closure. The relative freedom of adding extra low-stress syllables in the earlier part of an Old English half-line, but the tight limits on doing so at the end, can be seen as a different instantiation of the same general principle.

The principle of closure can also operate at the level of lines rather than verses. In Old English and *fornyrðislag*, the on-verse (the first half-line of a pair) is more readily able to accommodate the special verse types called D* and A3 by Sievers (see §3.1.6 and §3.1.7, respectively).[33] In Old English, the on-verse is also more open to anacrusis than is the off-verse. In Middle English, in contrast to

[33] In Norse, the A3 type does occur in the off-verse sometimes, as in *Vǫluspá* 6.4 (see 46 above). The type is still much less common in the off-verse than the on- (Suzuki 2014: 56, 59). D* verses occur occasionally in the off-verse in Old English (Goering 2016b: 56–62), and with a somewhat higher relative frequency in *fornyrðislag*, though the type is rare overall in Norse (Suzuki 2014: 125).

dróttkvætt, the trochaic cadence is only required at the end of the full line, not of every half-line, and in general the off-verses seem more narrowly constrained than the on-verses – a pattern that can also be considered part of the principle of closure.

3.5 Finding Language in Metre

A fundamental working assumption of this book is that looking at metrical structures can be a useful way to learn about linguistic structure. This is because metre is, in essence, the patterning or constraining of linguistic material in a systematic way. Metrical rules are always relative, in some way, to language. The tonal patterns of Tang poetry can't be applied as such to English, because it has no phonologised tones to pattern. Conversely, Tang verse provides an important body of metrical evidence for the tones of Middle Chinese, and the specific tones of the particular lexemes used in verse. In general, unless there's reason to think otherwise, it's reasonable to expect a fairly high degree of alignment between language and metre. This principle is part of what was dubbed *metrical coherence* by Dresher & Lahiri (1991) (not to be confused with *cohesion*; see note 32 above).

The qualifier of *unless there's reason to think otherwise* is not pro forma. Things such as conventional rhymes or alliterations, which don't directly reflect straightforward linguistic structure, are an obvious and important caveat (Kristján Árnason 1991: 12–22). To take a particularly clear example, the first line of *Beowulf* involves alliteration of *gār-* 'spear' and *geār-* 'yore', probably phonetically something like [ɣɑːr] and [jɑːr] at the time of the poem's composition. These are not particularly close phonetically, and certainly contrast phonologically, but they are treated as in some sense 'the same' for purposes of metrical regulation. There is a linguistic motivation for this, as explained clearly by Minkova (2003: 113–121), namely that initial **ɣ* had developed a palatal allophone [j], which was etymologically and phonologically related to /ɣ/, but acoustically very similar to /j/. This provided a kind of linguistic bridge, so that all three sounds could count as part of the same alliterative set: [ɣ]~[j]~[j]. But though rooted in two kinds of linguistic relationships (phonological and phonetic), the actual grouping of all three phones into a single class or set is strictly metrical.

This has led Kristján Árnason (1991: 23–26), following Attridge (1982: 158–159), to look for the *metrical set* of features in Germanic poetry. The idea is similar to that of metrical coherence, but recognises the independence of metre somewhat more clearly. The idea is, essentially, that metre involves the patterning of metrical constituents of various kinds: these may be rhyming sets, alliterative sets, stress sets, syllable sets, and so on. The sum of all these sets is the metrical set of a particular metre or poetic tradition. Each set is, in its turn, based in some way on linguistic features, but the relationships can vary. A given set might simply be a linguistic feature used metrically without qualification, or it might involve

a fairly high degree of conventionalisation – as is the case for the alliterative set [ɣ]~[ʝ]~[j]. Conventionalisation can also apply on a more restricted basis, such as the preservation of archaic or variant forms of certain words for poetic purposes (for extended examples of this in Old English, see Fulk 1992: ch. 1–2).

Looking at the metrical set of a poetic tradition can be a useful way to avoid both the naive assumption that all metrical features simply reflect normal linguistic features, and the despairing view that says, because there is some discrepancy between metre and language, the twain can never meet. Neither view is sensible. The effects of conventionalisation in relating the metrical set to language do need to be reckoned with, but that reckoning can often be done, and may itself be informative about the linguistic and cultural background of a poetic tradition.

To turn at last to resolution and foot structure – the core preoccupation running throughout this book – the idea of the metrical set is a potential means of mediating the two concepts. Resolution is in the first instance a matter of the metrical set of those traditions that make use of it: an equivalence (at least in some positions) of one heavy with two light syllables means that the two can form a metrical set with another. There could be various explanations for this, but the simplest assumption is to look to the principle of metrical coherence mentioned above, which might now be rephrased: if we don't have reason to suppose otherwise, a feature of the metrical set is likely to be based on a linguistic category. In this case, the obvious category would be the bimoraic trochee.

Whether this is the right answer depends on the specifics of the evidence. For early Old English – which I will explore at length in chapters 4 and 5 – metre and language seem to corroborate each other very well. While there is a limited degree of conventionalisation in how the metrical set relates to linguistic units, by and large the assumption of metrical coherence is born out, with little to speak against it. Much the same is likely true of early Middle English as well (chapters 6 and 7), though neither the metrical nor the phonological evidence is as well discussed in the scholarship. For Norse, matters are less straightforward, and there is some reason to think that the metres employ a higher degree of conventionalisation of resolution (chapter 11). This, however, is not a conclusion, but a baseline, and the real problem is to figure out the relationship between this more conventionalised metrical set and the prosody of the language.

Chapter 4

The *Hēafudu*-problem: Early Old English Foot Structure

The most direct evidence for prosodic patterning in Old English comes from a process commonly known as *high-vowel deletion* (often abbreviated to HVD). This refers both to a historical change in prehistoric Old English, and to a set of morphophonemic alternations in recorded Old English that maintain the effects of this sound change in the morphological system. Especially in its earliest operation, high-vowel deletion is an important window into Old English phonology. It attests to the presence of the bimoraic trochee foot in Old English, and gives an anchor for working out the chronology of vowel shortenings and reductions in the language.

High-vowel deletion involves the loss of unstressed, short, high vowels – **i* and **u* – in certain phonological contexts. The basic operation can be illustrated most easily with the nominative-accusative ending of strong (*a*-stem) neuter nouns, which in prehistoric Old English had the shape **-u*. This was originally a simple suffix, and words such as **scip* 'ship', **word* 'word, utterance', and **jē̦r* 'year' had corresponding plural forms **sci-pu*, **wor-du*, and **jē̦-ru*. Note where the syllable boundary falls in the plural forms: in **sci-pu*, the initial syllable is **sci-*, ending in a short vowel and so counts as a light, monomoraic syllable (cf. §2.3), while the other two both have heavy, bimoraic initial syllables, ending either in a consonant (**wor-*) or in a long vowel or long diphthong (**jē̦-*).

This distinction in syllable weight was a key conditioning factor in high-vowel deletion as a sound change. 'Light-stemmed' neuters – those which had a light initial syllable once an ending was added – such as **scipu* retained the ending throughout the historical Old English period (written as *scipu* or *scipo*). The heavy-stemmed neuters, by contrast, lost the ending, making the nominative-accusative plurals the same as the singular, *word* and *gēr* (West Saxon *gēar*, etc.). Exactly when this took place as a new sound change is hard to pin down with complete precision, but it was clearly in the relatively late prehistoric period (certainly after umlaut),

and an estimate of very roughly around the year 600 is probably approximately correct (Luick 1921: 287; Ringe & Taylor 2014: 292). The alternations between forms with and without *-u* created by this change were subsequently retained for several centuries. They are very regular in texts produced up to around the turn of the millennium, though they are gone by the time we get texts conventionally thought of as early Middle English.[1]

4.1 Resolved Words

The light-heavy distinction in monosyllabic bases – between *scip* and *word* – already suggests that high-vowel deletion has a prosodic dimension of some sort. This impression is strengthened when we consider polysyllabic bases. The most robust cases are words such as *werod* 'troop, war-band, army',[2] which may be notated as LL-stems (§2.3). The first syllable, *we-*, is always light, and the second is light after the addition of a vocalic inflection, as in the historical plural form **we-ru-du*.

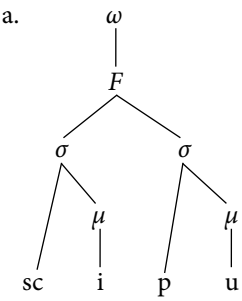
Words of the *werod*-type lose their final vowel, just like the *word*-type and in contrast to the *scip*-type: prehistoric **werudu* becomes *werod*. Traditional grammars usually just list types of words that show high-vowel loss and those that do not, without making any real attempt to generalise why *word* and *werod* should be in the same group (Campbell 1983: 144–147, Sievers 1965: 124–127). However, if we think in terms of the bimoraic trochee – a foot type introduced in §2.5.1 – it is easy to see how those two should form a group against the *scip* type.

The following trees show the three type-example words (ω) arranged into bimoraic trochee feet (F), each of which has two moras (μ). Syllables that don't fit into a foot are left *stray*, and it is these stray syllables that are of particular interest here:

[1] There is only one 'Old English' text which does not follow the standard *scip*/*word* distinction: the *Liber Scintillarum* glosses, which regularly show *wordu* and comparable forms. This manuscript dates from the middle of the 11th century, but the glosses are clearly copied from a different manuscript, of unknown date, with a slightly different Latin base-text (Derolez 1970: 148–150; Verdonck 1976). Forms such as *wordu* are probably best explained as late analogical formations, but this linguistically unusual manuscript deserves further investigation.

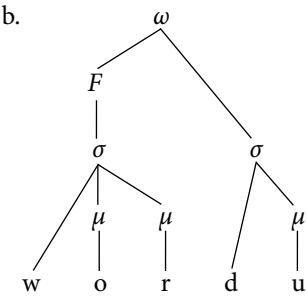
[2] This is the majority spelling in the corpus, but *wered*, *wĕorod*, *wĕorud*, and *werud* are also all found, in decreasing order of frequency. Remember that *ĕo* counts as a short, monomoraic vowel (see note 8 in §2.3).

(54) a.



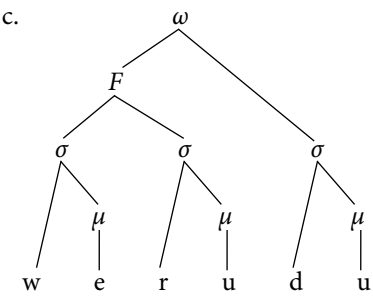
**scipu* 'ships'

b.



**wordu* 'words'

c.



**werudu* 'war-bands'

Under this arrangement, which involves a simple, typologically normal division into bimoraic feet, a potential conditioning factor for high-vowel deletion clearly emerges: the high vowel (in this case **u*) is retained when it is included in an initial bimoraic trochee, but is otherwise deleted. In the more compact bracket notation, the distinction is: **(sci-pu)* versus **(wor)-du* and **(we-ru)-du*.

The equivalence of the sequences *wor-* and *weru-* may be compared to the metrical phenomenon of resolution (see §3.1.1), a link whose importance was emphasised by Kuryłowicz (1949); cf. Fulk (1995). Although *resolution* is properly speaking a metrical term, it may be usefully applied to phonology as well, and I

will sometimes refer to the grouping of two monomoraic syllables into a single prosodic unit as *phonological resolution*.

Although the importance of a foot-based analysis along these lines has been recognised for decades, the precise formulation of high-vowel deletion has remained a matter of considerable controversy. This is partly a matter of differing formal or theoretical assumptions, but also (and more importantly) a question of working out just which outcomes of high-vowel deletion in more complex words are regular, and which are the result of analogical restructurings. This is partly a philological problem of determining precisely what the early and dialectal evidence says.

Theoretically, many models have sought to find a way to single out the position immediately after a heavy foot as in some way 'special', characterising this as the target environment for high-vowel deletion. Keyser & O'Neil (1985: 8–10), in a flawed but foundational analysis, posited ordinary bimoraic feet, which they claimed are right-headed (making them bimoraic iambs). For them, high-vowel deletion involves reductions immediately following the strong element at the end of each foot. Thus (marking strength with an acute), **(we-rú)-du* would delete the final vowel because it follows the strong head of the foot. This view is taken up in all essentials in the grammar of Hogg (2011: 222), though he avoids the word 'foot' as such.

This view has a number of theoretical problems, the most obvious of which is that foot structure is, among other things, the basis for stress assignment, and it is clear that Old English stress is left-headed, not right-headed. The stronger syllable of *werod* is certainly the first. This is established both on metrical grounds (Minkova 2003: 24–34), and by the phonological development of the word itself (see further Hutton 1998). The initial syllable is subject to diphthongisation, often becoming *wĕorod*, etc., a process which is limited to stressed syllables. By contrast, the second syllable is frequently reduced: the lowering of *werud* to *werod* is typical only of unstressed *u*,[3] as is the eventual further reduction to [ə] suggested by the very frequent spelling *wered*. Keyser & O'Neil thus have to adopt one analysis for foot structure to explain high-vowel deletion, but posit another, unrelated rule for stress assignment on the initial syllable of a root.

These criticisms were raised in an important article by Dresher & Lahiri (1991), who proposed a different kind of foot – dubbed the 'Germanic foot' – to better account for both high-vowel deletion and other stress phenomena (as well as metrical resolution) through a single formal apparatus. Specifically, they argue for a complex foot that has two components, an initial bimoraic 'strong branch', and an unstressed and monomoraic 'weak branch'. Under this view, a word such as

[3] I refer of course only to the Old English period. The much earlier process of *a*-umlaut in Northwest Germanic did lower stressed **u* to **o*, but that predates the periods under discussion by many centuries.

**werudu* would be entirely footed, with *(we-ru-)* filling out the strong branch, and *(-du)* attached as the weak branch. High-vowel deletion would then simply be the elimination of high vowels in a weak branch.

In practical terms, the results of this analysis are virtually the same as Keyser & O'Neil's. A bimoraic unit of some sort is still posited (though recast as merely the strong branch of a larger foot rather than the entire foot), and the immediately following position is highlighted for vowel deletion. Theoretically, however, Dresher & Lahiri's approach represents a significant advance by formalising the idea of metrical coherence (already implicit in the rather briefer treatments of Kuryłowicz 1949, 1970),[4] which rightly remains fundamental in all investigations of Old English foot structure (for the metrical dimensions to this concept, see §3.5). Metrical coherence holds that we should aim for a unified account of a language's prosody (both in phonology and verse), and that severe discrepancies such as Keyser & O'Neil's right-headed feet but left-headed word stress should be avoided. Although a closer review of the data in the following sections will suggest that the 'Germanic foot' of Dresher & Lahiri is not necessary or sufficient to account for the original operation of high-vowel deletion, the principle of metrical coherence remains an essential contribution to the problem.

Before returning to the question of how to understand high-vowel deletion, and what model of prosody best accounts for it, there is a major data problem that needs to be addressed. So far, I have introduced three relatively simple word-shapes: LL (**scipu*), HL (**wordu*), and LLL (**werudu*). There is no real doubt about high-vowel deletion in words of these shapes: LL words escape it, the other two are affected by it.[5] There are, however, three potential further types of polysyllabic bases with unstressed high vowels to consider: LHL, HHL, and HLL. The first pattern will be discussed later on, in §4.5.1.2, and the second is relatively uninformative in terms of prosody. The third type – HLL (along with its inflectional variant HLH), which can be exemplified by the neuter plural *hēafudu* – is by contrast potentially highly informative, but also presents the most complexities in determining what the regular outcome of high-vowel deletion really is. The following sections will outline the main issues by focusing on the inflection of *hēafud* 'head'; I will return to the fuller complexities of the data in §4.4.

4.2 The Inflection of *hēafudu* 'heads'

The neuter noun *hēafud* or, much more frequently, *hēafod* 'head' presents a particularly interesting case for high-vowel deletion. In this form (the

[4] Though Kuryłowicz used the actual term coherence, *Kohärenz*, in a different way: see note 32 in §3.4.1.

[5] Things do become slightly more complicated in the late Old English period, where we find plurals such as *wæteru*. Such words all originally ended in a resonant before which an epenthetic vowel has been added – **wætr* > *wæter* – and form a special class; see Bermúdez-Otero (2005).

nominative-accusative singular), no deletion takes place, nor would it be expected to since the final syllable is closed. There is, however, regular deletion of the historical **u* in the genitive and dative forms, both singular and plural, such as dative singular *hēafde* and plural *hēafdum*.

Complications arise when we look at the remaining case forms, the nominative-accusative plural. Historically this was formed with the same suffix **-u* we have been dealing with so far, and the pre-deletion form was something such as **hæ͡uβudu*,[6] with two potentially deletable vowels following the heavy root syllable. There are four logical possibilities for how high-vowel loss could affect this word:

1. Both vowels are lost: *ˣhēafd*.
2. Neither vowel is lost: *hēafudu*.
3. The first high vowel is lost: *hēafdu*.
4. The second high vowel is lost: *hēafud*.

As implied by the lack of any qualifying ˣ, possibilities 2–4 all actually occur in the corpus of surviving Old English manuscripts (both as such and with further variations that I will gloss over as not directly relevant, e.g. *hēafodo*). And even the non-occurring *ˣhēafd* has been alleged to be the regular outcome of high-vowel deletion, with the attested forms all being analogical reformations (Ringe 2002; Ringe & Taylor 2014: 301–302, 377–378). To my knowledge, no one has seriously argued that option 4, *hēafud*, is the regular outcome of high-vowel deletion, but all the others have been argued for in recent scholarship.

There are two principle techniques for determining which of the many attested variants is the original, and which are later restructurings. The first is close philological evaluation of the attested forms (privileging archaic and pan-dialectal forms). The second is the consideration of morphological change: if some (or even all) of the attested forms are later analogical creations, these need to have arisen through plausible morphological processes. Both approaches fortunately converge in this case, strongly supporting option 2, *hēafudu*, as the regular form.

Philologically, we have relatively early forms of *hēafud*'s plural in Mercian and West Saxon, the former showing both *hēafud* (5x) and *hēafudu* (2x), the latter showing *hēafdu* or its morphological variant *hēafda* six times, alongside one example of *hēafudu*.[7] In later Mercian, relevant forms are few, but show only the form *hēafud* (1x, with two more occurrences in a Late West Saxon text likely copied from Mercian). In West Saxon proper, *hēafdu* and *hēafda* predominate.

[6] This **æ͡u* is the sound that would become *ēa*. On the rounding of the second element even into early historical Old English, see Campbell (1983: 116), Hogg (2011: 21–22).

[7] The relevant forms are thoroughly discussed by Fulk (2010: 137–138), and I have double checked the data in Cameron, Amos & diPaolo Healey (2018: s.v. *hēafod*) and the associated *Dictionary of Old English Corpus*. On the morphological extension of *-a* for *-u*, see Bermúdez-Otero (2005: 20).

A reasonable assumption is that in both dialects *hēafudu* is an archaic form replaced by varying innovative plurals: endingless *hēafud* in Mercian, syncopated *hēafdu* in West Saxon.

This is, however, not conclusive on its own. The evidence of Northumbrian is open-ended: all three attested variants are found, despite the number of overall attestations being low; all the evidence is late; and the possibility of influence from other dialects (including the Late West Saxon scribal quasi-standard) is very possible. It is possibly significant that *hēafodo* occurs at all – it is the only plural found in all three dialects, and its appearance in Northumbrian can hardly be attributed to Late West Saxon influence – but the number of tokens is small enough, and the number of variants large enough, that while *hēafudu* is the most plausible candidate for an original plural form, its position can hardly regarded as a certainty on philological grounds alone.

Consideration of morphological change can help us rule out possibilities 1 (ˣ*hēafd*) and 3 (*hēafdu*). If either of these were the original regular form, it would mean that the medial **u* had been deleted regularly, and so where it does occur (i.e. plurals *hēafudu* and *hēafud*) it must be restored by analogy. It is particularly difficult, however, to explain *hēafudu* as the result of such an analogy, especially given that it co-exists with forms such as *hēafde* and *hēafdum*, where medial deletion is regular in all but the latest Old English texts.

To be specific, if the original form was *hēafdu* (or ˣ*hēafd*), alteration to *hēafudu* would have to occur on the basis of the singular, *hēafud*. That is, the morphophonemic alternation of syncope created by high-vowel deletion would be eliminated through paradigm regularisation. This is a normal enough kind of development, but if it happened, it would be expected to actually regularise the paradigm. Either the medial *-u-* should be restored throughout (*hēafud*, *hēafude*, *hēafudu*) or else the supposedly original syncope should be retained (*hēafud*, *hēafde*, *hēafdu*). But this is not what happens, not at first in any dialect and not at all in Mercian. Instead, the plural *hēafudu* is found in early texts and in all dialects in which this word is attested, while forms such as *hēafode* are late and dialectally restricted.[8] What analogical process could have restored the medial vowel in

[8] The dative singular *hēafde* occurs 325 times in the *Dictionary of Old English Corpus*, with a very wide distribution in terms of period and dialect. Longer *hēafode* occurs only 18 times, nearly always in texts copied in the 11th to 13th centuries; *hēafude* occurs twice, also in late texts. The only relatively early example (10th century) of *hēafode* I know of is in *Bald's Leechbook*, in the table of contents to Book I, heading xxxviii. But the usual form in this text is *hēafde*, occurring over a dozen times, including in the corresponding full text of chapter 38 (Cockayne 1865: 8, 92). The forms ˣ*hēafodum*/ˣ*hēafudum* and ˣ*hēafuda* do not occur at all, while *hēafoda* occurs once as a correction to *hēafod* (Cameron, Amos & diPaolo Healey 2018: s.v. *hēafod*). The genitive singular occurs ten times as *hēafodes*, also all in late manuscripts, against 109 instances of *hēafdes*, in a diverse range of contexts. Not included in these counts is a small residue of further forms such as *heouodes*, *hæfedes*, *hæfode*, and *heofede*, all late; see Cameron, Amos & diPaolo Healey (2018: s.v. *hēafod*) for details.

the nominative-accusative plural, while failing to do so in the dative singular or genitive plural?

On the other hand, if we start from a paradigm that already had a distinction between nominative-accusative plural *hēafudu* and dative singular *hēafde* in its oldest form, all the attested variants can be easily accounted for. Occurrences of *hēafudu* are simply archaisms, repeating the original pattern unaltered. The common West Saxon form *hēafdu* (or *hēafda*) represents an analogical extension of medial syncope from forms such as *hēafde* and *hēafdum*, generalising a regular rule: drop the medial syllable when a grammatical suffix is added.

The plural form *hēafud* follows a different analogy, based on the tendency for strong neuter nouns to have identical forms in the singular and plural nominative-accusative: just as the plural of *word* is *word*, so the plural of *hēafud* could be *hēafud* (compare Luick 1921: 286, who, less plausibly, looks to *werod* as the analogical basis for restructuring). This analogy would have been assisted by the presence of forms with secondary epenthetic syllables. The strong neuter **wuldr* 'glory', for instance, originally had a plural **wuldru*. This was precisely parallel to **word* and **wordu*, and the plural ending was dropped by regular sound change. However, unlike **word*, **wuldr* (now both singular and plural) ended in a consonant cluster of rising sonority, an awkward situation which was resolved by adding an epenthetic vowel: **wuldr* > *wuldur*. Words affected by vowel epenthesis formed a distinct class in West Saxon, and were altered further (Bermúdez-Otero 2005: 22–24, 49–53), but in Mercian they provided solid class of HL neuters with identical singular and plural forms in the nominative and accusative. It is therefore unsurprising that it is precisely in Mercian that the plural *hēafud* is best attested (Fulk 2010: 134–135). The following sets of forms make it easy to see how *wuldur* would provide a ready model for an innovative plural *hēafud*:

NOM–ACC.SG	wuldur	hēafud
DAT.SG	wuldre	hēafde
NOM–ACC.PL	wuldur	hēafud ← hēafudu

Table 4.1 An analogical model for plural *hēafud* in Mercian.

On the other hand, it is difficult to see what kind of analogy might have produced *hēafudu* as secondary in this dialect, without also producing forms such as ***wundru* or ***wuldru*. Such forms are absent in the *Vespasian Psalter*, a valuable source for Mercian of, probably, the earlier 9th century (Kuhn 1965: v–vi; Toon 1983: 80).

Both philological and, especially, morphological considerations accordingly point to an original nominative-accusative plural *hēafudu*, which occurred in the same paradigm as regularly syncopated forms such as *hēafde*, and which was adjusted by straightforward analogies variously to *hēafdu* (especially in West

Saxon) or *hēafud* (especially in Mercian). Using the relatively archaic variants from the Old Mercian of the *Vespasian Psalter* to represent early-ish historical Old English, the full paradigm would be as follows (the dative and genitive plurals of this word happen not to be attested in this text, but their forms are not in any doubt):

	Sg.	**Pl.**
Nom.–Acc.	hēafud	hēafudu
Gen.	hēafdes	hēafda*
Dat.	hēafde	hēafdum*

Table 4.2 Old Mercian paradigm of *hēafud*.

If this paradigm is correct,[9] it raises a further question, which leads to the crux of the matter: how did the contrast between the dative singular *hēafde* and nominative-accusative plural *hēafudu* come to be?

4.3 The Long and Short of It

In a synchronic grammar of 'classical' Old English (whether the Early or Late West Saxon literary norms, or the Mercian of the *Vespasian Psalter*), a distinction in vowel loss between *hēafudu* and *hēafde* is difficult to motivate. A coherent explanation may, however, be formulated for late prehistoric Old English, which is after all when high-vowel deletion first applied. Simply put, my proposal is that syncope of the medial **-u-* depended on the weight of the following syllable: an *HLL sequence underwent no vowel deletion, but an *HLH sequence did, to become HH.

For two case endings, this contrast can be seen even in later Old English. The only thing that distinguishes the nominative-accusative plural ending *-u* from the dative plural *-um* is an extra final consonant – that is to say, an extra mora. In pre-deletion Old English **hæ͡ɯ-βu-dum* would therefore have been an HLH word, while **hæ͡ɯ-βu-du* would have been HLL. The operation of deletion can then be explained easily by applying a simple bimoraic foot structure: **(hæ͡ɯ)(-βu-du)* can be exhaustively parsed into two bimoraic feet, while **(hæ͡ɯ)-βu(-dum)* cannot. The monomoraic medial syllable would not fit into either foot without making it trimoraic. It was left as a weak, unfooted syllable, which made it open to deletion.

Much the same also applies to the genitive singular *hēafdes*, from **hæ͡ɯβudæs*, but what about dative singular *hēafde* and genitive plural *hēafda*? This account requires that they end in long vowels at the time of high-vowel deletion, while the

[9] Compare §4.4, and especially §4.4.1, for corroborating evidence, as well as Fulk (2010) and Goering (2016a).

nominative-accusative plural ending **-u* was short: dative **hæ͡uβudǣ* and genitive **hæ͡uβudā*, against nominative-accusative **hæ͡uβudŭ*.

This length contrast is plausible (indeed, necessary), but the chronology of final-vowel shortenings in Old English requires a bit of discussion. All of the endings under discussion historically come from long vowels or diphthongs if we go back to Proto-Germanic: *-u* from **-ō*, dative *-e* from **-ai*, and genitive *-a* from, according to the mainstream view, **-ô^{n}*.[10] They all ended up as short by 'classical' Old English, and were further reduced stepwise to schwa (Kitson 1997) and then lost over the course of Middle English. The key problem concerns the precise dates of shortenings (for there was, I argue, more than one round of shortening) before the 'classical' Old English stage.

The raising of absolutely final **-ō* (the plain kind, neither trimoraic nor nasalised) to **-ŭ* appears to be a common Northwest Germanic development. It took place universally in West Germanic, and is witnessed in Early Runic inscriptions (Krause 1971: 88) – the earliest likely example to be directly attested is the form *mīnu* 'my (FEM.NOM.SG)' on the Opedal stone, dated to c. 350 by Antonsen (1975: 40), and to the early 400s by Krause & Jankuhn (1966: 177–178; Nielsen 2000: 85). This raising was probably closely followed by, or simultaneous with, a general shortening of high vowels in absolute auslaut (Ringe & Taylor 2014: 14–16): Proto-Germanic **hildī* 'battle' became Northwest Germanic **hildi*, and the vowel is treated uniformly as short throughout North and West Germanic. There is therefore little doubt that the neuter plural ending **-u*, which has featured so much in the discussion so far, had been short for many centuries by the period of Old English high-vowel deletion.

Non-final high vowels were not shortened as part of this process. This can readily be seen in North Germanic, where short **i* (including when newly shortened) was generally lost, but preserved **ī* was retained, and only shortened later on: **gastiz* 'guest' > *gestr*, **anþi* 'and, still' > *enn*, and **hildī* > **hildi* → *hildr* (the addition of the *-r* is analogical); but **gastīz* 'guests' > *gestir*, with the non-auslaut **ī* escaping early loss, attesting to its length at that time. The length of medial **ī* was also preserved through the syncope period in combining forms in compounds, such as **hildī-tanþu* 'battle-tooth' > *hildi-tǫnn*, an epithet of an early Danish king.

A similar contrast is also apparent in West Germanic, as evidenced by high-vowel deletion itself. In contrast to North Germanic, there was a very early loss of

[10] The circumflex represents a so-called 'trimoraic' vowel, and the superscript ^{n} nasalisation. 'Trimoraic' should be understood as a conventional term, referring to a class of long vowels – in practice mainly a type of **ō* – that is more resistant to shortening and has different outcomes from both plain bimoraic **ō* and nasalised bimoraic **ō^{n}*. See further especially Stiles (1988), and the more summary overview in Ringe (2017). Also compare Hollifield (1980) and Boutkan (1995). I do not accept the rather different system of Schrijver (2003), though a full refutation of his proposal would be considerably beyond the scope of this discussion, and in any case Schrijver's arguments mainly concern vowel quality and have less direct bearing on the immediate questions of vowel quantity.

final *-*z*, so that **gastiz* became **gasti*. This final short *-*i* stuck around long enough to trigger umlaut, but was eventually lost by high-vowel deletion, producing *gest*, *giest*, *gyst*, *gist*, etc. (the vocalism varies dialectally). Originally final long *-*ī* shows the same development, as shown by, e.g., **hildī* > **hildi* > attested *hild*. By contrast, in originally non-final position the length is retained through high-vowel deletion, preventing the loss of the vowel. Plural **alβīz* 'elves' accordingly becomes later Old English *ylfe*,[11] without undergoing high-vowel deletion. This suggests that the sequence of sound changes was as follows:

1. High-vowel shortening: **hildī* > **hildi*; **alβīz* unchanged
2. Final *z*-loss: **alβīz* > **alβī*

This also fits nicely with 1 being a common Northwest Germanic change, and 2 being a strictly West Germanic innovation. As in Old Norse, compound forms such as **hildī-burdaⁿ* 'battle-board, shield' also escape early shortening, and consequently also high-vowel deletion, becoming *hilde-bord*.[12]

New instances of long *-*ī* were also created from the reduction of the common endings *-*ijaz* and *-*ijaⁿ*, e.g. **rīkijaⁿ* 'dominion', which became prehistoric Old English **rīcī*, later *rīce*. This seems to have fallen together with the unshortened instances of Proto-Germanic **ī*, giving late prehistoric Old English, at the time of high-vowel deletion, a clearly reconstructible contrast of vowel length between unstressed (including word-final) **i* and **ī*, both from various sources.[13]

The question remains of how the various non-high vowels fit into this system quantitatively. Qualitatively,[14] these final vowels and diphthongs (and sequences which eventually became final) showed a gradual tendency to merge, first into a set of three non-high vowels in West Germanic, *-*ō*, *-*ā*, and *-*ē*, and then into just

[11] Presumably the plural of *gest* would have become **geste* by sound change, but this has been superseded by the productive *a*-stem plural formation *gestas*, etc.

[12] This need not imply that every compound with *hilde-* is particularly old, and we do also find compounds beginning with *hild-*, presumably a newer form imported from the nominative of the noun. In Old English poetry, the distribution of *hilde-* versus *hild-* was regularised synchronically, as discussed in §5.7. The pertinent point for the moment is that the survival of the combining form *hilde* at all is most likely due to its second syllable being protected from shortening inside compounds. Ringe & Taylor (2014: 303) suggest that the variation comes in part from the word being originally an *i*-stem, with later *jō*-stem forms being secondary, but the evidence for a class shift is not strong. *Pace* Ringe, Norse *hildr* is certainly a *jō*-stem, like in Old English and Old High German, meaning that the only real evidence for an *i*-stem variant is a single instance of the dative singular *hildi* in Old Saxon (*Heliand* M 5043b). Given the close interactions between *i*- and *jō*-stems in Old Saxon, such a form could easily be secondary (Gallée 1993: 205; Adamczyk 2018: 343–344).

[13] No such length contrast is securely reconstructible for **u*. By morphological happenstance, instances of protected or secondary unstressed **ū* were rare after shortening, and the one fairly good candidate – the accusative plural of *u*-stem nouns, **-unz*, which may have become **-ū* – seems to have been eliminated by morphological levelling as the nominative ending was extended to the accusative (Ringe & Taylor 2014: 375–376).

[14] This account does not enter into some of the more controversial aspects of this development, and is meant only to provide some relevant context for the question of shortening; see note 10 above.

two, *-ɔ̄ (from *-ō) and *-ǣ (by a merger of the other two). This last development occurred in the so-called Ingvaeonic (or North Sea Germanic) subgroup, which included Old Frisian and Old Saxon as well as Old English. At this stage there was a 'square' system of unstressed vowels: high **i* and **u*, non-high **æ* and **ɔ* (representing only quality, with no prejudice yet as to length).

It is probable that the non-high vowels were unaffected by the Northwest Germanic shortening of final *-ī and *-ū, a view reflected in my labelling of this as 'high-vowel shortening'. The monophthongisation of *-*ai* (and *-*ōi*) to *-ē postdates the divergence of North and West Germanic (Ringe & Taylor 2014: 24–27), suggesting that long non-high final vowels continued to play a role in the system even after the shortening of the high vowels. Further evidence for this retention of length comes from Kaluza's law in *Beowulf*, which will be discussed in the following chapter. To anticipate it slightly, there is metrical evidence that the earliest Old English poetry still made length distinctions in final vowels, and that *-ǣ and -ā (from Ingvaeonic *-ɔ̄) were both still long. There is no positive evidence for the shortening of final non-high vowels at any point in the prehistory of Old English.

PGmc	WGmc	Ingv	OE1	OE2	OE3
*i	*i	*i	*i/∅	i/∅	e/∅
*ī	*i	*i	*i/∅	i/∅	e/∅
*īz	*ī	*ī	*ī	i	e
*ija(z)	*ī	*ī	*ī	i	e
*ē	*ē	*ǣ	*ǣ	æ	e
ʔê	*ē	*ǣ	*ǣ	æ	e
*ai	*ē	*ǣ	*ǣ	æ	e
*ōi	*ē	*ǣ	*ǣ	æ	e
ʔā	*ā	*ǣ	*ǣ	æ	e
*ōⁿ	*ā	*ǣ	*ǣ	æ	e
*ōz	*ā	*ǣ	*ǣ	æ	e
*ô	*ō	*ɔ̄	*ɑ̄	ɑ	ɑ
*ōu	*ō	*ɔ̄	*ɑ̄	ɑ	ɑ
*ō	*u	*u	*u/∅	u~o/∅	u~o/∅
*u	*u	*u	*u/∅	u~o/∅	u~o/∅
ʔū	*u	*u	*u/∅	u~o/∅	u~o/∅
*unz	ʔūⁿ	ʔūⁿ	ʔū	N/A	N/A
*a(z)	*∅	*∅	*∅	∅	∅

Table 4.3 Final vowels in Old English.

The 'square' Ingvaeonic system survives into early Old English, and is robustly attested in Old Saxon (Klein 1977; Boutkan 1995: 152–162). In the majority of Old English manuscripts, however, it has been reduced to three, a 'triangular' system, through the merger of *i* and *æ* as *e*. This shift from a square to a triangular system likely took place in the middle of the 8th century in Mercian, and the 9th in Northumbrian (Dahl 1938: 196; Fulk 1992: 386–390). It seems likely, though not certain, that there was a stage (though perhaps a short-lived one) between general final-vowel shortening and the merger of the two front vowels. The development of vowels in (absolute) final position according to these assumptions is laid out in table 4.3 (nasalisation is only noted where this makes a difference, so **i* also includes **i*^{n}, etc.).[15]

If we allow that final **-ǣ* and **-ā* were indeed long in late prehistoric Old English, then the operation of high-vowel deletion in the paradigm of *hēafud* falls out nicely:

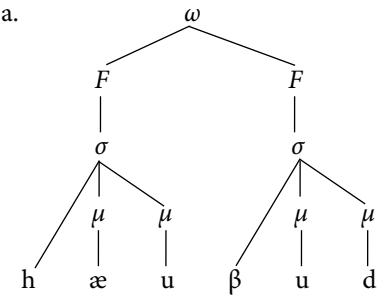
	Sg.		
Nom.-Acc.	*(hæ͡ù)(-βud)	>	hēafud
Gen.	*(hæ͡ù)-βu(-dæs)	>	hēafdes
Dat.	*(hæ͡ù)-βu(-dǣ)	>	hēafde
	Pl.		
Nom.-Acc.	*(hæ͡ù)(-βu-du)	>	hēafudu
Gen.	*(hæ͡ù)-βu(-dā)	>	hēafda
Dat.	*(hæ͡ù)-βu(-dum)	>	hēafdum

Table 4.4 A derivation of the paradigm of *hēafud*.

Syllables are parsed into bimoraic trochees, and unfooted high vowels are deleted. This may also be represented using trees, using the nominative singular and plural and the dative singular as representative forms:

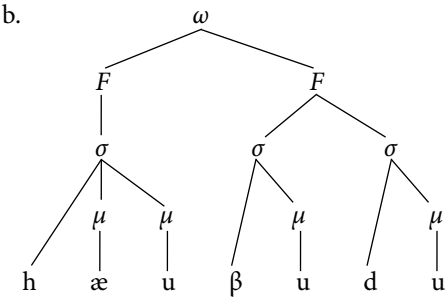
[15] The stages *OE1*, *2*, and *3* are left intentionally slightly vague chronologically. *OE1* is meant to cover the late prehistoric system at the time of high-vowel deletion, as well as the early historical system reflected in the metre of *Beowulf*, and *OE3* is the 'classical' Old English system familiar from the West Saxon quasi-norms and from Anglian texts including and postdating the *Vespasian Psalter*. *OE2* is then whatever residue is left between these two stages.

(55) a.



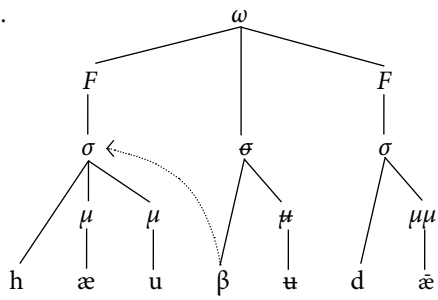
**hæ͡uβud* 'head (NOM.SG)'

b.



**hæ͡uβudu* 'head (NOM.PL)'

c.



**hæ͡uβudǣ* > **hæ͡uβdǣ* 'head (DAT.SG)'

The great strength of this hypothesis is that it can account for the discrepancy between syncope in forms such as *hēafde*, and its apparent lack of original operation in *hēafudu* (and similar data presented in §4.4.1). It also explains why this morphophonemic alternation eventually broke down, and was prone to restructuring in the later dialects: once final **-ǣ* did shorten (and eventually turn into *-e*), the motivation for syncopating before *-e* but not before *-u* – both now simply short vowels – was opaque. Different varieties of Old English adopted different solutions, West Saxon regularising syncope by extending it into the

nominative-accusative plural, and Mercian generalising the endingless strong neuter pattern on the model of *wuldur*.

Insofar as this model is successful in explaining the data of Old English, including this otherwise puzzling morphophonemic alternation, it in turn provides further evidence for the retention of length in final non-high vowels until at least the late prehistoric period (and thus serves as an important phonological corroboration for the evidence of Kaluza's law). It also suggests that the simple and typologically common bimoraic trochee is not only sufficient to account for early Old English, but is a preferable model to any alternative proposed so far, at least for the late prehistoric period. The following sections will elaborate on each of this points in turn, first (§4.4) briefly (at least relative to the scope of the potential evidence) surveying the wider data of high-vowel deletion – both to strengthen the empirical case in favour of this model, and to address potential counterexamples – and then (§4.5) outlining more explicitly and comprehensively the theoretical picture of early Old English prosody suggested by this analysis.

4.4 High-Vowel Deletion and the Philological Record

The argument so far has focused on the illustrative example of *hēafud*, but an analysis is only as good as the data it accounts for. There are of course many more forms that have been affected by high-vowel deletion, and the picture they present is on the face of it very messy indeed. Under any analysis, a great deal of the data must be explained as secondary, arising from morphologically driven innovations. As emphasised already with regard to *hēafud*, the strongest arguments in favour of the model of high-vowel deletion advocated for here are morphological: that the current account can derive all attested forms either by sound change or straightforward analogy (not necessarily of the old-fashioned four-part type, but always in line with what is observable in normal linguistic development around the globe), while other accounts require unmotivated or typologically strange analogies to derive the full range of forms actually found. I cannot fully treat all the relevant data in this section,[16] but there are several pieces of evidence that need to be addressed as part of the empirical basis for the bimoraic trochee in Old English.

[16] For instance, I do not dwell here on examples such as *rīcu* 'dominions (NOM.PL)' or *æþelu* 'nobility' where an apparently unfooted high vowel comes from an older sequence **-iu*: **(rī)(-ci-u)*, **(æ-þæ)(-li-u)*. These can be explained as losing the **i* not through normal high-vowel deletion, but through the simplification of two unstressed vowels in hiatus. See Goering (2016a: 187–189) for discussion and references; their assessment is in any case purely a matter of theorising, since the philological facts of this type of word are simple.

4.4.1 Paradigmatic Alternations

This morphological dimension is what makes the paradigmatic alternations in *hēafud* so important. It is significant, therefore, that this pattern is not isolated to a single lexeme. As noted by Fulk (2010: 133–135), in the 9th-century Mercian of the *Vespasian Psalter* exactly the same allomorphy is found quite generally in words with a heavy initial syllable followed by a syllable of the shape *-*uC*- or *-*iC*-: syncope fails in, e.g., *lȳtelu* 'little (NEUT.NOM.PL)', but occurs in *lȳtle* (MASC. ACC.PL), which is from **lūtilæ*. Fulk's article should be consulted for an extensive review of this data.

Further important evidence comes from nouns such as the strong neuter *nēten* 'animal, livestock', which are distinguished by having had an originally long second vowel: pre-deletion (and pre-umlaut) **næ͡utīn*. In Mercian, these seem to have fully merged with the *hēafud*-type, with a nominative-accusative plural *nētenu*, but a genitive plural *nētna*. This alternation is, like that in *hēafud*, very challenging to explain under the traditional view of high-vowel deletion (where deletion after a heavy foot should either apply to all forms or none), or under Ringe's alternative view (Ringe & Taylor 2014: 300–302).

Ringe sets up a relative chronology that splits high-vowel deletion into two phases, first a medial syncope, and later a final apocope. He suggests that medial shortening occurred between the two, which can yield the nominative-accusative plural well enough: **nētīnu* undergoes no change by syncope, since the medial vowel is still long, and then shortens to **nētinu*, which escapes apocope because the two short vowels form a single foot. Unfortunately, this theory also predicts a lack of syncope in the genitive plural, since the medial syllable of **nētīnā* would still have been long when that took place. As with *hēafud*, Ringe's theory has no means of explaining why syncope should take place before endings such as *-*æ* and *-*ā*, but not before *-*u*.

Instead, the simplest explanation for this Mercian data is to assume the following relative chronology:

1. Medial-syllable shortening
2. High-vowel deletion
3. Final-syllable shortening

The full paradigm may then be explained by adopting the same assumptions developed above for *hēafudu*, that words were formed into bimoraic trochees, and unfooted high vowels were deleted:[17]

[17] *Deletion* means specifically high-vowel deletion. The starting point is prehistoric Old Anglian, just after the operation of umlaut.

	Nom.Sg	Nom.Pl	Gen.Pl
Post-Umlaut	*nētīn	*nētīnu	*nētīnā
Medial Shortening	*nētīn	***nētinu**	***nētinā**
Deletion	*nētīn	*nētinu	***nētnā**
Final Shortening	*nētin	*nētinu	***nētna**
Mercian	nēten	nētenu	nētna

Table 4.5 The development of Mercian *nēten*.

These Mercian morphophonemic alternations, going well beyond the evidence of *hēafud* alone, constitute the central evidence for the model of high-vowel deletion I propose. Nonetheless, the wider picture is complex, and there are two potential complicating sets of data in particular that need to be addressed. The first concerns a potential challenge to the relative chronology I have just proposed, posed by the development of class II weak verbs. The second consists of the West Saxon cognates of *nēten* and other words of its type, whose inflections differ crucially in certain respects. Both complications can, I think, be satisfactorily addressed under the model I am proposing here, while the Mercian alternations remain effectively inexplicable under other approaches proposed so far.

4.4.1.1 Class II Weak Verbs

The so-called second or *ō*-class of weak verbs in Germanic had a stem formant **ō* or **ô* throughout the paradigm. While the present stem was restructured in ways that are not of immediate concern (see Cowgill 1959 for details), the preterite stem was formed with **-ōd-* in West Germanic, which became Ingvaeonic **ɔ̄d*. The vowel had two main outcomes in Old English: either *u~o* or *a*.[18] The conditioning for this divergence was long thought to be Van Helten's rule, a proposed West Germanic sound change according to which **ō* was raised to **ū* before a following **u*: this produced attested *u~o*, while unraised cases developed as normal for **ɔ̄*, being eventually lowered to *a*. Under this proposal, a verb such as West Germanic **wundōdun* 'wounded (pret.3pl)' would become *wundodon*, while **wundōdē* (pret.3sg) or the past participle **wundōd* would become *wundade* and *(ge·)wundad*.

This account has clear implications for the relative ordering of medial shortening and high-vowel deletion, and if accepted would strongly point to shortening only occurring *after* (medial) deletion. If **wundōdun* regularly became **wundūdun*, then medial shortening should give **wundudun*, which should in

[18] A third outcome, *e*, is presumably secondary from these sources (Dresher 1985: 47; Hogg & Fulk 2011: 283–284).

turn undergo deletion to become ˣ*wundun* or the like. There are no traces at all of such a form ever having existed. There would, certainly, have been analogical pressures at work to restore the lost vowel, both from short-stemmed verbs such as *bodudon* 'preached (PRET.3PL)', where deletion would not take place, and from the tendency in some dialects to generalise the *a*-formant, creating clearly analogical forms such as *bodadon*, *cēapadon* 'they sold', etc. But that such analogies would have so thoroughly and so early on eliminated all traces of syncope seems unlikely, and it is much more preferable to seek an explanation under which high-vowel deletion simply never affected class II weak verbs at all, or did so in a much more restricted manner.

Fortunately, the validity of Van Helten's rule in general has, on quite different grounds, recently been cast into serious doubt by Stausland Johnsen (2015), who has shown that in Early West Saxon, the data is strongly at odds with the predictions of that account. Instead, a different conditioning seems to have applied in prehistoric Old English, which is still statistically reflected in the distribution of variants in attested Early West Saxon forms: medial **ō* was weakened ultimately to *u~o*, while in final syllables it became *a*. Thus both **wundōdun* and **wundōdē* develop alike, to *wundodon* and *wundode*, respectively, while the participle **wundōd* is the original locus for the development into *a*, *wundad*.

This proposal is congruent with the metrical evidence for class II weak verbs, which supports the chronology of medial shortening predating final-syllable shortening. This can be seen most clearly in verses such as the following (Sievers 1893: 126; Russom 1987: 45–46):

(56) þrēate̲don þĕarle
'threatened forcefully' (*Beowulf* 560a)

Long syllables in the equivalent position are disallowed, and we do not find verses such as:

(57) ˣScyldi̲nga þēoden
'prince of the Shieldings' (cf. *Beowulf* 1675a)

A word such as *Scyldinga* would have a clear secondary stress on its medial syllable, *-din-*, which would constitute its own bimoraic foot. This would produce a verse of the rhythm *SswSw*,[19] an 'E*' type that is prohibited in normal Old English verse (§3.1.6).

The fact that *þrēatedon* + *Sw* is acceptable (scanning as type A, *SwwSw*) while *Scyldinga* + *Sw* is not points to a difference between shortened medial **-ō̄-* and

[19] See §3.1.2 and appendix C.1 for the metrical notation used here.

unshortenable medial *-*in*-. The divergence is further reinforced when we look at verses such as:

(58) ĕorlscipe efnde
'performed (acts of) heroism' (*Beowulf* 2133a, 3007a; cf. 2535a, 2622a)

Here the second syllable is historically short, *-*sci*-, and is allowed to form part of the dip of a type A verse (like 56, it scans as *SwwSw*). That is to say, the medial syllable of *þrēatedon* patterns metrically with historically short vowels in open syllables (which were always light), and against closed syllables (which were and remained heavy). The clear inference is that medial long vowels had already become short.

Since Kaluza's law in *Beowulf* suggests that absolutely final long vowels were still long (see chapter 5), the relative chronology would have to be medial-syllable shortening first, followed by final-syllable shortening. That is to say, a singular form such as **þræ͡ut͡ɔdǣ* (the singular counterpart to **þræ͡ut͡ɔdun* > *þrēatedon*) would have gone through a stage with a short medial but long final vowel: **þræ͡ut͡ɔdǣ* or the like.

The relative place of high-vowel deletion in the chronology is more difficult to resolve. In comparison to Van Helten's rule, Stausland Johnsen's account of class II weak verbs reduces the number of problematic forms greatly: much of the data would simply have no relevance to high-vowel deletion at all. Specifically, no finite forms of such verbs would have undergone high-vowel deletion, whatever the relative chronology, as long as we assume that the initial change really was one of shortening alone. If prehistoric Old English **wundɔ̄dǣ* became **wundɔdǣ* by medial shortening, then its stem vowel would not be a high vowel. That it later merged with **u* to give a single round unstressed vowel, eliminating unstressed **ɔ* as a distinct phoneme, would not be surprising, as this would have been present only in a single morphological category (though a very common and productive one), but this raising all the way to **u* is not a necessary immediate consequence of shortening.

Stausland Johnsen notes this, but argues on other grounds that this shortening took place after high-vowel deletion. His pool of evidence is rather small, however, coming entirely from inflected forms of the past participle – namely the feminine nominative singular and the neuter nominative-accusative plural with the ending *-*u*, e.g. **wundɔ̄du* 'wounded (FEM.NOM.SG)'. If we reckon with straight phonological development alone for such forms, Stausland Johnsen's conclusion is reasonable. The order of shortening followed by deletion would incorrectly give **wundɔ̄du* > **wundɔdu* > *ˣwundudu* (*ˣwundodo*), an almost non-occurring type (see below for the sole possible example). He therefore prefers the ordering of deletion first, and then medial shortening, with **wundɔ̄du* becoming first **wundɔ̄d*, and then the attested *wundad*.

It is not clear, however, that we should expect all forms of the past participle inflection to be sound-change outcomes of older inflections. In particular, there would have been no shortening in common forms such as the nominative-accusative singular for the masculine and neuter, and the unshortened variant **ɔ̄* could well have been levelled from there into other forms. In Anglian, this analogy proceeded to the point that *-a-* is the usual formant, not just in the participle but throughout the preterite for heavy-stemmed members of the class (Sievers 1965: 335–337; Dresher 1985: 47), and examples such as *ge·myclade* 'made great (MASC. NOM.PL)' occur in Early West Saxon. If such restoration took place before high-vowel deletion, then loss of the ending would be regular: **wundɔ̄du* > **wundɔdu* → **wundɔ̄du* > **wundɔ̄d* > *wundad*.

Furthermore, and perhaps just as importantly, the inflection of these participles was potentially also influenced by short-stemmed members of the class. In **luβɔdu* 'loved (FEM.NOM.SG)', deletion of the inflectional vowel would have been regular, even with early medial shortening: **(lu-βɔ)-du* > *lufad**. During the period of textual production, it would not be surprising for the lack of inflectional *-u* to have been generalised in class II participles, regardless of the weight of the root syllable.

Direct evidence for the ordering of medial shortening before high-vowel deletion is not something the class II weak verbs can easily supply, once we reject Van Helten's rule. A possible relic of the original development – if medial shortening is indeed earlier than high-vowel deletion – is *ge·āgenudu* 'owned, i.e. own (NEUT. NOM.PL)' (*Cura Pastoralis* 9.3.1), from **ji-āɣnɔ̄du*. This is an isolated form in a relatively early text, and so while it could be a sporadic analogical innovation, it could also plausibly be a residue of the phonological outcome of this inflection.

Clearly the evidence of class II weak verbs is not definite. Stausland Johnsen's rule gives good evidence for shortening occurring earlier in medial syllables than in final ones, but when high-vowel deletion fits in is harder to determine. It comes down to a relatively small number of past participle forms, which are reasonably viewed as being subject to multiple analogical pressures. Against this we may set the Mercian inflection of *nēten*. One of the two, either feminine *wundad* or plural *nētenu*, should be analogical.[20] With the rejection of Van Helten's rule,

[20] The other logical possibility, proposed by Fulk (1992: 198–199, 211–216), is that high vowels shortened earlier than medial vowels. A chronology such as the following would allow all the data cited so far to fall out phonologically:

1. Medial high-vowel shortening
2. High-vowel deletion
3. Medial non-high vowel shortening
4. Final-syllable shortening

However, there are problems with this picture. Fulk's data comes almost entirely from highly productive derivational suffixes, such as *-dōm* and *-lēas*, or from worn-down compounds, such as *missera* 'half-year (GEN.PL)' < **mis-jērô^n*, where morphology may have played a role in blocking or undoing any

the remaining evidence of *wundad* is not, in my view, particularly significant, being synchronically transparent in later Old English and easily explained as the secondary product of analogies. I continue to prefer the chronology based on accepting *nētenu*/*nētne* as the regular outcome of sound change, and not a plausible analogical innovation.

4.4.1.2 West Saxon *nīetenu*

The Early West Saxon inflection of *nīeten* 'animal, livestock' (the dialectal equivalent of Mercian *nēten*) presents an interesting puzzle for any account of high-vowel deletion. In contrast to the Mercian forms, which show medial syncope before historically heavy endings but retain the vowel medially before historically light endings, the West Saxon forms show no syncope at all: the nominative singular is *nīeten* with a corresponding plural *nīetenu* (such as Mercian *nēten*, *nētenu*), but the genitive plural is *nīetena*, and the dative plural *nīetenum* (Mercian *nētna*, *nētnum*).

These forms present something of a paradox. Given a starting point such as **nīȇtīnu* and **nīȇtīnā*,[21] neither ordering of high-vowel deletion and medial vowel shortening will give us the right outcomes. If shortening occurred first, then we would expect the equivalents of the Mercian forms, following the developments laid out in table 4.5 above. That is, we would expect syncopated ˣ*nīetna* rather than attested *nīetena*.

On the other hand, if vowel deletion occurred first, then we would expect the following developments:

	Nom.Sg	Nom.Pl	Gen.Pl
Post-Umlaut	*nīȇtīn	*nīȇtīnu	*nīȇtīnā
Deletion	*nīȇtīn	***nīȇtīn**	*nīȇtīnā
Medial Shortening	*nīȇtīn	*nīȇtīn	***nīȇtinā**
Final Shortening	*nīȇtīn	*nīȇtīn	***nīȇtina**
Early West Saxon	nīeten	ˣnīeten	nīetena

Table 4.6 An untenable chronology.

medial shortening. Moreover, some of these unshortened elements appear to still be long during the historical Old English period, and indeed many are still clearly indicated as having long vowels in Orrm's early Middle English (c. 1150). By contrast, Fulk's own metrical evidence makes it clear that the class II formants had, even if they shortened later than high vowels, still become short by the time *Beowulf* was composed, that is to say by the early 8th century. So while the chronology presented in this footnote is possible, there is extremely little supporting evidence for it beyond the desire to make both *nēten*-forms and the class II weak verb participles phonologically regular.

[21] I write the prehistoric, post-umlaut form of the diphthong *īe* as *ȋȇ* as a back-projection of the historical spelling. It is far from clear exactly how this should be understood phonologically or phonetically.

The retained medial length would 'protect' that syllable from being syncopated in the genitive plural, correctly yielding *nīetena* – but this is at the cost of predicting high-vowel deletion in the nominative plural. The actual form is *nīetenu*, not ˣ*nīeten*.

The most influential way of resolving this paradox is based on Luick (1921: 290), who suggested that the original secondary stress of the long vowel was retained even after shortening, protecting the now-short medial vowel from syncope. This account has been fairly widely followed in the grammars (Sievers 1965: 135; Campbell 1983: 149; Hogg 2011: 230). Bermúdez-Otero (2005: 25–32) has more recently attempted to place the process on a more solid theoretical footing, while keeping the essential logic of the proposal.[22]

This line of thought has not been universally accepted, however, and a particularly noteworthy alternative solution comes from Fulk (2010: 137).[23] He asserts that 'West Saxon has generalised the disyllabic stem in these nouns', i.e. that it once had forms such as **nīe͡tna*, but has analogically extended the medial vowel to give *nīetena*. Fulk is on the right track, I think, but some adjustment is necessary to head off some reasonable objections to the proposal as stated.

The main problem with Fulk's analogy is why regularisation would occur in different ways in *nīeten* and *hēafud*. In the former, Fulk sees paradigm regularisation as restoring the lost medial vowel (**nīe͡tna* → *nīetena*), while in the latter regularisation is achieved by extending syncope to all open medial syllables (**hæ͡uβudu* → *hēafdu*). Fulk indeed articulates the morphological reasonableness of the latter type of analogy very well, and argues that it is also responsible for the creation of Early West Saxon forms such as *īdlu* 'empty (FEM.NOM.SG.)' ← **īdilu* (Mercian has, of course, *īdelu*). Why, then, would the paradigm of *nīeten* not simply have regularised by creating the nominative plural ˣ*nīetnu*?

This objection can be answered, I think, by placing the regularisation of *nīeten* much earlier than that of *hēafud*, with this early levelling motivated by the particularly large amount of variation that had arisen in the stem vowel of this and other words with an originally long medial vowel. If the ordering of changes really was, as I have been arguing, first medial shortening, then high-vowel deletion, and only later final shortening, then there would have been a stage, between the second and third of these changes, where pre-West Saxon *nīeten* had three different forms of the (historical) second syllable:

[22] I followed Bermúdez-Otero (2005) in Goering (2016a: 187), but I now prefer a more strictly analogical account for the word's earliest development without any additional phonological apparatus. Nonetheless, in the later Alfredian and Ælfrician stages that Bermúdez-Otero focuses on, his account works as an effective synchronic description.

[23] I will return later to Ringe's proposal of separate syncope and apocope periods separated by medial shortening, outlined in §4.4.1 above (Ringe 2002; Ringe & Taylor 2014: 300–302).

1. A long vowel: nominative singular **nīe̯tīn* (unaffected by either of the changes in question).
2. A short vowel: nominative plural **nīe̯tinu* (with a shortened medial syllable).
3. No vowel: genitive plural **nīe̯tnā* (with a shortened and then syncopated medial syllable).

This triple variation was surely more unstable and prone to restructuring than the merely two-way variation found in words such as **hǣu̯βud* and **īdil* with originally short medial syllables: these only alternated between presence and absence, without any variation between long and short vowels.

I suggest that at this stage of pre-West Saxon, words of the *nīeten*-type levelled out this variation, in general by extending a single vowel throughout the paradigm. The illustrative forms would then develop as follows:[24]

	Nom.Sg	**Nom.Pl**	**Gen.Pl**
Post-Umlaut	*nīe̯tīn	*nīe̯tīnu	*nīe̯tīnā
Medial Shortening	*nīe̯tīn	***nīe̯tinu**	***nīe̯tinā**
Deletion	*nīe̯tīn	*nīe̯tinu	***nīe̯tnā**
Levelling	*nīe̯tĭn	***nīe̯tĭnu**	***nīe̯tĭnā**
Final Shortening	***nīe̯tin**	*nītinu	*nīetinɑ
West Saxon	nīeten	nīetenu	nīetena

Table 4.7 A derivation of West Saxon *nīeten*.

I leave it open whether the generalised vowel was long or short: hence the noncommittal notation **ĭ*. If long, it would have been shortened regularly in the nominative-accusative singular by the shortening of vowels in final syllables. Probably any remaining long medial vowels would also be (re)shortened at this point, as contrastive vowel length in unstressed syllables seems to have been eliminated at that point (alternatively, the short vowel could have spread analogically). If it was the long vowel that was generalised, this would have (re-)created **nīe̯tīnu* at a stage after the operation of high-vowel deletion. If such a form existed, I would assume that by this time the ending was a stable part of

[24] Note that I assume a different chronology of restoration in these forms as compared to the class II weak verbs discussed above. *If* the class II weak verbs are to be explained by the chronology of levelling, I would see the generalisation of the long vowel there occurring *before* high-vowel deletion, while the *nīe̯tīn*-type would restore the vowel *after* high-vowel deletion had first applied as a fully regular sound change. This difference in chronology would be motivated. The pressure to level out the participial formant of the verbs as a static suffix would have been present at all periods, while the allomorphy in **nīe̯tīn* was tolerable, and indeed unexceptional for nominal paradigms, until it reached the breaking point: the introduction of a third, syncopated variant by high-vowel deletion. Thus the **nīe̯tīn* restoration necessarily postdates high-vowel loss, while any restoration in class II weak verbs could have potentially operated immediately after medial shortening.

this word's inflection, and so rather than applying a second round of mechanical high-vowel deletion, the **-u* was retained on a morphological basis. This kind of morphologisation is well paralleled, with synchronic exceptions even in early texts to high-vowel deletion in contexts where it should be able to apply very transparently. For instance, the 8th-century *Corpus Glossary* (entry 514) gives the verb *frigno* 'I find out by enquiry, *consulo*', historically from **friɣnu* where the vowel was in the most classic context imaginable for high-vowel deletion, presumably restored on the basis of both light verbs such as *cumu* 'I come, *uenio*' and heavy *ja*-stem verbs such as *dōemu* < **dœ̄miu*[25] 'I (will) judge, *iudicabo*'.[26]

Once a paradigm with a uniform stem vowel – **nīetĭn*, **nīetĭnu*, and **nīetĭnā* – had developed, the attested forms would develop by straightforward sound changes: the shortening of any remaining unstressed long vowels, and the lowering of unstressed **i* to *e*. It is important to stress that this scenario does not work under a different relative chronology. If high-vowel deletion took place before shortening, then the **-u* of the nominative-accusative plural would already be gone, with no reasonable basis for being restored later on.

In the final view, the West Saxon forms are simply not very probative. While I believe an analogical account along the lines proposed here can account for the paradigm in the most economical way, the traditional account based on Luick is also feasible, and is compatible not only with Luick's own view of high-vowel deletion (that it affected the position immediately following a heavy foot), but also with the current proposal (as I argued in Goering 2016a: 186–187). Ringe's theory of double loss, outlined briefly above, derives the West Saxon paradigm entirely by regular sound change – but any advantages this may seem to provide are entirely undermined by the inability of this framework to account for the Mercian forms, which have no feasible phonological or analogical explanation under that theory, and indeed ought to be precisely the same as the West Saxon ones. The overall conclusion is that the West Saxon forms are relatively easy to account for (and are synchronically transparent), while the Mercian paradigm (with its synchronically erratic distribution of syncope) demands a much more constrained and specific explanation, and should be privileged as important evidence in favour of the model of high-vowel deletion proposed here.

[25] On historical **-i(j)u*, see Goering (2016a: 187–189).

[26] Hogg (2000: 363) suggests that the first-person singular ending may simply have never been lost, and that morphological pressures were at work from the start. It is perhaps more likely that the vowel was initially lost, but restored fairly quickly due to very substantial morphological pressures. Certainly the replacement of historical first-person singular **-u* by subjunctive *-e* in West Saxon is easier to explain if vowel loss did affect this category originally. See further Goering (2016a: 194, n. 36).

4.4.2 Other Forms and Analogies

Most further data with a potential bearing on high-vowel deletion's original operation, and its relationship to other sound changes, comes from morphologically volatile environments, where analogies are plausible or, in come cases, certain. There are isolated early forms, such as *hirnitu* 'hornet' (*Erfurt Glossary* 275; as *hurnitu* in *Corpus* 603) and *aelbitu* 'swan' (*Épinal* 718, *Corpus* 1439), which support the same pattern of no deletion in HLL sequences suggested by *hēafudu* and *nētenu*, and which are unlikely to have been morphologically restored from forms with vowel loss (Goering 2016a: 177).

Forms can also be found that seem to speak against the theory of high-vowel loss I have been developing. The largest class of words that appear at first glance to be at odds with the retention of HLL sequences are feminine abstract nouns made with the synchronic suffix *-þ(u)*, such as *strengþ(u)* 'strength' and *frymð(o)* 'beginning'. In late prehistoric Old English, this suffix had the form **-iþu*, and I would predict that the regular forms in attested Old English would be **strengeþu* and **frymeþ*, neither of which actually occurs. Forms such as *strengþu* might be seen as supporting a Luick-style high-vowel deletion, occurring immediately after heavy feet, while Ringe (2002) points to the *strengþ*-type as a regular outcome of his proposed double loss.

It is important to note, however, that under no theory is either *frymð* or *frymþu* possibly regular: an original **frumiþu* should, under any model, develop in parallel to **werudu*, and become **frymeþ*. There has clearly been a widespread restructuring of this class of abstracts, and the issue is not to seize upon this or that form as 'regular', but to best explain all the extant forms through reasonable changes.

Originally, the **-u* would have been limited to the nominative singular, and all other case forms would have had a heavy ending. Here is the paradigm for *strengþ* immediately before and after high-vowel deletion:

	Singular		
Nom.	*strængiþu	>	*strængiþu
Acc.	*strængiþǣ	>	*strængþǣ
Gen.	*strængiþǣ	>	*strængþǣ
Dat.	*strængiþǣ	>	*strængþǣ
	Plural		
Nom.	*stængiþā	>	*strængþā
Acc.	*strængiþǣ	>	*strængþǣ
Gen.	*strængiþā	>	*strængþā
Dat.	*strængiþum	>	*strængþum

Table 4.8 Pre-high-vowel-deletion paradigm of *strengþ(u)*.

In every single form except the nominative singular, the following ending was heavy, and the medial syllable should have been lost. That the now-anomalous **strængiþu* should then have been remade to **strængþu* is an entirely run-of-the-mill analogy. Some such generalisation of the suffix without the **i* must have taken place, since the replacement of **frymiþ* by *frymð* has to have been a morphological process.

The variable fate of final **-u* then follows naturally. Once **strængþu* had come into being, it would (at that early stage) have been relatively anomalous. The inflection of *þ*-abstracts would in the other case forms have been standard for heavy strong feminine nouns, such as *hild* 'battle' or *lār* 'teaching', which had lost their nominative singulars due to high-vowel deletion (< **hildi*, **lāru*). There were two potential paths open to deal with this anomaly, and both are taken in different varieties of Old English:

1. Extend the anomalous **-u* as a distinctive marker of feminine abstracts.
2. Eliminate the anomalous **-u* and generalise the bare *-þ* variant of the suffix.

Option 1 was mainly elaborated in the Anglian dialects, where analogical forms such as *frymþu* can be found. The *-u* was even extended from the nominative into the oblique: dative singular *ermðu* 'misery' in the Mercian *Vespasian Psalter* is a representative example. Meanwhile, West Saxon texts favour forms such as *strengþ*, with what I argue is an analogically removed **-u*, and retain the historically expected oblique forms such as *strengþe*. See further Hogg & Fulk (2011: 29, 120–121).

The traditional account of Luick or Dresher & Lahiri, under which the regular forms would be *strengþu* and ˣ*frymeþ*, can of course also explain all these forms in one way or another – for this subset of data, that approach is no worse, but it is also no better. Ringe's double-loss approach, however, faces serious difficulties. Even though he can derive *strengþ* regularly, and *frymð* by the same type of analogy as everyone else, he has no easy way to bring the ending **-u* back into the picture, it having been universally lost in this class. He proposes a rather elaborate account involving the *īn*-stem feminine abstracts, but this rests on pivot-forms that simply would not have existed in early Old English, before the merger of **-ǣ* and **-ī*; see Goering (2016a: 192–193) for details.

4.4.3 Summing Up: Philology, Phonology, and Morphology

It should be clear from this section that the data of Old English is messy, and it is simply not possible to account for it all through purely phonological means (not that we should expect phonological change to be the only factor at work). In a case like this, it is easy for explanations to proliferate, and hard to decide between them. Once the data is collected (a philological project), the analysis turns more on morphological judgements than phonological ones: which cases are easiest to

explain as remodelled morphologically, and which ones remain outstanding once reasonable morphological solutions are exhausted?

Here, there is a core of data – including the early inflection of *hēafud*, and the many Mercian nouns of the *nēten*-type – that shows a peculiarity which resists any analogical explanation: a failure to undergo high-vowel loss in HLL sequences, alternating synchronically within a single paradigm with medial syncope in historical HLH conditions. Since this cannot be the result of morphological innovation, it must have a phonological explanation, such as the model proposed here: the formation of bimoraic trochees and the deletion of unfooted high vowels.

4.5 Bimoraic Feet in Early Old English

Even if we accept the bimoraic foot in early Old English, questions remain about overall prosodic structure. There are two major issues. First, what is the status of overheavy syllables and initial LH sequences: are there any contexts under which feet with three moras (or more) are permissible? And second, what is the relationship between final feet and stress, and is there any kind of extrametricality or stress demotion?

4.5.1 Trimoraic Feet

The model of high-vowel deletion developed above implies that trimoraic feet are strongly avoided. If **hæ͡uβudum* could be footed as either **(hæ͡u-βu)(-dum)* or as **(hæ͡u)(-βu-dum)*, then the medial vowel would not be open to deletion. While precisely bimoraic feet were clearly strongly preferred, there is evidence that trimoraic feet were tolerated, at least under some circumstances.

4.5.1.1 Overheavy Syllables

The first type of evidence for overheavy feet comes from initial syllables (or stressed monosyllables) which would seem to have more than two moras. Monosyllabic examples are legion: *land* 'land', *bōc* 'book', *torht* 'bright', *lēoht* 'light', *frēond* 'friend', and many more. These could only be made bimoraic by assuming (optional) final-consonant extrametricality: that is, freedom to disregard the weight from segments in the final coda of a word (Bermúdez-Otero 2005: 9–10). Some very limited form of extrametricality may well be plausible (§4.5.2), but it will not be able to account for non-final overheavy syllables (Bermúdez-Otero 2005: 15): e.g. inflected forms such as *frēon-des* (GEN.SG), *lēoh-te* (DAT.SG), or *torht-ne* (MASC.ACC.SG).

We could perhaps play around with the syllabification or moraic assignment rules, but these would generally be unsatisfactory approaches. Alternative syllabifications such as *frēo-ndes*, *lēo-hte*, and *tor-htne* would result in onsets that

violate sonority sequencing and are highly unusual for Old English: *nd-*, *ht-*, and *htn-* are not valid word onsets in Old English, and are not very plausible word medially. It seems better to accept that the initial syllables of words such as *torhtne* and *lēohte* really are heavier than the 'ideal' norm, but that this was acceptable specifically and only in initial root syllables or feet. Such tolerance – which I will call the *overheavy licence* for initial feet – is a natural response in a language that privileges the initial syllable of a word in many ways: it bears the primary stress, it allows the greatest range of vowels, and, in verse, its onset provides the material for alliteration. Such syllables must be footed, and the preference for feet to contain precisely two moras of weight is secondary by comparison.

4.5.1.2 LH Feet

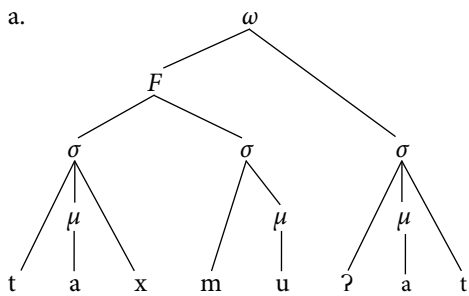
That single overheavy syllables need to sometimes be incorporated into ideally bimoraic feet is probably not surprising. A more complex problem is posed by ĹH sequences: how would words such as *weruld* 'world', and its inflected forms such as *werulde*, have been treated? One thing to stress immediately is that there is no stress shift in *werulde* comparable to what is found in modern German *lebéndig* 'living', where the heavy syllable has attracted the word accent (potentially leaving the initial syllable unfooted). The initial stress is shown both by the developments of the vowel (e.g. diphthongisation to *wĕorold-*), and by the metrical behaviour of the word, which alliterates on *w-*. This implies that it is part of a foot – but in what way? A strictly bimoraic initial foot is not a possible option, given that moras are tied to syllables and the moras within a syllable cannot be split between feet (Hayes 1995: 121–123). So either we have an initial 'degenerate', light foot *(we)(-ruld)*, or else an overheavy, trimoraic foot *(we-ruld)*, as argued for by Idsardi (1994: 525–526) and Sohn (1998: 4–8). Note that either way, high-vowel deletion would be expected to and did in fact apply to the nominative singular: *weruld* is from **weruldu*.

A hypothetical foot structure of *(we)(-ruld)* would involve an initial light foot, with a single mora. There are typological parallels for languages that use a bimoraic trochee, and which tolerate such light, monomoraic feet in some contexts. For instance, Cahuilla, a Uto-Aztecan language of California, largely shows a bimoraic trochee and root-initial stress system relatively close to that of early Germanic, though with the notable difference that the only consonant to count as moraic is the glottal stop [ʔ] when it occurs in a syllable coda (Seiler 1977: 26–43; Hayes 1995: 117–118, 132–140). In Cahuilla, there is a clear distinction between words beginning with LL and LH. An LL word such as *táxmuʔat* 'song' has initial primary stress followed by an unstressed syllable.[27] The foot structure may be

[27] The final syllable is also transcribed as *-ʔàt*, with secondary stress. Hayes (1995: 137) argues that such syllables are actually unstressed, but undergo a phonetic final lengthening that gives the

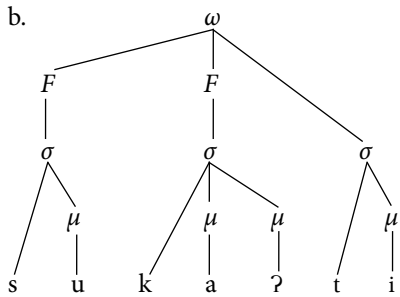
taken to be *(tax-mu)-ʔat* (remember that [x] is non-moraic in this language). By contrast, the word *súkàʔti* 'deer' has the same initial stress, but also a secondary stress on the medial syllable. This implies a different foot structure, along the lines of *(su)(-kaʔ)-ti* (remember that [ʔ] is moraic in codas, unlike [x]). That is, since the three moras of *su- kaʔ-* cannot all be accommodated into a single bimoraic foot, a light initial foot is formed and carries the primary stress, while the medial syllable then forms a second, fully optimal bimoraic foot, which translates into secondary medial stress:

(59) a.



taxmuʔat 'song'

b.



sukaʔti 'deer'

A typological analogue is, however, not evidence, and a closer examination shows that Cahuilla provides more of a contrast than a parallel to Old English. If we apply a system with light, monomoraic feet to Old English, we would expect, alongside the nominative *(we)(-ruld)*, a dative singular **(we)(-rul)(-dǣ)*. Such a form should (just like *súkàʔti*) have a secondary stress on the medial syllable:

impression of secondary stress. Since I accept this account, I have left off the grave accent for clarity and ease of exposition, but I should emphasise that this is a departure from the presentation of the data in Seiler (1977: 26–43). Mamet (2011: 264) takes such final stresses as real, and proposes that they are degenerate final feet. This point has no direct bearing on the main issue at hand, the treatment of LL versus LH sequences.

[x]*wérùlde*. This predicted stress, however, is not to be found. Phonologically, the second syllable develops entirely as a normal unstressed vowel, with *u* lowering to *o* in forms such as *werold* or *wĕorold*, and the vowel is, in the later Old English period, eventually lost entirely: *wĕorld-*, *world-*.

Metrical evidence also weighs against footings such as *(we)(-ruld)*, and instead supports the accommodation of LH feet, at least under certain circumstances. As noted in §3.1.1, resolution is a central feature of Old English poetry, and its operation is robustly evidenced in the surviving corpus. As I will discuss in more detail in chapter 5, resolution is most general with LL sequences, and a word such as *wine* 'friend' (for earlier *uuini*) will resolve in any context. But LH sequences also frequently resolve:

(60) þurh hwæt his worulde ge·dāl
'through what his separation from the world' (*Beowulf* 3068a)

(61) worulde līfes
'of the life of the world' (*Beowulf* 2343a)

In these verses (which are representative), the underlined sequences are resolved, and the half-lines would be unmetrical without resolution. Taking (60) as having a medial secondary foot would imply a verse of the rhythm *wwwSswwS*, which is wholly unparalleled in Beowulfian metre. A half-stress instead of resolution in (61) would result in the illegitimate rhythm *SswSw*, which is not only unparalleled, but one of the most conspicuously avoided patterns in Beowulfian verse (§3.1.6).

Negative metrical evidence reinforces this picture. We can find type-E verses with the rhythm *SswS* where the secondary stress is filled by a heavy derivational syllable (underlined in the following examples), but only when the root syllable is already heavy or resolved (italicised):

(62) *ēh*tende wæs
'was a persecutor' (*Beowulf* 159b)

(63) *æþe*linga bĕarn
'children of nobles' (*Beowulf* 1408b)

If Old English really had a Cahuilla-type system, with a degenerate initial foot followed by a regular bimoraic foot, then there ought to also occur verses such as the following, but with LH instead of HH or LLH:

(64) [x]*wo*rolde brēac
'enjoyed the world' (cf. *Beowulf* 1062b)

(65) ˣ*cy*ninga bĕarn
'children of kings' (cf. *Beowulf* 1408b)

All this evidence taken together points in one direction: LH sequences could, at least when word-initial, resolve together, and form a single foot.

This tolerance needs no further theoretical machinery to explain it beyond what has already been proposed. The *overheavy licence* already shows that Old English was willing to allow overheavy feet of more than two moras, when these occurred word-initially. It appears this licence applied irrespective of whether the feet in question were monosyllabic or disyllabic. The principles at work are then just the following (see §5.5 for an emendment to principle 2):

1. Form moraic trochees from left to right.
2. Word-initial syllables must be footed.
3. Trimoraic feet are tolerated in word-initial position.

These principles will allow all the words discussed so far to be footed appropriately, from **(hæ͡u)(-βu-du)* to **(hæ͡u)-βu(-dǣ)* to **(sci-pu)* to **(lēoht)* to **(torht)(-nǣ)* to **(cy-ning)* to **(we-rul)-du* to **(æ-þæ)(-lin)(-gā)*.

4.5.2 Final Feet and Secondary Stress

There is one further outstanding issue of foot structure: the possibility of secondary stress on final feet. As should now be clear from the data in the previous section, in initial and medial syllables, the heads of feet are usually stressed. The head of an initial foot bears primary stress, while that of a medial foot carries secondary stress. This is well illustrated by *éþelìnga* (see 63), which (given in its early Old English form to avoid anachronism) would be footed and stressed as **(é-þæ)(-lìn)(-gā)*. As far as the first two feet go, there are no surprises. Bimoraic trochees should be seen as, in the first instance, fundamentally quantitative (Hayes 1995: 271–272), grouping elements of weight (phonologised perceptual duration), which we formalise as moras, into regular groups. These units are in turn used in stress assignment, based on a separate set of principles. In Old English, stress appears to proceed, like footing, from left to right, and to be left-headed: the leftmost syllable of the prosodic word is therefore always both footed and given primary stress, while medial feet are assigned secondary stress. The length of non-compound words generally means there will usually not be more than one medial foot at most.

Final feet, however, are treated as 'unstressed'. The final syllables of words such as *(hæ͡u)-βu(-dæs)* must be footed in order to account for the syncope that affects this word, but the final foot shows no evidence of stress. The vowel reduces to *e* in later Old English, showing the typical merger of unstressed *æ* and *i*, and metrically such syllables are treated as entirely unstressed. This does not necessarily

mean that final footed (or indeed unfooted) syllables have no relative acoustic prominence at all, and things such as final phonetic lengthening are typologically common (Minkova 2021: §4.3), but actual 'secondary stress' (however exactly this was realised phonetically) could only be given to the heads of medial feet, not generally to those of final ones.

This exemption from stress should probably be thought of either as a type of foot extrametricality (Hayes 1995: 77–78), or of defooting. Either way, the practical results are much the same: a final foot is formed, and is relevant for high-vowel deletion but ignored when it comes to stress assignment. Final feet also appear to be less salient metrically, a matter discussed at greater length in §§5.6–5.7 in the next chapter.

A complicating piece of data is that, to judge by the metre, there is one type final syllable that *does* carry secondary stress. Particularly in *Beowulf*,[28] the final syllable of *æþeling* is able to condition the non-application of resolution (see further §5.5.2), which suggests that it is a partly stressed syllable:

(66) æþeling manig
'many a noble one' (*Beowulf* 1112b)

The scansion here is *SsŠw* (type 'A2k'; see appendix D), with no resolution taking place in *manig*. The behaviour of *-ling* in conditioning this suspension of resolution suggests that *áeþelìng*, like *áeþelìnga*, has real secondary stress of some kind. This is not normal, and most words that have secondary stress medially in inflected forms lose that stress when the syllable is final: a typical example is *ōþèrne* '(an)other, second (MASC.ACC.SG)' versus *ōþer* (MASC.NOM.SG), with no secondary stress.

The general rule appears to be that overheavy final syllables such as *-ing* can (if not absorbed into a larger LH foot) bear secondary stress,[29] while bimoraic final syllables such as *-er* cannot carry secondary stress at all. This behaviour might be formalised in various ways, but it is likely related to the fact that final overheavy syllables are prosodically problematic. They are overheavy, and so perceptually relatively prominent, but they cannot be straightforwardly incorporated into the

[28] This contrast is poorly attested outside of *Beowulf*. Against five examples from *Beowulf*, in his large but partial corpus, Russom (2001: 60, n. 31; 56, n. 18) finds just three further examples of heavy word-final affixes showing evidence of metrical stress (*Andreas* 787a, *Juliana* 242a, *Metres of Boethius* 20.216a). He finds considerably more examples of final stresses on suffixes such as *-lic* and *-dom* (Russom 2001: 60, n. 30), which were originally distinct lexemes, but these may involve complications of prosodic word structures that go beyond the basic interactions of feet and stress.

[29] Metricists sometimes draw a distinction between true secondary stress, which occurs only on the second elements of compounds, and 'tertiary stress', which is assigned to heavy derivational syllables. It is probably better, however, to speak of the derivational syllables as having secondary stress in phonological terms, and to explain such metrical peculiarities as occur in compounds as stemming from their morphological structure, or the effects of nested prosodic words.

ideal bimoraic trochee. One possibility would be that a limited form of final-consonant extrametricality gets applied to these syllables (Russom 2001: 62–63). This could not be a general rule at the earliest period, since final extrametricality in **hæ͡uβudu⟨m⟩* would incorrectly lead to footing as **(hæ͡u)(-βu-du⟨m⟩)* and escape syncope, but it is possible that extrametricality was allowed in a limited fashion. Alternatively, and perhaps more simply, the phonetic heaviness of these syllables could have led to the exceptional extension of the trimoraic licence to them. Either way, with special allowances taken to let syllables such as *-ing* and *-end* be footed, it is hardly surprising that they would be then exempt from the usual final foot extrametricality or defooting.

4.6 Early Old English Foot Structure

Putting all the pieces from this chapter together, I would propose the following rules for the foot structure of early Old English. Chronologically, most of the evidence comes from high-vowel deletion, and so describes a system active at perhaps c. 600 AD, though it is also congruent with the metrical data of *Beowulf* (probably composed c. 650–750, though the poetic register may reflect a slightly more conservative phonology than the daily speech of the time). The cover term 'early Old English' thus, in this particular case, spans the late prehistoric and early historical period.

The relevant prosodic factors may be summarised as follows. The foot type is the bimoraic trochee, with feet being formed starting at the left edge of the word (left-to-right foot formation).[30] An *overheavy licence* allows the creation of feet with more than two moras, in order to allow the footing of syllables that cannot be left unfooted (usually under- or overweight initial syllables, but also potentially overheavy final syllables). Light, monomoraic feet are strongly dispreferred (though they may occur in the second elements of compounds; see §5.5.1), but stray unfooted syllables are allowed where not excluded by other factors (namely the requirement to foot initial syllables). The leftmost foot is assigned primary stress, and all remaining non-extrametrical feet take secondary stress; the final foot is usually extrametrical for the purposes of stress assignment.[31]

[30] Just where the 'word' begins is probably at least partly morphologically determined, since there are prefixes that are sometimes stressed and sometimes unstressed. The unstressed ones are probably clitics outside the (minimal) prosodic word (§2.6), but the stressed ones are presumably incorporated within it. Which 'prefixes' are incorporated into the 'word' depends partly on the class of the main word (contrast verbal *on(d)·séndeð* 'sends to, away; destroys' and nominal *óndswaru* 'answer' or denominal *óndswàrigað* 'they answer'), and partly on the prefix (*ge-* is never stressed, even when attached to nouns). See further especially Minkova (2008).

[31] Or more pedantically, a non-initial final foot is extrametrical. If there is only one foot in a word, it is both initial and final, but, obviously, cannot count as extrametrical (Hayes 1995: 58, ex. 47d).

More schematically, the rules and principles are:

1. Form bimoraic trochees from left to right.
2. Initial syllables must be footed.[32]
3. Trimoraic feet are tolerated only in word-initial position, or to prevent overheavy single syllables from being unfooted.[33]
4. Final feet are extrametrical for the purposes of stress assignment (excepting overheavy feet, which require a special licence to be footed).
5. The heads of (non-extrametrical) feet are stressed.
6. The leftmost foot carries the primary word stress (end-rule left).

This foot structure persists through a number of sound changes affecting the quantitative structure of words, at least until (and in large part potentially after) change 3:

1. Shorten medial long vowels.[34]
2. Delete all unfooted high vowels.
3. Shorten final long vowels.

A few localised analogies also took place early on, including possibly the restoration of vowel length in class II participles between changes 1 and 2 (e.g. **wundɔdu* → **wundɔ̄du*); see §4.4.1.1. More limitedly in terms of dialectal scope, sometime after change 2 pre-West Saxon extended a single stem vowel in noun paradigms where there was three-way alternation between a long vowel, a short vowel, and no vowel (through syncope) within a single paradigm (e.g. **nīe͡tnā* → **nīe͡tĭnā*); see §4.4.1.2.

The combined foot structure and vowel deletion rules generate the data for early Old English very robustly, as shown in the following list:

- (scíp)
- (scí-pu)
- *(ję̄)-ru > (gę́r)
- (wórd)
- *(wor)-du > (wórd)
- (wé-rud)
- *(we-ru)-du > (wé-rud)
- (wé-ru)(-dum)
- (hḗa)(-fud)

[32] This is more accurately 'Root syllables of lexical items must be footed', as discussed in §5.5 in the next chapter.
[33] Unless final overheavy feet are instead footed through limited final-consonant extrametricality.
[34] Possibly to be separated into two changes, with this initial shortening being limited to high vowels only, and medial non-high vowels shortening later, after change 2; see note 20.

- (hé͡a)(-fu-du)
- *(hǣù)-βu(-dum) > (hé͡af)(-dum)
- (né͡)(-ten)
- (né͡)(-te-nu)
- *(né͡t)-ti(-nū) > (né͡t)-na
- (ǽl)(-bi-tu)
- (lé͡oht)
- *(tórht)(-nǣ) > (tórht)-ne
- *(we-rul)-du > (wé-ruld)
- (wé-rul)(-dum)
- *(œ́x)(-tæ̀n)(-dī) > (é͡h)(tèn)de
- (ó͡)(-þer)
- *(ó͡)(-þæ̀r)(-nǣ) > (ó͡)(-þèr)-ne
- (ǽ-þe)(-lìng)
- (ǽ-þe)(-lìn)(-gum)

A certain number of very early exceptions, such as the creation of forms like *strengþu* 'strength' and *frigno* 'I learn by enquiry', are due to natural and simple morphological pressures. Later, after change 3, the prosodic basis of high-vowel deletion became opaque. The relatively early Mercian of the *Vespasian Psalter* often preserves the original alternations, but analogical readjustments would become increasingly common as time went on. These changes did not obscure the fundamental distinction between words such as *scip* on the one hand, and *word* and *werud* on the other, but they do suggest that the presence or absence of high vowels was increasingly morphologised. It is not until the 12th and 13th centuries, in the period conventionally known as early 'Middle English', that new and more direct evidence for foot structure will emerge – this will be the matter of chapter 6. But before moving forward in time, I will deal with the metrical evidence of resolution and Kaluza's law in *Beowulf* in the coming chapter.

Chapter 5

The Sandwich Rule: Kaluza's Law and Resolution in *Beowulf*

Beyond the strictly phonological evidence discussed in the previous chapter, the most important window onto Old English foot structure is provided by the metre of alliterative verse. In particular, the process of *resolution*, introduced in §3.1.1, is especially interesting from a phonological perspective. What is really striking is that resolution sometimes occurs, and sometimes fails to occur. At least in the poem *Beowulf*, the operation or non-operation of resolution isn't random, but is conditioned by a set of rules known as *Kaluza's law*,[1] and these conditions are closely bound up with issues of bimoraism and the structure of the prosodic word in Old English. This chapter will first present the workings of resolution and non-resolution in *Beowulf*, before dealing with the implications of this for Old English phonology.[2]

5.1 Resolution and Syllable Weight

As outlined in §3.1.1, resolution is a ubiquitous feature of Old English verse: as a general rule (for exceptions, see §5.6 below), any heavy syllable bearing some degree of stress may be replaced by two light syllables instead. The following three verses, for instance, have the same scansion (type A in Sievers' scheme; see appendix C.1):

(67) lange hwile
SwSw
'for a long time' (*Beowulf* 16a)

[1] Named to acknowledge Kaluza (1894a: 78–82, 1896). Current understandings of Kaluza's law differ from Kaluza's earliest approaches in several important respects, though the revision and summary in Kaluza (1911: 61–63) is an excellent introduction to the basic ideas and problems.

[2] Much of the argument and data for this chapter has been published in Goering (2021a). Goering (2016b: ch. 2) contains further discussion of some the finer philological problems and details. The data referred to in this chapter is given more fully in appendix F.

(68) mādma mænigo
SwS^{w}w
'a multitude of treasures' (*Beowulf* 41a)

(69) werodes wīsa
S^{w}wSw
'leader of the war-band' (*Beowulf* 259a)

The simplest assumption is that this metrical equivalence reflects the phonological equivalence of H (*heavy*) and LL (*light-light*), each of which forms a bimoraic trochee. In principle, the metrical system could have counted each syllable individually – just because a prosodic unit exists in a language doesn't mean that poetic metre must make use of it – but it's not a shock to see the bimoraic foot reflected in verse structure.

As noted in §4.5.1.2, resolution frequently occurs not just with such LL sequences, but also with combinations of a light syllable followed by a heavy one, LH. Compare the three following verses (all of Sievers' type B, *wwSwS*), which are identical except for the structure of the final word, which may be a single (over-) heavy syllable, an LL disyllable, or an LH disyllable:

(70) him on bĕarme læg
'on his breast lay' (*Beowulf* 40b)

(71) sōhte holdne wine
'he has sought a loyal friend' (*Beowulf* 376b)

(72) hwæt mē Grendel hafað
'what Grendel has (done) to me' (*Beowulf* 474b)

By contrast, a disyllabic word starting with a heavy syllable – that is, of the shape HX – is emphatically not permitted in such a position. The singular verbs *læg* 'lay' of (70) and *hafað* 'has' of (72) couldn't have occurred in their plural forms *lāgon* or *habbað*, nor could the *wine* of (71) have been replaced by the near-synonym *drihten* 'lord'.

It is not the case, however, that LL and LH sequences are always equivalent. LL disyllables almost always resolve (again, on exceptions see §5.6), but it's fairly common to find LH sequences that do not resolve, and instead scan more comparably to words with heavy initial syllables. Take the following type-E verse:

(73) bēag-hro-den cwēn
'circlet-adorned queen' (*Beowulf* 623b)

In this verse, even though *-hro-den* begins with a light syllable, it must be scanned as non-resolving, equivalent to other type-E (*SswS*) verses such as:

(74) sorh-ful-ne sīð
'sorrowful journey (ACC.SG)' (*Beowulf* 1278a, 1429a; cf. 512a)

If *-hroden* were resolved, it would instead be equivalent to a hypothetical verse such as:

(75) ˣsorh-ful sīð
'sorrowful journey (NOM.SG)'

Such a verse, with the contour *SsS* or *SwS*, would be very easy to compose linguistically, but poets appear to studiously avoid making them (§3.1.6). In (73), it is clearly much more preferable to assume non-resolution, making the verse parallel to the amply attested pattern of (74) rather than the non-occurring pattern of (75).

This non-application of resolution is traditionally known by the rather cumbersome term *suspension of resolution*. The central questions regarding non-resolution are, firstly, under what phonological or metrical conditions it occurs, and secondly, why this kind of variation exists, and why it affects LH sequences so much more than LL ones.

5.2 Stuck in the Middle: The Conditions for Non-resolution

Descriptively, whether a stressed light syllable resolves with a following syllable depends especially on the syllables around it:

1. The preceding syllable must be both at least somewhat stressed *and* heavy.
2. The following syllable must also be heavy, though it need not be stressed.

Put another way, if a light syllable is sandwiched between two heavy syllables, the first of which bears some stress, it won't resolve. Otherwise (with a few exceptions to be discussed) resolution takes place. I call this conditioning the *sandwich rule*.

The 'sandwich' conditions are easy to see in (73), which I repeat here as (76). The first heavy, stressed syllable is underlined, the 'sandwiched' light syllable is in italics, and the following (unstressed) heavy syllable is in boldface to emphasise that it does not resolve:

(76) bēag-*hro*-**den** cwēn
'circlet-adorned queen' (*Beowulf* 623b)

This sandwich condition can be contrasted with some of the verses already seen above, where resolution does take place. Take (72), for instance, which I repeat for convenience as (77). Here the preceding syllable is underlined, and the two resolving syllables are both in italics:

(77) hwæt mē Grendel *ha-fað*
'what Grendel has (done) to me' (*Beowulf* 474b)

This might, at first glance, seem to fulfil the relevant conditions: we have a *light syllable* (*ha-*) sandwiched between one heavy syllable before it (*-del*) and **another** following (*-fað*). However, because the preceding *-del* is fully unstressed, it does not meet the requirements of the sandwich rule: *hafað* accordingly resolves.

Conversely, some verses only meet the first condition, but not the second:

(78) hrēð-*si-go*-ra ne gĕalp
'did not boast of glorious victories' (*Beowulf* 2583b)

Both *-si-* and *-go-* are light syllables, and so they resolve even though they follow the stressed, heavy *hrēð-*.[3]

There are of course also plenty of verses that don't come close to satisfying any of the conditions for the sandwich rule, such as (71), which I repeat as (79):

(79) sōhte holdne *wi-ne*
'he has sought a loyal friend' (*Beowulf* 376b)

There is no sandwiching of the syllable *wi-* here: the preceding syllable is fully unstressed, and the following one is light. Resolution is strongly expected to take place, and indeed there is not a single example in *Beowulf* of resolution failing to occur in this kind of context.

5.2.1 A Stress Test?

Much of the literature on Kaluza's law assumes that non-resolution requires a further condition: that the potentially resolving syllable bear secondary – or (what is not always clearly distinguished in the scholarship) subordinated – stress. Compare, for example, this widely cited definition of Kaluza's law by Neidorf & Pascual (2014: 658), from an article intended to clearly and precisely explain the workings of the process:

[3] Note that resolution in this verse is confirmed, since otherwise this would be a type-E verse with a trisyllabic dip (*-go-ra ne*), and such a long dip isn't metrically permitted (see §3.1.4, and further Russom 1987: 24; Cable 1991: 12–15; Hutcheson 1995: 252–255).

> In brief, Kaluza's law refers to a linguistic regularity observed in two types of verses, wherein syllabic sequences *under secondary stress* are treated as resolvable or unresolvable according to whether the desinence involved was historically long or short. [*Emphasis* added]

This follows similar conditioning expressed by Fulk (1992: 156, n. 6, 2007: 317), and implicitly also Bliss (1962).[4]

Certainly in (73), the non-resolving syllable does indeed carry secondary stress, but a review of more verses involved with the law quickly shows that this is not an adequate criterion. Many instances of suspension of resolution concern syllables that bear primary word stress, for example:

(80) fĕorh *cy*-**nin**-ges
'the life of the king' (*Beowulf* 1210a)

(81) nū sēo hand *li*-**geð**
'now that hand lies' (*Beowulf* 1343b)

In verses such as these, it has been argued that the suspended syllables are phrasally subordinated. This would mean that the conditioning to suspend resolution wouldn't be secondary stress strictly speaking – this properly refers to secondary stresses within a single word – but rather *subordinated stress* (Fulk 1992: 240, further 156, n. 6, 1996: 495–496). If this were the correct conditioning, then objecting to 'secondary stress' as a condition for Kaluza's law would be a terminological quibble – a valid quibble, since secondary and subordinated stress ought not to be conflated, but not touching on the real substance of the conditioning proposed by Fulk and others.

However, even subordinated stress doesn't really hold up as a conditioning factor for Kaluza's law. There are a good number of verses in *Beowulf* that show non-resolution in keeping with Kaluza's law, but where the syllables in question do not seem to be in any way subordinated with respect to stress (Fulk 1992: 239, n. 4; Hutcheson 1995: 82–87, 2004: 307–309; Suzuki 1996: 295–296; Cable 2003: 151–152):

(82) wīd-cūþ *we*-**rum**
'widely known to men' (*Beowulf* 1256a)

(83) Hrun-ting *be*-**ran**
'(he commanded the sword) Hrunting to be carried' (*Beowulf* 1807b)

[4] See Goering (2021a: 55–56) for more on the history of this idea.

These verses clearly involve the failure of resolution, since the verse type *SsS* is not otherwise a feature of Old English metre, while *SsSw* is. What is more, the lack of resolution here is fully in keeping with Kaluza's law: an LH sequence following a heavy, partly stressed syllable does not resolve. When an LL sequence occurs in a comparable metrical position, it does resolve:

(84) ĕald-swĕord *ĕo-te*-nisc
'giantish ancient sword' (*Beowulf* 1558a; cf. 2616a, 2979a)

(85) ate-līc *e-ge*-sa
'terrible fear' (*Beowulf* 784a)

That is, verses like these all adhere very well to Kaluza's law. The only respect in which they might be in any way 'problematic' under traditional formulations is that the LH and LL sequences are not secondary or subordinated in any way. By all established standards of evaluating both phonological and metrical prominence, the light syllables *we-* and *be-*, *ĕo-* and *e-*, are all considerably more stressed than the syllables before them. Beyond general considerations, the alliteration of *werum*, *ĕotenisc*, and *egesa* strongly suggests that they are each prominent among the words in their respective verses (Russom 1987: 65; Minkova 2003: 24–28).

All in all, subordinated stress is best regarded as an irrelevant factor for Kaluza's law (Suzuki 1996: 293; Yakovlev 2008: 76, n. 49; Goering 2021a). The light syllable in question must have some degree of stress (as does the preceding heavy syllable), but beyond that there are no limits: primary, subordinated, and secondary stresses are all found aplenty. If secondary stresses seem relatively common, that probably is nothing more than a reflection of the fact that the relevant condition – a light syllable following a heavy one, both carrying some stress – is particularly easy to meet within compound words.

5.3 The Weight of History

The second condition of the 'sandwich rule' given in §5.2 is that resolution normally only fails in LH sequences, not in LL ones: that is, if the final syllable of the potentially resolving sequence is light, then resolution will take place even if the first condition (regarding the preceding syllable) is met. I have been careful to so far provide only examples where the relevant syllable weights did not change over the course of the Old English period, but – as discussed in §4.3 – many final vowels in Old English shortened during the 8th and 9th centuries. The effects of high-vowel loss reviewed in the previous chapter give a baseline for concretely determining which final vowels were long and which were short in early Old English, and the conclusions based on that phonological evidence align neatly with etymological expectations.

This phonological perspective also aligns very well with Kaluza's law. Vowels that are expected to count as long on other grounds also count as long for non-resolution, and similarly those that are etymologically expected to be short also count as short for Kaluza's law. Compare the following two verses, one with resolution and one without:

(86) frēo-*wi*-*ne* folca
'dear friend of the people' (*Beowulf* 430a)

(87) þæt mǣg-*wi*-**ne**
'(my) relation-friends (avenged) that' (*Beowulf* 2479a)

The same lexeme, *wine*, occurs in both verses, and in late Old English there seems to be no distinction between the two, but in (86) it must resolve into a single metrical position, while in (87) it cannot resolve, and must count as two distinct positions. This difference in metrical behaviour matches a difference between the final vowels that would have existed in earlier Old English. The *wine* of (86) is nominative singular (in vocative use), which is expected to be short in early Old English: **winĭ*. The *wine* in (87) is nominative plural, which is expected to be historically long (Goering 2020c): **winī*. Once the vowel lengths of early Old English are taken into account, both of these verses behave as expected by the sandwich rule.

5.4 The Regularity of Kaluza's Law

The sandwich rule described here is not perfectly regular: the conditions described in §5.2 do not account for every instance of non-resolution in *Beowulf*, and there are occasions where the rule predicts resolution to fail, but it occurs anyway. Not all of these exceptions have the same importance or type of interest. Some are probably due to imperfect transmission of the text, while others point to further systematic metrical principles that can interfere with the basic operation of Kaluza's law. A relatively small number have no ready obvious explanation, and can be considered genuine exceptions.

To start with, there are a few verses in *Beowulf* where resolution seems to not take place, even though the preceding syllable is unstressed, violating principle 1 of the sandwich rule:

(88) Hrēðel *cy*-**ning**
'king Hreðel' (*Beowulf* 2430a)

This verse must scan with non-resolution of *cyning* to conform to any well-established type in *Beowulf*, but this is unexpected by Kaluza's law.

Resolution ought to be suspended only after a heavy syllable bearing some degree of stress, and *-ðel* should be wholly unstressed.

By my count, there are 11 apparent exceptions of this sort, ten of which are probably spurious: either the substitution of variant linguistic forms[5] or plausible emendation[6] will remove the apparent non-resolution (see appendix F.5 for these verses). Only (88) really lacks a straightforward explanation, and this verse stands alone as a metrical anomaly (Fulk 1992: 184–185; Hutcheson 1995: 69, n. 5).

The overwhelming majority of relevant verses occur when the first condition of the sandwich rule is met: when a light syllable immediately follows a heavy, at least partly stressed syllable. In this context, whether or not resolution takes place is predictable from the early Old English weight of the final syllable in over 95 per cent of unambiguous examples in *Beowulf* (Goering 2016b: 129–130). There is naturally some uncertainty about the exact number – some verses involve textual difficulties or emendations, while in others the historical length of a given syllable is disputed – but even the most ungenerous interpretation of all uncertain cases still leaves Kaluza's law with a regularity of over 90 per cent (see appendix F).

Most of the exceptions involve LL sequences that fail to resolve, and the majority of these (though not necessarily all) may have a principled explanation; I will return to this matter in §5.6 below. Only a very few verses involve resolution of an LH sequence in a Kaluza's law position. The three clearest instances are these, with the conditioning heavy syllable underlined, and the resolved syllables both italicised:[7]

(89) æsc-holt *u-fan* grǣg
'ash-forest grey above' (*Beowulf* 330a)

[5] This goes for 262a, 459a, and 2048a with a dialectal **fædder* (Fulk 1992: 181; cf. *fædter* in the *Vitellius Psalter*, and the comparable geminate in *moddor*, alongside usual *mōdor*), 881a with **ēahām* for *ēam* allowing resolution of *nefan* (Trautmann 1904: 50; Holthausen 1912: 165), and 1828b with dialectal **dēdon* read for *dydon* (Sievers 1885c: 498).

[6] So 779 with *ā* stressed to allow resolution of *-mete* in a type-B verse (and emendation to correct the alliteration by inverting *manna ǣnig* in the off-verse; Holthausen 1909: 25; Pope 1966: 238), 845a with **ofer·wunnen* for *ofer·cumen* (Kaluza 1894b: 82), 954a with **ge·fēred* for *ge·fremed* (Andrew 1948: 138), 1514a with **wæt(e)ra* for *wæter* (Martin 1895: 295), and 1728a emendable by either inversion of *on lufan* and *lǣteð* (Pope *apud* Donoghue 1987b: 193) or replacement of *lufan* by **luste* or **lustum* (Grundtvig 1861: 59; cf. Griffith 1997: 127–128 for parallels in verse, and note also *in lustum* frequently in the *Vespasian Psalter* translating *voluntatibus* 'according to one's volition').

[7] There are three more potential examples: 1122a, 1534a, and 2950a. I discuss the first of these in Goering (2020c), where I argue the line should be emended, eliminating the metrical difficulty. 1534a involves a dative singular of an *i*-stem noun, a category where archaic datives (of dative or instrumental origin) with the shape of (probably) short **-i* were largely displaced by **-ī*, probably spread from the *a*-stems (Dahl 1938: 161–163; Goering 2016b: 95–96; Adamczyk 2018: 146–147). This ending usually scans as heavy (see appendix F.2, group 'LX?'), and this is the only example where a light variant would be better. Does 1534a contain an archaic variant used for metrical convenience (compare the occasional use of genitive plurals such as *Denia*), or is it a breach of Kaluza's law? 2950a involves *fela-* as the first element of a compound; see Goering (2021a: 59, 70–71, esp. note 34), and note 14 below.

(90) mōd-*cĕa-re* micle
'great trouble of spirit' (*Beowulf* 1778a)

(91) mōd-*cĕa-re* mǣndon
'proclaimed the sorrow of their spirit' (*Beowulf* 3149a)

Strictly speaking, the resolution in (89) isn't entirely assured, and Hutcheson (1995: 167) complains that this verse seems to 'defy classification'. This is usually taken as an A2ab verse (Bliss 1962: 72; Pope 1966: 262), comparable to *grim-līc gryre-fāh* 'fierce and terrible in its variegated colouring' (3041a), but this would be a very unusual specimen of that type. A2ab verses usually end with a single compound word, such as *gryre-fāh*, not in two distinct words, and I know of only one parallel for this in the corpus of Old English:[8]

(92) glēaw-mōd, gode lēof
'wise-minded, dear to the deity' (*Andreas* 1579a)

In terms of general scansion it's probably easiest to take *Beowulf* 330a as type A2ab, making it a genuine exception to the sandwich rule, but it's worth remembering that this is a rather strange verse in general.

In *mōd-cĕare*, which is accusative singular in both these examples, the ending should go back to Proto-Germanic **-ō^{n}*, which Fulk (1992: 381–382) argues was shortened already in prehistoric Old English. However, Fulk's only evidence for such a shortening is Kaluza's law itself, specifically these two verses, and proposing any such special shortening of **-ō^{n}* specifically – as opposed to any of the other many sources of **-ǣ̆* in early Old English – seems an otherwise unwarranted complication in phonological history (Ringe & Taylor 2014: 298–303). In any case, all other instances of the outcome of **-ō^{n}* behave as long for purposes of Kaluza's law.[9] Furthermore, in the *Vespasian Psalter* we find the accusative feminine singular adjective *īdle* (106.8), which points to early Old English **īdlǣ* < **īdilǣ*, with the long final vowel needed to condition syncope. If the final vowel were short, syncope ought to have failed, as it does in the feminine nominative singular form *īdelu* (107.11), from **īdilu*, in the same text (see further §4.4.1).

That these instances of *mōd-cĕare* really are problematic has long been acknowledged, though no really good explanation has been forthcoming. Bliss (1962: 119) wonders, plausibly enough, whether *mōd-cĕare* 'replaces an

[8] It may be worth noting that *Andreas* may well be influenced by *Beowulf* (for discussion, see North & Bintley 2016: esp. 62–81, with references), though I would emphasise the extreme rarity of this configuration – type A2ab with a word break before the final syllable – anywhere in Old English more than its extremely marginal presence in these two poems.

[9] In particular, 2007b, 2334b, 2588a, 2959a, 2969b, and 3081b would be exceptionally anomalous if their final syllables were short. These verses all end in *þone*, with the final vowel from Proto-Germanic **-ō^{n}*.

obsolete word of a different declension' – but he ventures no guesses as to what the replaced word might have been, and I can see no really obvious possibilities. In the end, the explanation for these few genuine exceptions to Kaluza's law can't be determined conclusively: faulty transmission, the willingness of the poet to occasionally break from the usual phonological-metrical norms (or to put it another way, the poet nodding), or a quirk of linguistic history that is now otherwise obscure to us are all possibilities.

In the remainder of this chapter, I will leave these few genuinely irregular exceptions such as 330a, 1778a, 2430a, and 3149a aside, and concentrate on explaining the patterning of the overwhelming majority of verses that do adhere well to Kaluza's law, as well as those apparent exceptions that seem to have more systematic motivations. Even without Kaluza's law being truly exceptionless, there are many hundreds of verses that show a sensitivity to syllable weight that needs to be explained both metrically and phonologically – and the explanations help to confirm and extend the picture of early Old English foot structure developed in the previous chapter.

5.5 Explaining Kaluza's Law: The Overheavy Licence

As discussed in §4.5.1.2, the formation of LH sequences into single prosodic units is somewhat unusual phonologically. It is normal enough for LL sequences to form a single bimoraic foot: each syllable has one mora, and together they provide the two moras of the optimal foot. An LH sequence has, by contrast, at least three moras, and any foot created will be overheavy, exceeding the optimal weight of a bimoraic trochee. In the previous chapter, I proposed accounting for the presence of overheavy syllables at the starts of words – such as *lēoh-tes* 'of light' or *torht-ne* 'bright (MASC.ACC.SG)' – by means of an *overheavy licence*. This is essentially a tolerance for excessively heavy feet in word-initial position. As noted there, this licence also clearly extends to resolved sequences, so that *worulde* 'of the world' in (61) scans as the equivalent of *Sw* rather than *S̆sw*.

Looked at in this light, the difference in behaviour between LL and LH sequences under Kaluza's law makes sense. LL sequences are almost universally resolved in any position (with the exceptions discussed in §5.6 below), but LH sequences are only permitted in certain positions – very much as initial LH forms a single foot in *worulde*, but non-initial LH does not in **(hæ͡u)-βu(-dum)*. Explaining Kaluza's law is, in essence, a matter of explaining the conditions under which the overheavy licence operates in verse.

5.5.1 Kaluza's Law in Compounds

The operation of Kaluza's law in compounds is already largely accounted for by the principles of foot structure proposed in the previous chapter. Resolution of LL

sequences needs no further explanation. In *hrēð-si-go-rā* (cf. 78), the two medial syllables are both light, and so can form a bimoraic foot without issue: **(hrǣþ) (si-gu)(-rā)*, scanning as *Ssw*.

Non-resolution of LH sequences in compounds – examples such as *bēag-hroden* (cf. 73) – is also expected. Since *-hro-den* has three moras (one in the first syllable, two in the second), it could only resolve if the overheavy licence applied. Since the sequence is not word-initial, the licence does not apply, and resolution does not take place. There is, however, a difference between the foot structure of *bēaghroden* and that of **hæ͡uβudum*, though they have the same quantitative structure, HLH. In the latter, the medial **βu* is left unfooted, unstressed, and open to deletion. In the former, however, the scansion suggests that *-hro-* has a secondary stress, with the overall metrical contour being *Ssw*. This implies that *-hro-*, unlike **βu*, is footed. As a reminder, a foot with a single mora is called a *light* (or *degenerate*) foot (cf. §2.5), and this is apparently what is formed in such compounds: **(bæ͡uɣ)(-hro)(-dæn)*.

As noted in §4.5.1.2, light feet are not preferred in Old English. In a word such as *worulde*, it is apparently preferable to form an initial LH foot than an initial L foot. But this is word-initially, where the already established overheavy licence makes trimoraic feet more acceptable. Within a compound word, there is no overheavy licence, but there is still pressure to foot and stress the root of a lexical element such as *hroden*. With the overheavy licence unavailable, the only option is to make a light foot. The principles at work are essentially the same as those given in §4.6:

1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. *Overheavy licence*: Trimoraic feet are tolerated only in word-initial position, or to prevent overheavy single syllables from being unfooted.

I have changed rule 2 from a requirement to foot initial syllables of *words* (a vague term) to *lexical items* in order to account for the behaviour of compounds.[10]

5.5.2 Kaluza's Law in Phrases

Within compounds, Kaluza's law can be seen as pretty much a direct reflection of phonological structure. This is not necessarily the case when the law applies across word boundaries, as in examples (80) and (82), which I repeat here for reference:

[10] These principles could be stated purely with reference to different levels of prosodic word, with the footing requirement applying to the minimal prosodic word, and the overheavy licence to the maximal prosodic word. The variable behaviour of 'prefix' stressing, however, inclines me to think that the stipulations for certain syllables to be stressed (and so footed) is fundamentally morphological (compare note 30 in chapter 4, as well as §2.6).

(80) fĕorh *cy*-**nin**-ges
'the life of the king' (*Beowulf* 1210a)

(82) wīd-cūþ *we*-**rum**
'widely known to men' (*Beowulf* 1256a)

The failure of resolution in these verses requires more explanation. The simplest approach is to work as much with the tools already available, and assume that the initial syllables of *cyninges* and *werum* count as being in some way 'non-initial'. I suggest that the principle of *metrical cohesion* (§3.4.1) is sufficient to account for the behaviour of Kaluza's law.

As a reminder, metrical systems show cohesion when they treat elements in a verse as more closely bound in some way than they might be in ordinary speech. The classic examples involve syllabification across word boundaries. The cohesion I am suggesting for *Beowulf* is somewhat different: I propose that in sequences of consecutive feet, they are all treated as belonging to the same prosodic unit (roughly, perhaps, as part of the same maximal prosodic word). Only the first such foot is therefore 'initial' within the context of the verse. The two verses just cited would then be footed as follows (remember from §4.5.2 that final feet are formed, but in some way count as extrametrical or are defooted; I mark them with angled brackets):

(93) (fĕorh)(cy)(-nin)⟨-ges⟩
'the life of the king' (cf. 80)

(94) (wīd)(-cūþ)(we)⟨-rum⟩
'widely known to men' (cf. 82)

If this explanation is on the right track, then it implies that this cohesion really does apply to sequences of feet, not words. This is important to explain verses such as the following:

(95) hwæt mē (Gren)⟨-del⟩ (ha-fað)
'what Grendel has (done) to me' (cf. 72)

The extrametrical final foot of *Grendel* (**Grændil*) interrupts the sequence of consecutive feet in the verse, so that *hafað* is now 'initial' not only in terms of normal word boundaries, but also in terms of metrical cohesion. The overheavy licence therefore applies to it, so that its two syllables form a single, trimoraic foot, and count as metrically resolved.

This hypothesis of cohesion is rather difficult to test. It seems to me an efficient way of explaining the behaviour of Kaluza's law, but as far as I can see, there are no

independent processes that could support or speak against this kind of foot-based metrical cohesion in *Beowulf*. On the other hand, it could be that, if this kind of cohesion did apply, it operated also in rapid connected speech to some extent. The most that can be safely said is that this approach straightforwardly accounts for the operation of Kaluza's law across word boundaries without introducing much in the way of new or unparalleled theoretical machinery.

5.6 The *Stānhliðo* Context

There is one final wrinkle to Kaluza's law. As noted above, LL sequences tend to be resolved, even after heavy, stressed syllables. There are, however, a certain number of verses in which an LL sequence scans as two metrical units, without resolution. A couple of these might be explained through faulty textual transmission,[11] but most do not have an obvious textual explanation. The main group of exceptions consists of some 21 verses, of which the following are typical examples:

(96) under stān-*clĕo*-**fu**
'underneath stone-cliffs' (*Beowulf* 2540a)

(97) stēap stān-*hli*-**ðo**
'steap stone-slopes' (*Beowulf* 1409a)

For the full list, see appendix F.2, group 'LL'. In these verses, the unexpected resolution occurs in the second elements of verse-final compound words. I would emphasise that, contrary to what has been claimed in some of the previous literature on Kaluza's law, it probably doesn't matter whether the verses in question are type C (opening with a dip, like 96) or D (opening with a stressed word, as in 97).[12] Taken as a whole, such verses do *generally* adhere to Kaluza's law, and about 199 examples end in -LH – but the residue of the 21 verses in -LL is too high, and the examples too textually secure, to be easily dismissed.[13]

[11] 1914b, for instance, ends in non-resolved *gĕara*. This is unexpected if taken as an error for **gĕaru*, but is not relevant if taken as **gĕarwa* (with an archaic weak adjectival ending; cf. Fulk, Bjork & Niles 2008: cxlix–cl; Goering 2021a: 73, n. 40).

[12] Type D has often been seen as having a special status, but this is in part due to the exclusion of some relevant data, especially the treatment of *ĕal-gĕaro* as a phrase rather than a compound (Goering 2021a: 65–66).

[13] If just these clearer cases are considered, this group shows non-resolution of final LL about 9.5 per cent of the time (21 out of 220). A potential confound are 24 verses ending in the dative singulars of *i*-stems, whose historical status is somewhat complex (see note 7 above). If these are (improbably) all counted as LL, then the rate of LL-suspension in verse-final compounds jumps to 18.4 per cent, but if they are considered LH, it drops to 8.6 per cent. This last count is probably the most plausible, but still makes for a remarkably high rate of suspended LL. Three more difficult cases – 851a, 2921b, and 3074a – do not seriously change the larger picture, however they are dealt with.

There are three features that these non-resolving LL sequences share:

1. They immediately follow a preceding heavy syllable.
2. They are the final two syllables of the half-line.
3. They are subordinated as the second elements of compounds.

Which of these features is most relevant in explaining the failure of resolution? The first feature is of course the same as the first condition for the sandwich rule, but since this type of non-resolved verse clearly involves a deviation from the normal operation of Kaluza's law, there must be something more at work.

The second feature is reminiscent of the principle of closure (§3.4.2): the tendency for the end of the verse to show the strictest correspondence between linguistic and metrical structures. It is certainly conceivable that in this position, the pressure to align syllables and metrical positions might be somewhat greater, but a wider consideration of Old English verse forms shows that this alone is clearly not a sufficient explanation. It leaves unexplained why this alignment should be on the level of syllables rather than feet, and in any case there are plenty of verses such as (71) which do show verse-final resolution (just not within compounds). The verse-final position of these elements is a necessary, but not sufficient, factor.

The third feature is just as crucial as the second: the key context here is the non-resolution of LL sequences at the ends of verse-final compounds. Before attempting to explain what is going on in verse-final compounds, however, some defence of this third condition (the limitation to compound words) is needed.

5.6.1 Compound Words and Non-resolving LL Sequences

Although most examples of non-resolving final LL elements are within compounds, there are a few verses where fully independent LL words don't resolve, and are treated as two distinct metrical positions. There are probably just six examples in *Beowulf*, though as usual there are some problems in determining the exact number:[14]

[14] For a full listing, see appendix F.4, group 'LL'. I include there 3000b: the verse is defective and requires emendation, but all the proposed emendations I know of would give the same metrical pattern. Aside from a few textually problematic verses where relevant emendation is likely, the only really uncertain cases are the ten verses (group 'LX?') that end in the particle *fela* 'much, many', which might originally have been **felu*, **felā*, or both in different contexts (Goering 2021a: 59, 70–71, esp. note 34). If these were taken as short-finalled **felu*, then the number of suspended final LL words would increase very substantially, from six to 16, but it is more likely that, at least when used as an independent particle, an LH form such as **felā* was employed. I should further note that in group 'LH', I have included some eight verses (589b, 680b, 1179b, 1367b, 2031b, 2530b, 2749b, 3176b) that would have had light endings if they developed by sound change from Proto-Germanic – specifically subjunctive endings of preterite-present verbs – but where the historical light **-i* had clearly been replaced analogically by heavy **-ǣ* well before the earliest written Old English (Bammesberger 1982; Ringe & Taylor 2014: 356). It seems clear these verses would all involve long endings by the time of *Beowulf*.

(98) wæs on bǣl gearu
'was prepared on the pyre' (*Beowulf* 1109b)

Such verses are very unusual, however. Normally if an independent disyllable fails to resolve, it has the shape LH as expected by Kaluza's law:

(99) þonne wīg cume (< **cumǣ*)
'when war should come' (*Beowulf* 23b)

While the exact numbers again depend on how you count, the percentage of such verses that show suspended independent LL words is probably around 1.8 per cent of the total.[15] This contrasts with the at least 8.6 per cent rate within verse-final compounds. Only if the *Beowulf* poet turned out to always use the light-stemmed **felu* variant of *fela* (see note 14) would this conclusion be put into question,[16] but the evidence of the most linguistically secure examples agrees with what I would consider the safer assumptions about *fela*: independent verse-final words suspend or not according to Kaluza's law alone, with very few exceptions. It is only in the special environment of verse-final compound words that suspension goes beyond Kaluza's law, with LL elements failing to resolve at a notably higher rate.

5.6.2 The Stānhliðo *Rule*

So far, I have tried to show that LL sequences generally resolve under almost any circumstances, with the only set of exceptions frequent enough to really require a special explanation occurring in the second elements of verse-final compounds. The lack of resolution in this context might be termed the *stānhliðo* rule, after example (97):

> Resolution is not permitted in the second element of a verse-final compound.

There are a few potential exceptions to this rule, such as the following:

(100) mearcað mōr-*hopu*
'stains the secret place in the marsh' (*Beowulf* 450a)

This, like all the other comparable verses, has the shape *SwSs̆w*, meaning that it could potentially be scanned either as type A2b, *SwSs*^{w} (with resolution), or as type Da* *SwSs̆w* (without resolution). This ambiguity means that

[15] See appendix F.4, which includes 329 verses featuring an independent suspended LH word, against the six examples of suspended LL words mentioned in note 14.
[16] That would make the suspension rate around 4.6 per cent, with 16 out of 346 independent LL words failing to resolve.

these verses are not very informative, but they are not in any way problematic for the *stānhliðo* rule.[17]

Is it possible to come up with a more precise characterisation of the *stānhliðo* rule in metrical and phonological terms? I would suggest that it involves a special process of defooting, where a doubly subordinated element – the second element of a compound which is itself the final element in the verse – undergoes demotion and loses its status as a foot (Goering 2016b: 146–151).[18] The strength of this approach is not so much in its ability to explain the *stānhliðo* rule alone – it seems to me that this could be accounted for in a couple of reasonable ways – but in accounting simultaneously for both this rule and a further phenomenon known as *Terasawa's rule*, to which I now turn.

5.7 Terasawa's Rule and Final Defooting

Old English poetry in general shows a pervasive restriction that was noted by Weyhe (1905: 79–83) and further clarified by Terasawa (1994: 8–15): compounds of the shape *Sws*^{w} seem to be generally prohibited. There are plenty of compounds such as *hilde-bord* 'battle shield', with the shape *Sws* achieved without resolution in the second element of the compound. There are also plenty of phrasal equivalents, such as *forma sīð* 'first time' and *holdne wine* 'loyal friend', which – as this last example shows – do permit resolution. But perfectly imaginable compounds such as ^{x}*hilde-sele* 'battle-hall' (cf. *gūð-sele* 'battle-hall') are strongly avoided:

(101) lǣtað *hilde-bord*
'let the battle-shields (remain here)' (*Beowulf* 397a)

(102) næs þæt *forma sīð*
'that was not the first time' (*Beowulf* 1463b)

(71) sōhte *holdne wine*
'he has sought a loyal friend' (*Beowulf* 376b)

(103) ^{x}in þǣm *hilde-sele*
^{x}'in that battle-hall' (cf. *Beowulf* 443a)

This seems to be a real restriction that poets worked to abide by. This is shown particularly clearly by compounds in *hild(e)-* 'battle': in compounds, this element

[17] For a complete list, see appendix F.3. Among verses of this shape, 37 end in -LH, and six in -LL, for a rate of 14 per cent suspended LL sequences. Compare note 13 above. Also see Goering (2016b: 59–62) on the non-resolution of similar sequences in non-compound words.
[18] Minkova (2021: §4.2) alternatively suggests that this is due to phonetic lengthening of a phrase-final syllable, but attractive as this idea is, it doesn't explain the restriction to compounds.

has two variants, a longer *hilde-* and a shorter *hild-*.[19] The two variants exist, as Terasawa observed, in virtually complementary distribution: *hilde-* is used before elements beginning with a heavy syllable, such as *-bord* or *-mēce* 'sword', while *hild-* is limited to use before second elements beginning with light syllables, such as *-fruma* 'leader'. Terasawa (1994) provides a thorough and convincing review of the philological ins and outs of this argument, reaching the conclusion that Old English poets really did avoid compounds of the shape *Sws*^{w}.[20]

While this constraint is very interesting, its explanation is not immediately obvious. Certainly there is nothing inherent in the vocabulary that would lead to this being an accidental gap. The fastidiousness with which poets selected *hild-* or *hilde-* as needed to get the right shape speaks to this, and furthermore, in the closely related Old Saxon poetic corpus, words such as *brūdi-gumon* 'bridegroom' (*Heliand* 509b, 2050a) and *hōbid-stedi* 'capital city' (*Heliand* 4127b) occur frequently enough to make their absence in Old English conspicuous.[21]

The explanation of Terasawa's rule must lie somewhere in the interaction of phonology and metre in Old English verse. I suggest that this and the *stānhliðo* rule can be explained in the same way, using a single rule for *final defooting*:

> The final element of a verse-final compound is defooted.

I will return to the exact formulation of this rule shortly, but for now I want to focus on how a process along these lines can account for Terasawa's rule. The first thing to note is that *Sws*-compounds only occur verse-finally in Old English. It's long been noted that verses such as the following are effectively absent from the corpus, despite being apparently unremarkable in terms of lexis and syntax:

(104) ^{x}*hilde-rinc* hār
^{x}'grey(-haired) battle-warrior' (cf. *Beowulf* 1307a)

The reasons why *Sws* compounds can't occur outside of verse-final position is a matter of debate – compare in particular Russom (1987: 29–31) and Cable (1991: 148–151) – but one consequence is that any examples of the resolved equivalent, *Sws*^{w}, would have to be verse-final.[22] In this position, the defooting rule would apply, so that a theoretical compound such as ^{x}*hilde-sele* would have its second

[19] On the history of this word, see §4.3, especially note 12.
[20] The rule has sometimes been extended beyond Terasawa's formulation to defend emending away compounds such as *sibbe-ge·driht* (*Beowulf* 387a, 739a) – see Fulk, Bjork & Niles (2008: 329) – but such words do not involve resolution, and do not fall under the scope of the rule.
[21] The relevant verses can be found in Hofmann (1991b: 191–199), though he does not sort verses by resolution.
[22] The only exceptions to this occur in proper names, most prominently forms such as the genitive *Ongenþēoes* (1968a, 2387b), which have long been recognised as exceptional, and may involve special accommodations licensed by the need to talk about certain people prominent in the poetic tradition. Compare Fulk (1992: 150, n. 10).

element defooted: instead of resolving nicely to *(se-le)*, the final element would simply count as two weak syllables, giving the whole compound effectively the structure *Swww*. This is not a suitable cadence for any standard verse type in Old English, and so poets simply avoided such words altogether. In other words, they couldn't use *hilde-sele* earlier in the verse, since no *Sws* compound (resolved or otherwise) was possible there, and they couldn't use them verse-finally, because they would then be transformed by final defooting into an unwieldly and unusably long metrical pattern. The same rule which allows *stānhliðo*-type compounds to scan as trisyllabic sequences when verse-final (in defiance of Kaluza's law) also prevents *ˣhilde-sele* compounds from occurring at all.

This final-defooting rule must remain tentative. It seems likely to me that something generally along these lines is probably correct: that verse-final compounds metrically parse their second elements by syllables and not by feet. But it is less clear to me whether this involves genuine defooting (and so presumably destressing), producing scansions such as *stān-hliðo* being *Sww* and *ˣhilde-sele* being (if it existed) *Swww*. Intuitively, it would seem nicer if the root syllables of the second elements remained as light feet, keeping a secondary stress: *stānhliðo* as *Sšw* and *ˣhilde-sele* as *Swšw*. But what interaction of pressures would possibly favour the creation of a monomoraic foot in any circumstance when a perfect, optimal bimoraic foot could be readily created instead? Because of this, I have preferred to frame this rule as one of defooting as a simple and coherent mechanism to explain both the *stānhliðo* and Terasawa's rules, but I would emphasise that its exact formulation (and consequences for metre and phonology) can hardly be anything but tentative.

5.8 Conclusion: Converting from Foot to Metre

Kaluza's law has been much discussed, not least for its value in anchoring *Beowulf* phonologically in the context of early Old English. Rather than focusing on the narrow question of dating, I have attempted here first to reframe the law so that its full scope is clear: verses such as *atelīc egesa* (85) are just as much subject to Kaluza's law as any other. A given light syllable will generally resolve with the following syllable unless it is 'sandwiched' between a (somewhat stressed) preceding heavy syllable and another (frequently unstressed) following heavy syllable. Whether the light syllable in question has any kind of secondary or subordinated stress is irrelevant.

Especially when looked at this way, the evidence of resolution and Kaluza's law reinforces the picture of early Old English foot structure developed in the previous chapter. Bimoraic feet are optimal, but word-initial feet may be overheavy – either by simply containing a heavy syllable, as in *(lēoh)(-tes)* 'of light', or through resolution, as in *(wo-rul)(-dē)* 'of the world'. The metrical behaviour of compound words adds one further wrinkle to this picture: in second elements of compounds,

the root syllables must be footed, a requirement that can lead to monomoraic, light feet. The basic phonological principles are (repeated with slight adjustment from §5.5):

1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. Trimoraic feet are tolerated only in word-initial position (or to prevent overheavy single syllables from being unfooted).
4. Final feet are extrametrical for the purposes of stress assignment (excepting over-heavy feet, which require a special licence to be footed).
5. The heads of (non-extrametrical) feet are stressed.
6. The leftmost foot carries the primary word stress (end-rule left).

Beyond these principles, which are essentially phonological requirements that are simply reflected in the metre, there are two further ways that the metrical system seems to interact with the phonology to produce effects that are detectable in poetry, but may not have applied (or may have worked in different ways) in non-poetic speech.

These first of these is the operation of Kaluza's law across word boundaries, which seems to amount to only the first foot in a run of feet actually counting as 'initial' as far as principle 3 is concerned, even if these feet are in different words (§5.5.2). The same extrametricality of final feet that applies in stress assignment, principle 5, are not counted for these purposes either. This phenomenon is perhaps best understood as a type of metrical cohesion.

The second process is final defooting, which prohibits resolution of an element when it occurs as the second part of a verse-final compound. This principle allows compounds such as *stānhliðo* to escape resolution when verse-final, even though the final LL element normally should always resolve by Kaluza's law (§5.6). It also potentially explains why compounds such as **hilde-sele* are avoided by Old English poets (§5.7).

Both the extension of Kaluza's law across word boundaries and final defooting seem to rely on specifically metrical notions – the idea of metrical cohesion on the one hand, and demotion in verse-final position on the other – but they are coherent extensions of principles already found in the phonological foot structure within the regulated context of poetic speech. It is not necessarily the case that every detail of versification directly encodes ordinary phonology, but there is not, as far as I can see, any reason to doubt that the metre of *Beowulf* is built on the foundation of ordinary early Old English prosody, and the evidence of Kaluza's law in particular allows the description of foot structure given in the previous chapter to be elaborated and made more precise with respect to compound words.

Chapter 6

Feet in Early Middle English: *Ie*-Reduction

The previous two chapters focused on the prosody of Old English, and specifically of the earliest Old English: the late prehistoric process of high-vowel deletion, and the early metrical phenomenon of Kaluza's law.[1] Both of these sources of evidence paint a fairly consistent picture of early Old English foot structure, based around the bimoraic trochee, which can be tracked with some precision until the shortening of final long vowels (§4.3). After this change, the evidence for foot structure in Old English becomes significantly sparser. In general terms, the contrast in high-vowel deletion remains robust – retention in words such as *scipu* 'ships', loss in words such as *word* 'words' and *werod* 'troops' – and resolution persists as a key metrical feature even in poems such as *The Battle of Brunanburh* (composed sometime after 937), and almost certainly in *The Battle of Maldon* (composed after 991). However, the further details of both processes are more complex, and need to be considered against other potential morphological and poetic factors.[2]

In this chapter and the next, I leapfrog over the problems in interpreting the later Old English data, and focus instead on sources from the 12th and 13th centuries, a stage conventionally called early Middle English – though as I will argue, in prosody as in so much else there is no sharp break in many dialects, and in many ways the linguistic situation of this period is better considered together with Old rather than later Middle English. In this chapter, I examine the development of unstressed *ie*-sequences in dialects of the West Midlands, where a strong sensitivity to moraic structures seems to condition sound change – this can be interpreted straightforwardly as a reflecting a bimoraic trochee foot type. In the next chapter I turn to metrical evidence of resolution during the same time period.

[1] The research underlying this chapter has largely been presented in Goering (2021b).
[2] In general, see Minkova & Stockwell (1994). On high-vowel deletion, see Bermúdez-Otero & Hogg (2003), Bermúdez-Otero (2005), and on resolution in *Maldon*, Fulk (1992: 259–260).

6.1 Sources for Early Middle English

The chief break between Old English and Middle English is not so much linguistic as philological. The written standard of Late West Saxon continued to be widely used and emulated – with varying degrees of success – but over the course of the 12th and early 13th centuries, a wider range of dialects and orthographic approaches begin to appear.[3] Sources from the far North remain scanty until the 14th century, but a range of sources from southern and central England give a broad (if still rather spotty) impression of a variety of dialects. These include two very long poetic texts from the 12th century – Laȝamon's *Brut* from the southwest Midlands and the *Ormulum* by Orrm (Orm) from the dialectally very different northeast Midlands – which I will return to in more detail in the following chapter.

For now, I focus especially on two substantial manuscripts of non-metrical works representing a West Midlands variety from the earlier 13th century.[4] The first of these is Corpus Christi College, Cambridge 402, which contains a version of the *Ancrene Wisse* (Tolkien 1962; Millett 2006; Millett & Dance 2006), a work of guidance for women who had gone into religious seclusion. The other manuscript is Bodley 34, which contains a variety of works dealing with the lives of women saints and female religiosity: *Þe Martyrdom of Sancte Katerine* (d'Ardenne & Dobson 1981), *Þe Liflade ant te Passiun of Seinte Margarete* (Mack 1934), *Þe Liflade ant te Passiun of Seinte Iuliene* (d'Ardenne 1961), *Epistel of Meidenhad* (Millett 1982),[5] and *Sawles Warde* (Wilson 1938).[6] *Ancrene Wisse* has been referred to traditionally by the siglum A, and the Bodley texts by B – whence 'this algebra of A and B' for the two together, the 'language (AB)' of Tolkien (1929), or more simply just the AB dialect.

This variety of Middle English in general developed from a type of Old West Mercian, and can be loosely regarded as a successor to the language represented in the *Vespasian Psalter* (though for rather minor qualifications to this view, see Ball 1970). There are also other sources that reflect closely related dialects, which I point out as needed: the most notable of these are the so-called Wooing or Wohunge Group (Thompson 1958) and the Lambeth Homilies (Morris 1988). For a full survey of these and other texts from the general area, see Dance (2003: ch. 2).

[3] For an overview of the continuities and changes in textual culture during this time, see especially Treharne (2012).

[4] Much of this corpus is arguably in verse, with the alliterative patterning very often allowing an easy arrangement into lines. But even if some or all of these texts are considered poems, they are not *metrical* poems, and have no discernible regulation within the line (cf. §3.1).

[5] This text is also known as *Hali Meiðhad*, but Millett & Dance (2006: x) are right that the manuscript title *Epistel of Meidenhad* is to be preferred.

[6] For a diplomatic edition of the entire manuscript, see d'Ardenne (1977).

6.2 *Ie*-Reduction in Class II Weak Verbs

In these early Middle English dialects, a prosodically conditioned sound change took place: the unstressed sequence **iə* either remained unchanged or was reduced to *i* (Tolkien 1929; d'Ardenne 1961: 188–189). This sound sequence occurred in various words, but its development is especially clear in that large group of weak verbs traditionally labelled class II. In Old English, the present tense of these verbs showed two types of stem element, a shorter one in *-a-* (in the second- and third-persons singular, e.g. *lōcað* 'looks'), and a disyllabic one in *-ia-* or *-ie* (in all other present forms, e.g. *lōciað* 'they look', *lōcie* 'look (SUBJ.SG)'). At some point, unstressed *e* and *a* collapsed into [ə], written <e>, so that *ie* and *ia* merged as [iə], <ie>.[7]

The further reduction of this early Middle English *ie* to *i* was sensitive to syllable weight, with reduction taking place after heavy syllables, but not after light ones. The following examples of developments from Old English to AB are representative:[8]

(105) *clěopi<u>a</u>ð* 'they call' > AB *clěopi<u>e</u>ð* (*Ancrene Wisse* P.158)[9]

(106) *(ge·)lōci<u>a</u>ð* 'they look' > AB *lōki<u>i</u>ð* (*Ancrene Wisse* 4.1258)

(107) *ěardi<u>a</u>ð* 'they dwell' > AB *ěardi<u>i</u>ð* (*Margarete* 22.16)

For want of a snappier label, I call this process *ie*-reduction, which at least has the benefit of being relatively transparent. The result of this process is a set of morphophonemic distinctions between *i* and *ie* in class II weak verbs, which is witnessed virtually without exception in the AB texts (Tolkien 1929: 122–124; d'Ardenne 1961: 189, 234–235).

The basic contrast of light versus heavy class II weak verbs is already significant from a prosodic perspective, showing a clear sensitivity to syllable weight in this variety of early Middle English. The impression that this might have something to do with foot structure, and the parallelism with high-vowel deletion, is only strengthened by the behaviour of 'light disyllables', with two light syllables before the verbal formant:

[7] Kitson (1997) shows that in the West Midlands, a full merger had still not taken place by the middle of the 12th century, with *e* and a merged reflex of *a* and *u* still being distinguished.

[8] In this chapter, Old English forms are cited, where possible, from the *Vespasian Psalter* (Kuhn 1965), in order to approximate as closely as possible the Old West Mercian that preceded West Midlands Middle English.

[9] Remember that short diphthongs count as a single mora. I continue to mark short digraphs with a breve, including in Middle English where such sequences represent monophthongs (d'Ardenne 1961: 181–182, 186–187).

(108) *swĕotolian*, *sutelian* 'to make clear' > AB *sutelin* (*Iuliene* 167, 543)[10]

Even though the **ie* formant follows a light syllable, it reduces to *i*, indicating that this change depends on something more than just the weight of the immediately preceding syllable (Keyser & O'Neil 1985: 91–94). Just as with high-vowel deletion, it seems plausible that prosodic feet might be at work. This parallelism between the two processes is easy to see when the effects are laid out side by side:

Base	High-Vowel Deletion	Ie-Reduction	Reduction
L	**scipu* > *scipu*	*clĕopiað* > *clĕopi̲e̲ð*	No
H	**wordu̲* > *word*	*ĕardi̲a̲ð* > *ĕardi̲ð*	Yes
LL	**werudu̲* > *werod*	*suteli̲a̲n* > *suteli̲n*	Yes

6.3 Foot Structure and *Ie*-Reduction

In contrast to Old English high-vowel deletion, which has been discussed and analysed from a wide variety of theoretical perspectives and with reference to a wide range of data, *ie*-reduction has received relatively little linguistic attention. The main exception is Keyser & O'Neil (1985: ch. 5), who review much (though not all) of the relevant data, and offer a formal prosodic analysis of the phenomenon. Much of their discussion remains valuable, though many specifics also need reconsideration.

Specifically, Keyser & O'Neil (1985: 91) argue that the stressed syllables of words are part of a two-mora foot, consisting either of a single heavy syllable such as **(lō)-ki-eð* or two light syllables such as **(su-te)-li-en* or **(clĕo-pi)-eð*. Within this foot framework, *ie*-reduction is, under their analysis, a 'Weak Foot Drop' rule: an *e* is deleted when it follows another vowel, which itself follows the edge of a foot. So the *e*'s of **(lō)-ki-e̲ð* and **(su-te)-li-e̲n* are deleted, since they separated from the edge of the foot by a single vowel, *i*. This correctly gives deletion in *lōkið* and *sutelin*, while keeping *clĕopieð* unchanged, since there the *e* immediately follows the end of a foot.

This 'Weak Foot Drop' rule in and of itself will probably not appear very elegant to linguists today. That a rule should make reference to a foot boundary plus a syllable's space seems peculiar at best, and is not the sort of thing that prosodic rules generally seem to do. As I will show later, there are also empirical problems with this rule in longer verbs.

[10] No relevant forms of this verb happen to be attested in the *Vespasian Psalter*, which only has preterite forms such as *ge·swĕotulades* 'you made clear, revealed'. These forms are drawn from the wider Old English corpus.

On the data examined so far, a simpler explanation of *ie*-reduction might be to see the change to *i* as the default, unconditioned outcome, rather than the result of a special rule. The question would then be why *ie* remains in words such as *clěopieð*. I suggest the following framing:

Unstressed **ie* becomes *i*, unless a foot boundary falls between the two vowels.

This accounts well for all the word-types examined so far:

(105) **(clěo-pi)-e⟨ð⟩ > clěopieð*

(106) **(lō)(-ki-e⟨ð⟩) > lōkið*

(107) **(ěar)(-di-e⟨ð⟩) > ěardið*

(108) **(su-te)(-li-e⟨n⟩) > sutelin*

Yet even if Keyser & O'Neil's *ie*-reduction rule needs some revision along these (or other) lines, their basic assumption that it is sensitive to bimoraic feet seems sound. The examples so far are given with simple bimoraic trochees;[11] I will consider the possibility of the Germanic foot in §6.5. For now, the important thing from the perspective of the history of English prosody is that some kind of bimoraic unit, which can encompass two light syllables if needed, provides the necessary context for any adequate rule of *ie*-reduction.

6.4 Complications

As should be expected, a close look at the data of *ie*-reductions reveals a certain number of wrinkles and complications. Most of these are not terribly significant, and have largely been treated well by Tolkien (1929) and Keyser & O'Neil (1985). For instance, the exact number of words of the *sutelin*-type, with light disyllabic bases, could be debated. Some, such as *euenin* 'make even' come from Old English monosyllables, in this case *efnian*, with an epenthetic vowel providing the second light syllable. A few even alternate between light disyllabic and heavy monosyllabic bases in the AB corpus, such as *sunegin*, *sungin* 'sin'. It is worth emphasising that in all examples, the disyllabic forms predominate, and are often the only ones attested, and epenthetic vowels in relevant verbs are often attested already in Old English (for instance, AB *openin* 'open' is preceded by Old English

[11] And very provisionally, for the sake of being able to provide concrete examples, I have assumed final-consonant extrametricality, though there is no relevant evidence for or against this that I am aware of.

openian, alongside *ge·opnian*). This issue is, however, not of any great importance, since there is a core of words such as *sutelin* or *tĕoheði* 'tithe'[12] which are disyllabic as far back as their history can be reconstructed, and all LL sequences, old or new, behave the same.

More interesting, but also more problematic, are longer class II weak verbs. Keyser & O'Neil limited themselves to the types discussed so far: light monosyllables (with L bases, such as *clĕopieð*), heavy monosyllables (with H bases, such as *ĕardið*), and light disyllables (with LL bases, such as *sutelin*), shapes which do account for the overwhelming majority of the data in the AB texts. There are, nonetheless, a few words with longer bases including heavy syllables.[13]

6.4.1 *HH-Verbs: The* Herbarhin*-type*

The evidence of HH bases is relatively straightforward. This type includes verbs such as *cnāwlēchin* 'acknowledge' and *herbarhin* 'lodge'. As these examples suggest, as might be expected under any theory of *ie*-reduction, they almost uniformly show the change of the verbal stem to *i*. Under the bimoraic trochee assumed in the previous section, the development might have been something such as **(her)(-bar)(-ʒi-e⟨n⟩)* > *herbarhin*, with the foot-internal *ie*-sequence reducing according to the rule.

The only apparent exception to the reduction to *i* is the imperative plural *ēadmōdieð* 'make humble' (*Ancrene Wisse* 4.1440). This is plausibly explained by Tolkien (1929: 121, n. 2) as a deadjectival formation to *ēadmōdi*, so that the verb is effectively from **ēadmōdiieð*.[14] This complex and unique structure probably does not tell us much about either foot structure or the usual rules of *ie*-reduction.

6.4.2 *HL-Verbs:* Ondswerien *and* Hersumin

Verbs with HL bases are in equal measure intriguing and puzzling. They have the potential to shed light on the details of how the medial syllables of longer words are footed, but the evidence they provide is difficult to interpret satisfactorily. *Ie*-reduction is seen in some verbs of this shape, such as *hersumin* 'obey', while others preserve the old sequence, as in *ondswerien* 'answer'.[15]

[12] On the not infrequent loss of final *-n*, see d'Ardenne (1961: 199) and Diensberg (1975: 84–89).

[13] One pattern which provides little data is LH bases, but these would probably be uninformative anyway. They would be expected to show *ie*-reduction whether they were footed as (LH), equivalent to (LL), or as (L)(H). It would be interesting to know whether trimoraic resolved feet or degenerate light feet were preferred in early Middle English, but even if enough words of this shape were attested, they would not be able to shed light on the matter.

[14] Diensberg (1975: 210) prefers to see the second vowel as having shortened, which would make this verb parallel to *ondswerien*, discussed immediately below in §6.4.2. This is possible, but seems much too uncertain a suggestion to rest any analysis on.

[15] The beginning of this word is sometimes also spelled *on-* or *ont-*.

Although the evidence pool is very small, it seems that the presence or absence of *ie*-reduction in such verbs is related to their morphological structure. Specifically, the two verbs that retain the *ie* are both morphologically complex. In the relatively well-attested *ondswerien*, the verb is derived from the noun *ondswer* 'answer', which is itself made up of the prefix *ond* 'toward, in response, anti' and the verbal root *swer* (independently, though less frequently, attested in the verb *swerien* 'swear').[16] This derivation occurred early – *ondswĕorian* (with its spelling variants) is well attested in Old English – so the extent to which it would still have been regarded as morphologically complex in AB Middle English is unclear. Still, it is not implausible that it might have retained a prosodically relevant juncture between its elements at this date. Tolkien (1929: 118) even goes so far as to suppose a 'strong secondary accent' on the second syllable, *ónd-swèrien*, an idea to which I will return shortly.

A compound structure also seems plausible for the only other HL-verb without *ie*- reduction: *gristbĕatien* 'gnash the teeth'. A relevant present-tense form is only attested once (*Iuliene* 671), and although its etymology is not transparent, it does seem to have a complex internal structure (Tolkien 1929: 125–126). A compound structure would, of course, also hold for *ēadmŏdieð*, if this is held to have a shortened medial vowel (Diensberg 1975: 210; cf. note 14 above).

There are two further HL-verbs in the AB corpus whose relevant inflectional forms are attested: *hersumin* 'obey' and *fēðerin* 'load up, weigh down'. Neither of these has a potentially compound-like structure. The first of these is formed with the nominalising suffix *-sum-*, a derivational element showing significant vowel reduction (cf. German *gehorsam*). This, intriguingly, seems to generally show *ie*-reduction in the two attestations of its infinitive (*Katerine* 53, 127). There is a further instance of the plural found as *hersumeð* (*Katerine* 98), which must be an error for either **hersumieð* or (more likely, given the clearly attested infinitive forms) **hersumið*. Setting aside this erroneous form, it seems that this verb regularly underwent *ie*-reduction.

The same seems to be true of *fēðerin*, though here it is possible that the initial vowel was shortened at some point. The word etymologically comes from **fœ̄ðrian*, and shortening of the long vowel in an overheavy syllable **fœ̄ð-* is possible (Hogg 2011: 207). Shortening of the initial syllable of a trisyllabic word is also possible, either in **fœ̄ðrian* or later, with the epenthetic vowel, in forms such as the third-person singular **fœ̄ðerað* > **feðereð* (Fikkert, Dresher & Lahiri 2006: 140). The Nero manuscript of *Ancrene Wisse* might suggest such a shortened form in its spelling of the past participle as *iueððred*, but there is, as far as I know,

[16] One might wonder if the *ie* in *ondswerien* is simply due to lexical analogy with *swerien*, but this does not seem likely. For one thing, the words are not close derivationally, separated by the nominal *ondswer*. For another, *swerien* is much less frequent than *ondswerien*, and seems unlikely to have exercised the necessary lexical pressure.

no clear evidence for potential shortening from the AB corpus. If shortening did take place, then the word belongs rather with the *sutelin*-group; if it retained its etymological length, it is parallel to *hersumin* in showing *ie*-reduction after an HL base.

This philological evidence is frustratingly slight, but as it stands the impression is that in HL-verbs, those with a more compound-like structure (*ondswerien*, *gristbĕatien*, just possibly *ēadmŏ̄dieð*) retain the old *ie*-sequence, while those with only one lexical-like element show reduction to *i* (*hersumin*, perhaps *fĕ̄ðerin*). The obvious follow-up question is what implications this potential distinction might have for either foot structure or the process of *ie*-reduction.

6.4.3 Ie-*Reduction Reconsidered*

The basic problem for *ie*-reduction in the AB corpus is how to explain the contrast between the more compound-like *ondswerien* and the simplex *hersumin*. As an initial observation, it is clear that the Weak Foot Drop rule of Keyser & O'Neil (1985: 91) can't explain *hersumin*. This would have originally been footed either as **(her)(-su-mi)-en* or **(her)-su-mi-en*, neither option putting the *e* in the necessary position for that rule to apply (one syllable removed from the closing bracket of a foot). This can be seen as the final nail in the coffin for the Weak Foot Drop rule.

Unfortunately, coming up with a precise explanation for these words is a harder matter. If the foot structure continued the bimoraic trochee of early Old English, then both **(ond)(-swe-ri)(-en)* and **(her)(-su-mi)(-en)* should have had the same pattern of feet in the period just before *ie*-reduction took place. Broadly speaking, it seems that the second foot of **hersumien* was in some way 'weaker' than that of **ondswerien*. The *ie*-reduction rule might then be described as:

> Unstressed **ie* becomes *i*, unless the two vowels are separated by the boundary of a 'strong' foot.

I can see two principle ways of distinguishing foot 'strength' in this context. One, following Tolkien's suggestion that 'strong secondary accent' is the relevant feature (1929: 118), would be to assume that *ie*-reduction depends on stress assignment, and that in the normal course of things only initial feet are assigned stress (in contrast to Old English). For *ondswerien*, the compound-like structure would lead naturally lead to the stressing of the second foot regardless.[17] The other option is to assume that the boundaries of non-initial feet should be treated differently from those of word-initial feet: that is, a 'strong' foot is one that is initial in the prosodic word.

[17] A full stress shift as seen in Chaucer's *answéren* (ten Brink 1901: 126) seems less likely in view of the vocalic alliteration this verb shows in Laȝamon (*Brut* 11189).

While theoretically more straightforward, the evidence of Middle English metre seems to speak against the former option, that *óndswèrien* receives a secondary, medial stress, while *hérsumin* does not. Poetic evidence for secondary stress is not as straightforward in Middle English as it was in Old English, but there is some evidence from stress shifts. Take the following rhymes from Laȝamon's *Brut*:

(109) Hēo færden mid ȝēapscipe ⁊ mid wis*dṓ*me
swā longe þat hēo tō Alamaine cṓmen
'They travelled with cunning and wisdom for so long that they came to Alemannia' (*Brut* 1379)

(110) ⁊ dōn him hersum*nésse* and þurh him singen másse
'and do him obeisance and sing mass through him' (*Brut* 14838)

These suggest at least some prominence on the italicised syllables, which rhyme with standardly stressed words. Laȝamon's metre is loose and often ambiguous (§7.2.1), but similar things are also found in the *Ormulum*, where the metre involves monotonously rigid alternating stresses:

(111) ⁊ sóþ wiss*dó*mess léome
'the true light of wisdom' (*Ormulum* 6729)

(112) ⁊ óff gal*nés*se skír ⁊ fré
'and free and pure of lasciviousness' (*Ormulum* 8015)

As observed by Yakovlev (2008: 232–234), these lines seem to attest to a genuine stress shift, and scan as if the derivational syllable not only were the primary stress of the word, but as if the remainder of the word were unstressed (this is probably as true for Laȝamon as for Orrm). While this was clearly done for metrical reasons, it seems likely that such shifts capitalised on the presence of secondary stresses on heavy suffixes such as *-dōm* and *-nesse*. This is not entirely certain – a stress shift that seems to fully demote a primary stress could theoretically promote a fully weak syllable – but it is probably safest to assume that medial feet are indeed assigned (secondary) stress, more or less as in Old English. If this is right, then tying *ie*-reduction to stress is probably not sound, since the same processes that would create a secondary stress in *(gā́l)(-nès)-se* should also do so in **(hér)(-sù-mi)-en*.

This leaves a 'strong foot' as, descriptively, one that is initial within the (minimal) prosodic word. Reduction in *(clĕo-pi)-eð* is blocked because the ')' boundary of the first foot is a strong one, while it can take place in **(her)(-su-mi)-en*, because the ')' of the medial foot is in some way weaker. This is still a somewhat impressionistic way of characterising the situation, but it is not clear to me how to

arrive at a more detailed or concrete explanation of *ie*-reduction on the evidence currently available.

6.5 The Germanic Foot

Dresher & Lahiri (2022: 41–44) argue that while early Old English did have a true bimoraic trochee, later Old English – and subsequently Middle and modern English – altered this system by allowing the core bimoraic foot to be optionally expanded with a further weak syllable (see §4.1). The resulting foot type is what they call the Germanic foot. If this foot type did develop, then *ie*-reduction should be explainable within this framework. This is how the main word-types discussed so far would, just prior to *ie*-reduction, be footed under this system, using | to mark the boundary between the main body of the foot and the extra 'weak branch':[18]

(113) *(clĕo-pi|-e⟨ð⟩) > *clĕopieð*

(114) *(ĕar|-di)(-eð) > *ĕardið*

(115) *(su-te|-li)(-en) > *sutelin*

(116) *(her|-su)(-mi-e⟨n⟩) > *hersumin*

(117) *(ond)(swe-ri|-e⟨n⟩) > *ondswerien*

The generalisation within this framework is that **ie* becomes *i* unless the **e* stands in the weak branch of a foot. This is perhaps somewhat uncomfortable – the weak branch should be a position associated with reduction and deletion, not retention – but this is not necessarily a fatal problem. Someone already committed to the Germanic foot as a model for Middle English would not find any strong reason to abandon it because of *ie*-reduction. On the other hand, it is hard to say that this model has any special advantages in describing the process either. I personally do not find the evidence of a shift to the Germanic foot convincing,[19]

[18] I assume morphological pressures in *ondswerien*, and (as before) optional final-consonant ⟨extrametricality⟩, indicated by angled brackets.

[19] Specifically, they argue that the shortening of final unstressed vowels in the Old English period rendered much of the operation of high-vowel deletion opaque (this is surely correct), and that this prompted a prosodic reanalysis from the bimoraic trochee to the Germanic foot. The Germanic foot can indeed describe the innovative syncope in West Saxon *hēafdu* in a very simple manner, but on balance I find the moraic-trochee analysis of Bermúdez-Otero (2005) preferable in accounting for the full range of later Old English data, including the peculiar changes to words such as *wæter*. It is also worth noting that the motivation for the Germanic foot would have been weak outside of West Saxon, so that even if Dresher & Lahiri's foot-shift were accepted for that dialect, it would not be obvious that a similar shift should also have taken place in other dialects – including the Mercian that grew into AB.

but it should be considered as a reasonable possibility, with the evidence of *ie*-reduction not being detailed or varied enough to be decisive on this point.

6.6 *Ie*-Reduction Beyond Class II Weak Verbs

Class II weak verbs provide the bulk of the evidence for *ie*-reduction for several reasons: the group is large; it includes verbal bases of various shapes, allowing the prosodic contrasts to be traced with relative clarity; and the effects of morphological analogy seem to be very limited (at least in the AB corpus). Still, there are various isolated lexemes, such as Old English *hlǣfdī(g)e* 'lady', which generally seem to show the same patterns of *ie*-reduction as the weak verbs do.[20]

There is also one important general class relevant to the process: adjectives in *-i*, from Old English *-ig*, such as *bisi* 'busy, active' and *hāli* 'holy'. These would, like any adjective, add an inflectional *-e* to mark agreement as needed. So, for instance, the plural of *bisi* is *bisie*. By contrast, *hāli* usually has the plural form *hāli* (e.g. *Meidenhad* 2.24), with no ending, just as would be expected for a form affected by *ie*-reduction.

These adjectives are, however, more open to morphological pressures than the weak verbs are. As Keyser & O'Neil (1985: 90–92) note, plurals such as *hālie* are in fact attested (e.g. *Ancrene Wisse* 1.394; cf. also d'Ardenne 1961: 217–218):

> To a limited but surprising extent, [*ie*-reduction] fails: that is, from time to time in AB we find forms like *creftie* ['mighty'] and *haalie* [i.e. *hālie*] where we expect … *crefti* and *haali*, but never *bisi* and *dusi* ['foolish'] where we expect *bisie* and *dusie*.

As they observe, this limitation of this variation to heavy stems only means that it is systematic, and 'cannot be the result of a simple confusion' (Keyser & O'Neil 1985: 98), but is clearly due to morphological pressures:

> In the adjectives, however, *e* is all there is to the inflectional system. Lose it and there is none of the essential information about definiteness and/or plurality conveyed: if the adjectival *e* goes, the paradigm goes. It is, then, interesting and not at all surprising to find adjectival *e* reasserting itself despite Weak Foot Drop [i.e. *ie*-reduction] – though not in great proportion compared to the presence of the expected *e*-less forms. We understand this fairly insistent violation of Weak Foot Drop among adjectives whose syllabic metrical structure is that of [*hāli*] to be a particularly clear case of analogy – perhaps the clearest case that we know of the force of paradigmatic regularity imposing itself on the forms of a language. (Keyser & O'Neil 1985: 98–99)

[20] There are forms such as *lafdie* from Laȝamon's *Brut*, but as noted below, these most likely represent archaisms not yet affected by *ie*-reduction.

As with high-vowel deletion, the workings of morphological pressures do not seriously undermine the relevance of *ie*-reduction to foot structure, nor mean that it is in any way a *purely* morphological process.

6.7 *Ie*-Reduction and Middle English Dialects

Taking a step back from the AB texts, there is a spectrum of outcomes for *ie*-reduction that reflects both changes over time and variation in different areas (Tolkien 1929: 119–120; Goering 2021b: 483–487). One extreme of this spectrum is represented by the East Midlands dialect of Orrm, writing in the middle of the 12th century. His work is slightly older than the AB texts, but in a dialect that has innovated in ways that essentially obscure any weight-based developments. Most importantly, the large set of class II weak verbs has entirely replaced its stem formant with *e* [ə] (from *a*). Only in isolated lexemes such as *laffdiȝ* 'lady', from *hlǣfdīge*, is there a hint that some kind of *ie*-reduction took place here as well (Tolkien 1929: 119).

Among those texts that do retain some kind of *ie* or *i* formant in class II weak verbs, a sense of the range of outcomes can be gained by using *The Linguistic Atlas of Early Middle English*, or *LAEME*, which is organised by manuscript. *LAEME* does not represent a full corpus from the period, but includes large enough selections from a wide enough range of texts to give a useful impression of the linguistic landscape of the period.[21] In table 6.1, I summarise the results for *ie*-deletion in class II weak verbs, sorting the outcome into four columns. The first column, *ie*, gives the number of forms that seem to retain their disyllabic character without deletion, including rarer variants such as *ia*, *iȝe*, *ii*, and *ihi*. The second column, *i*, shows the number of forms that have been reduced to simple *i*. Column *e* indicates forms that had *ia* or *ie* in Old English, but are found as *a* or (much more commonly) the reduced form *e*. That is, this column shows the number of Orrm-style forms in each stem-category for each text. The fourth column, ∅, is included for the sake of completeness, and gives the number of forms where no ending at all is provided; these are few in number and probably all scribal errors. For each column, both the absolute numbers and percentages (as proportions within the row) are given.[22] The data is further broken down by word-shape within

[21] The texts I have surveyed here, including their *LAEME* numbers, are: *Worcester* = Worcester Cathedral, Dean and Chapter Library F 174 (172, 173); *Laȝamon C* = British Library, Cotton Caligula A ix (277, 278); *Lambeth* = Lambeth Palace Library 487 (2000, 2001); *Vices & Virtues* = British Library, Stowe 34 (64, 65); *Nero* = British Library, Cotton Nero A xiv (245, 1800); *Trinity Homilies* = Cambridge, Trinity College B.14.52 (1200, 1300); *Laȝamon O* = British Library, Cotton Otho C xiii (280); *Trinity B.14.39* = Cambridge, Trinity College B.14.39 (246–249); *Cleo* = British Library, Cotton Cleopatra C vi (273); *Royal* = British Library, Royal 17 A xxvii (260–262); *Titus* = British Library, Cotton Titus D xviii (118–123); *Caius* = Cambridge, Gonville and Caius College 234/120 (276); *A·yénbite* = British Library, Arundel 57 (291).

[22] Due to rounding, the percentages do not always add up to precisely 100 per cent.

Manuscript	Stem	*ie*		*i*		*e*		∅	
Worcester	H	163	(86.2%)	0	(0%)	26	(13.8%)	0	(0%)
	LL	26	(96.3%)	0	(0%)	1	(3.7%)	0	(0%)
	L	98	(100%)	0	(0%)	0	(0%)	0	(0%)
Laȝamon C	H	23	(74.2%)	1	(3.3%)	7	(22.3%)	0	(0%)
	LL	3	(100%)	0	(0%)	0	(0%)	0	(0%)
	L	56	(96.6%)	0	(0%)	2	(3.4%)	0	(0%)
Lambeth	H	86	(55.1%)	28	(17.9%)	42	(26.9%)	0	(0%)
	LL	7	(38.9%)	0	(0%)	11	(61.1%)	0	(0%)
	L	91	(89.2%)	2	(2%)	9	(8.8%)	0	(0%)
Vices & Virtues	H	32	(24.8%)	84	(65.1%)	13	(10.1%)	0	(0%)
	LL	2	(22.2%)	7	(77.8%)	0	(0%)	0	(0%)
	L	112	(89.6%)	1	(0.8%)	12	(9.6%)	0	(0%)
Nero	H	18	(24.3%)	15	(20.3%)	40	(54.1%)	1	(1.4%)
	LL	1	(8.3%)	1	(8.3%)	10	(83.3%)	0	(0%)
	L	75	(97.4%)	1	(1.3%)	1	(1.3%)	0	(0%)
Trinity Homilies	H	15	(15.5%)	7	(7.2%)	75	(77.3%)	0	(0%)
	LL	1	(10%)	2	(20%)	7	(70%)	0	(0%)
	L	69	(60.5%)	0	(0%)	45	(39.5%)	0	(0%)
Laȝamon O	H	2	(12.5%)	9	(56.3%)	5	(31.3%)	0	(0%)
	LL	0	(0%)	1	(100%)	0	(0%)	0	(0%)
	L	26	(89.7%)	2	(6.9%)	1	(3.4%)	0	(0%)
Trinity B.14.39	H	2	(4.8%)	7	(16.7%)	32	(76.2%)	1	(2.4%)
	LL	0	(0%)	0	(0%)	6	(100%)	0	(0%)
	L	26	(37.7%)	7	(10.1%)	36	(52.2%)	0	(0%)
Cleo	H	2	(3.8%)	36	(67.9%)	15	(28.3%)	0	(0%)
	LL	0	(0%)	3	(33.3%)	6	(66.7%)	0	(0%)
	L	39	(76.5%)	2	(3.9%)	10	(19.6%)	0	(0%)
Royal	H	1	(0.8%)	94	(71.8%)	35	(26.7%)	1	(0.8%)
	LL	0	(0%)	13	(65%)	7	(35%)	0	(0%)
	L	128	(92.1%)	2	(1.4%)	9	(6.5%)	0	(0%)
Titus	H	1	(0.4%)	60	(26.8%)	163	(72.8%)	0	(0%)
	LL	0	(0%)	11	(50%)	11	(50%)	0	(0%)
	L	178	(72.7%)	4	(1.6%)	63	(25.7%)	0	(0%)

Table 6.1 *Ie*-reduction and *e*-generalisation in early Middle English.

Manuscript	Stem	*ie*		*i*		*e*		∅	
Caius	H	0	(0%)	10	(29.4%)	24	(70.6%)	0	(0%)
	LL	0	(0%)	3	(42.9%)	4	(57.1%)	0	(0%)
	L	27	(96.4%)	0	(0%)	1	(3.6%)	0	(0%)
A·yénbite	H	0	(0%)	54	(71.1%)	22	(28.9%)	0	(0%)
	LL	0	(0%)	7	(70%)	3	(30%)	0	(0%)
	L	20	(69%)	5	(17.2%)	4	(13.8%)	0	(0%)

Table 6.1 (continued)

each manuscript. Only the basic word-shapes of monosyllabic heavy stems (H), monosyllabic light stems (L), and stems of two light syllables (LL) are included. I will discuss words of other shapes in §6.7.2, but they are rather uninformative and too infrequent to include on the table. The manuscripts are arranged in decreasing order of what percentage of heavy stems retain the archaic *ie*-form.

Table 6.1 shows two main lines of development, which partly go hand-in-hand. One is the emergence of the weight-based distinction in whether the *ie*-form is retained or not. Some of the earlier manuscripts, such as Worcester and the Caligula MS of La3amon's *Brut*, show this process only incipiently, with a large majority even of heavy-stemmed verbs retaining the archaic *ie*-formant: these are forms such as *clensien* 'cleanse' from Worcester.[23] Presumably *ie*-reduction simply hadn't affected the dialect of these works yet. Royal and Caius, by contrast, approach the AB corpus in terms of retaining *ie* in light-stemmed verbs, and replacing it with something else (either *i* or *e*) in heavy stems and light disyllables. This is not surprising, since in content and language, these manuscripts are clearly broadly related to the AB texts (for Royal in particular, see Tolkien 1929: 108; Jack 1991). The Otho text of La3amon's *Brut* might also be reasonably put in this category. The distinction is not so stark in the remaining manuscripts, but there is nonetheless a very clear tendency for light stems to retain *ie* at much higher rates than other stem types (even Trinity B.14.39 reflects this trend, though *ie*-forms constitute only a minority even among the light stems). Weight-sensitive *ie*-reduction may not usually operate quite as clearly outside of the AB corpus and some very closely related texts, but it seems to be broadly reflected throughout the South and West of England in the 13th century. The alternations created in class II weak verbs partly survive still even in 14th century Kentish, to judge by Dan Michel's *A·yénbite of Inwyt*.[24]

[23] *The Soul's Address to the Body*, fragment D, line 10 (Moffat 1987: 70).
[24] To avoid overly vague reference to *Michel*, I give him his title as well. He is also known as Michel (or Michael) of Northgate.

6.7.1 *The Spread of* e

The other trend, which increasingly obscures this weight-based alternation, is the spread of the formant *e* (or occasionally and archaically, *a*). In the most archaic texts, Worcester and Laȝamon C, the *e* is already present in historically *ie*-contexts as a minority outcome. Interestingly, although there is very little sign of *ie*-reduction to *i* in these manuscripts, the *e*-variants (though never especially common) are decidedly weighted towards heavy stems. Worcester thus has both *fostrien* and *fostren* 'to rear (as a child)', but not *fostrin* (this last being the usual form in AB), while words such as *clĕopie* are never reduced.

It could be that this points to a variant type of *ie*-reduction, to *e* rather than *i*, but if so, this is not clearly followed through in any of the manuscripts. Three (Trinity Homilies, Titus, Caius) do show a pattern in which *e* is the most common formant for heavy stems and *ie* for the light stems – e.g. heavy *clansen* 'cleanse', light *makien* 'make' – but even so, especially for Titus and Caius, a significant minority of heavy stems show *i*, such as *offrin* 'offer'. No texts show a pattern of **ie* > *e* without some trace of **ie* > *i*.

Whether or not there was some phonological reduction directly to *e*, the usual trend is best explained by the phonological development being to *i*, with this then being prone to morphological replacement by *e*. Such a morphological spread would not be surprising. Before *ie*-reduction (but after **a* > *e*), class II weak verbs had two stem variants: *e* in the second- and third-persons singular, and *ie* in the remainder of the present. With the introduction of *i* in the heavy stems, the situation was more complex morphologically, with three variants distributed partly by function and partly by weight. This is the case in the AB system:

	Light	Heavy
3sg	clĕopeð	lōkeð
3pl	clĕopieð	lōkið

In other verb types, such as the strong verbs and class I weak verbs, the situation was simpler. Perhaps significantly, the third-person singular and plural often had identical endings, with the Old English singular *-eð* and plural *-að* merging as *-eð*, [əθ]. This identity was particularly widespread among heavy-stemmed verbs, such as *wurcheð* 's/he does' or 'they do'. Light stems (I count here verbs such as *tellen* 'tell' with light-stem forms in the paradigm) were frequently distinguished by other kinds of alternations, such as *nimeð* 's/he takes' versus *nĕomeð* 'they take', or *teleð* 's/he tells' versus *telleð* 'they tell' (d'Ardenne 1961: 236, 244; Diensberg 1975: 158–159, 202).[25] It may be that the limited spread of *e* among heavy stems already

[25] Heavy stems ending in a dental can optionally differentiate singular versus plural by the reduction of

in Worcester and La3amon C – before general *ie*-reduction – might have been on the analogy of such verbs, with the general pattern being to use *-eð* as an almost uniform third-person ending for heavy stems of all classes. The pressure to adopt this form would only have increased after the change of *ie* to *i*. Replacing a form such as *lōkið* with *lōkeð* would not only bring the plural marker in line with heavy-stemmed verbs of other classes, it would reduce the number of allomorphs in the class from three (*ie*, *i*, *e*) to two (*ie*, *e*). Once this *e* had become established in the heavy stems, it could be spread from there to the light stems as well.

Simplifying the situation slightly, the texts can be loosely arranged into a sequence representing subsequent stages of this development. The starting point (stage I) – not reflected as such in the *LAEME* texts – shows the sound-change developments of Old English *ia* and *ie* to *ie*, preserved regardless of weight. Worcester largely reflects this stage, but with the introduction of very limited *e*-spreading in the heavy stems. The AB texts show little sign of *e*-spreading, but do reflect the introduction of general *ie*-reduction to *i* among heavy stems. I distinguish these two parallel types of innovation as stages IIa and IIb.

From there, things develop in a more or less regular sequence. A third stage, represented by Royal, shows *ie*-reduction and the entrenched presence of *e*-spreading in about a quarter of heavy stems. Stage IV is seen in Caius, where the proportions of Royal are nearly reversed in the heavy stems: *e* is now the majority variant. In Titus, representing the next stage (V), the heavy stems remain more or less the same as in Caius, but *e* has begun to spread to the light stems in significant numbers, being found in about a quarter of cases. Among the texts included in my *LAEME* review, Trinity B.14.39 would seem to carry this process of *e*-generalisation furthest, favouring *e* for all class II weak verbs, but retaining a significant minority of *ie*-forms for light stems (stage VI). The logical final outcome, stage VII, would be the situation seen early on in Orrm, and eventually reached by later authors such as Chaucer (see below).

This development is shown more schematically in table 6.2. Stages I–II show the first introduction of limited *e*-spreading and general *ie*-reduction among the heavy stems, III–IV the increasing spread of *e* among the heavy stems, and V–VII the further spread of *e* to the light stems.

This sequence is relatively robust, even for texts on table 6.1 that might not seem to fit in at first glance. To judge simply by the numbers, Dan Michel's Kentish looks out of sequence. The heavy-stemmed verbs are still at stage III, with *i*-forms predominating, but there are both *e*- and *i*-forms found among his light-stemmed verbs. However, the variation in this instance largely stems from a single verb,

the singular: e.g. *sit* 's/he sits', *sitteð* 'they sit' (in general, see d'Ardenne 1961: 235; Diensberg 1975: 130, with examples in following sections). This reduction was not consistent, and doublets such as *chit* and *chīdeð*, both 'chides', occur. For heavy stems ending in other consonants, there was typically no differentiation of singular and plural in the third person.

Stage	3pl Light	3pl Heavy	Example Text
I	*ie*	*ie*	*Mid 12th century
IIa	*ie*	*ie~e*	Worcester
IIb	*ie*	*i*	AB corpus
III	*ie*	*i~e*	Royal
IV	*ie*	*e~i*	Caius
V	*ie~e*	*e~i*	Titus
VI	*e~ie*	*e~i*	Trinity B.14.39
VII	*e*	*e*	Orrm, Chaucer

Table 6.2 Relative chronology of *ie*-reduction and *e*-spreading.

maki 'make', which seems to have developed a special paradigm: the Old English infinitive *macian* had become *maki* (or its graphic variant *maky*), with *ie*-reduction exceptionally applying (in contrast to *clepie* 'call', *hatie* 'hate', *herie* 'praise', *zuerie* 'swear'), and the third-person plural was *makeþ*. Since a similar irregularity is seen in the more sparsely attested *waki*/*waky* 'wake', the final *k* may have conditioned some kind of special phonological development – though alternatively the innovation might be ascribed to frequency effects in *maki*, spreading by analogy to the rhyming *waki*. Either way, the bulk of class II weak verbs in the *A·yénbite of Inwyt* do belong at stage III, with the exceptions forming a well-defined group caused by a further, complicated innovation at least partly independent from the more general kinds of *e*-spreading seen in other texts.

A more significant qualification is needed for stage VII. As already mentioned, Orrm, writing in an East Midlands dialect in the 12th century, shows a uniform *e* in class II weak verbs, giving him indiscriminate infinitives such as the heavy *clennsenn* 'cleanse' and light *clepenn* 'call'. This is, however, probably not the outcome of Orrm's dialect having gone through all the previous stages, but rather due to direct influence on an earlier form of his dialect from Norse (Tolkien 1929: 120; Warner 2017). Norse originally had a stem vowel *a* throughout the inflection of this verb type, with no variant corresponding to Old English *ia* or *ie* at all (this being an innovation restricted to the Ingvaeonic languages; Cowgill 1959). So *kalla* 'call' was both the infinitive and third-person plural, with *kallar* being the third-person singular. In regions where close interaction between English and Norse took place, it would not be surprising for the very simple Norse inflection of this class to have been generally adopted, leading (with reduction of **a* to *ə*) directly to Orrm's system.

It is, however, not hard to find dialects that probably reached this last stage primarily through internal change. Late texts – including the works of such famous authors as Chaucer and Gower – show a uniform *e* in class II weak verbs: *lōken* 'look', *clēpen* 'call'. It is not surprising that the old weight-based distinctions

would have been abandoned by that point, since the effects of open-syllable lengthening meant that many formerly light-stemmed verbs had become heavy in key inflectional forms (§8.2). After the third-person singular lengthened from *clepeþ* 'calls' to *clēpeþ*, it would be less than obvious why this new *clēpeþ* would have an infinitive *clĕpien*,[26] while the superficially similar *lōkeþ* 'looks' had an infinitive *lōken* (reflecting *e*-spreading). If *e* hadn't already fully won out before open-syllable lengthening took place, it surely would have very quickly afterwards. As a consequence, in the large corpus of later southern Middle English texts, the weight-sensitive alternation of *ie* and *i* (or *e*) had been entirely given up, stage VII being achieved without any necessary influence from Norse.

6.7.2 *The* Ondswerien- *and* Hersumin-*types Dialectally*

One point that unfortunately does not become clear from my *LAEME* survey is the prosodic status of HL bases such as *ondswerien* and *hersumin*. There is support for a distinction between the more and less compound-like types, with manuscripts such as *Virtues & Vices* and *Royal* agreeing precisely with the evidence of the AB corpus: reduction in *hersumin*, but not in *onswerien* or *grispatien*. Beyond this, there is little to say. There are signs of *e*-generalisation in the expected manuscripts, such as Titus, with four examples of *onswerien* to six of *onsweren*. In general, the number of relevant tokens is very small, meaning that the larger story of weight-based alternations and *e*-spreading must be told mainly through the much better-attested, shorter word-types.

6.7.3 *Dialectal* ie-*reduction: Conclusions*

Overall, the *LAEME* survey, summarised in table 6.1, and the seven-stage development outlined in 6.2 (§6.7.1) provide a broadly plausible scheme for how *ie*-sequences developed in most of southern and western English-speaking Britain. This broad overview may, of course, be complicated by a closer investigation of the philological particulars of each manuscript, but the general picture that emerges seems to fit well with what might be expected to happen on more general grounds. At some point in the 12th century (perhaps in the early 13th in some areas), a sweeping wave of weight-sensitive *ie*-reduction took place. This suggests that a foot type similar to the bimoraic trochee was present not only in the narrow area of the AB dialect, but was very widespread in English, at least outside the North and East where influence from Norse led to early replacement of the *ie*-formant by *e*. The exact effects of this on the stem vowels of class II weak verbs were significantly complicated by the morphological spread of *e*, and eventually

[26] For this form, I assume that lengthening was blocked by trisyllabic shortening; see §8.2.

the entire foundation of distinguishing light and heavy stems was undermined by open-syllable lengthening. Together, these changes finally resulted in the generalised *e* familiar from widely read authors of later Middle English such as Langland, Chaucer, and Gower.

6.8 Conclusion: Foot Structure in Early Middle English

The evidence of *ie*-reduction points to a conservatism in Middle English – or to be precise, in western and southern dialects of earlier Middle English – which has often been overlooked in the phonological literature. Murray (2000: 622), for instance, states plainly that 'resolution was no longer a prosodic feature of the language'. The evidence reviewed in this chapter suggests that far from being inoperative, phonological resolution – the equivalence of H and LL – was robust and widespread, persisting until well into the 13th century, and at least in the case of Dan Michel's Kentish, into the 14th.

The precise details of foot structure are hard to recover on the available evidence, but it is simply accounted for by the same bimoraic trochee proposed for early Old English. In principle, all the data discussed in this chapter could also be described within the framework of the Germanic foot, if such a foot type could have arisen as an innovation in the intervening centuries (§6.5). Even if this did happen, there would still be an essential point of prosodic continuity: the presence of a bimoraic unit, either as the strong branch of a larger foot or (as I prefer) as the entire foot. Either way, these feet were clearly formed much as in earlier stages of English: from left to right, and with the first foot of the word carrying the main stress. While it is not possible to be as precise as for Old English, the following principles probably apply:

1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. Final consonants may count as extrametrical. (?)
4. Final feet are extrametrical for the purposes of stress assignment.
5. The heads of non-extrametrical feet are stressed (on secondary stresses, see §6.4.3).
6. The leftmost foot carries the primary word stress (end-rule left).

That there should be a significant prosodic continuity, with the bimoraic trochee persisting (or at most being extended with an extra weak branch) through later Old English and into at least the earlier Middle English period, should not really be very surprising. A change would need a cause, and none of the major developments before the 13th century would seriously disrupt the core operation of bimoraism in medieval English. It is not until the more significant changes of

later Middle English, discussed in chapter 8, that the potential for a major change in foot type might be found.

That the evidence for continuous bimoraism has been overlooked may be due at least partly to the unfortunate effects of scholarly periodisation. While virtually all comments on the divide between 'Old' and 'Middle' English are followed by a formulaic invocation of how arbitrary such a division is, the separation of dictionaries, grammars, online tools, and other philological apparatus into these two groups undoubtedly hinders research into these kinds of continuities, and likely influences how the change to 'Middle' English is conceptualised. It is virtually always treated as a sharper break than it really is, a tendency not mitigated by an excessive focus on Orrm as a prime representative of 'early Middle English' for linguists, despite his writings representing quite a new dialectal variety compared to earlier records of English. There is much to be said for alternative periodisations such as that passingly proposed by Tolkien (1983a: 195, n. 9), and being admirably experimented with in practice by Ringe's ongoing *History of English*.[27]

There are at least two further potential ramifications of finding the bimoraic trochee in early Middle English which need consideration. One is whether this foot structure finds any reflection in the metrical systems of early Middle English poetry, which might help corroborate and strengthen the phonological evidence. The other is how this prosodic framework fares in later Middle English: what implications does it have for our understanding of changes such as open-syllable lengthening and trisyllabic shortening? These two issues are, respectively, the subjects of the following pair of chapters.

[27] Ringe's sections of volume 2 deal with Old English up to roughly the year 900, with the projected third volume to go 'well into the Middle English (ME) period'. As the authors note, 'it has long been clear that the division between O[ld] E[nglish] and M[iddle] E[nglish] is an artificial one, imposed by external factors … and since the research of our predecessors has made it increasingly feasible to extrapolate across evidential gaps, it seems worth the attempt to adopt a different periodisation' (Ringe & Taylor 2014: 3). This decision is one I enthusiastically endorse, and I eagerly look forward to the publication of the third volume, and the impact that it might have on the framing of English linguistic history.

Chapter 7

Metrical Resolution in Early Middle English

In the previous chapter I reviewed the evidence of *ie*-reduction in southern and western Middle English. It is natural to wonder whether this finds any echo in the poetry of the time, the way that the prosodic structure underlying Old English high-vowel loss is closely paralleled in verse. After a review of the poetic landscape of 12th- and 13th-century English-speaking Britain – a complex backdrop to the specific works under investigation – I take a look at two poems from the 12th century that show metrical resolution. The first is by Laȝamon,[1] the son of Leouenað, who wrote a a very long history of the Britons now usually called the *Brut* (§7.2). His rather messy and elusive metre, which mixes alliteration and rhyme, shows indirect but extensive evidence for metrical resolution, and the general equivalence of light disyllabic sequences (LX) with a single heavy syllable (H). The other poem is the *Moral Ode* (§7.3), whose evidence for resolution has been subject to some debate in recent years.

7.1 English Verse in the 12th Century

Old English poetry, at least as it survives, was entirely alliterative. Even the so-called *Rhyming Poem* in the Exeter Book still observes strict patterns of alliteration, with end-rhyme featuring as an additional further element. By the 12th century, however, vernacular poetic fashions were at least partly shifting towards models in Latin and French. This involved not only an increasing orientation towards rhyme on the part of many poets, but frequently the importation of new rhythmical forms. For example, the septenarius metre, very common in Latin, was employed in both the *Moral Ode* (§7.3) and the *Ormulum*.

[1] This is how his name is spelled in the more conservative manuscript of his work; this is sometimes, rather unfortunately, modernised to *Layamon*, though the *ȝ* in this instance represents [ɣ] rather than [j].The occasional rendering as *Lazamon* can only be described as eye-wrenching. His name is also recorded as *Laweman* in the other manuscript, and can be modernised as *Lawman*.

Such forms of verse are usually relatively transparent, showing a regular metrical scheme constructed along the same lines as much later English poetry: iambic or trochaic feet, repeated in certain numbers and arrangements, and subject to familiar licences such as foot inversion, promotion or demotion of monosyllables, and elision. This is not to say that extracting prosodic information from such poems is problem-free. Especially with the *Moral Ode*, the textual situation and number of manuscript variants makes it difficult to fully unravel the poem's history: it is not always clear which forms can be attributed to poets (whether the first composer, or metrically aware copyists), and which are due to scribal alteration done without any concern for verse form. Orrm's long poem, the *Ormulum*, is textually more straightforward: the single surviving copy (perhaps the only medieval copy ever produced) is probably in Orrm's own hand.

Much more difficult is the alliterative poetry of this period. The septenarius, octosyllabic verse, and other new poetic styles supplemented the alliterative tradition, but did not displace it. As discussed in §3.3, there is a substantial body of alliterative verse attested from the 14th century and later that forms a fairly coherent metrical corpus with its own distinctive rules and regularities, which have been increasingly decoded since the late 1980s. These rhythms are not those of Old English verse, but they are also not those of Latin or French poetry: they seem rather to represent the outcome of a long period of development from Old English verse along 'internal' lines (Russom 2004a,b; Fulk 2004).[2]

The exact nature of this development is hard to trace in detail, and has been the subject of some debate. Between the copying out of the great Old English poetic codices – MS Junius 11, the Vercelli Book, the Exeter Book, and the *Beowulf* manuscript – roughly around the turn of the millennium and the poems of the so-called Alliterative Revival in the 14th century, there is a relative dearth of surviving written alliterative poetry. 'Relative dearth' is not 'complete absence', and there are a fair number of poems found in this gap (Oakden 1968: 133–151; Weiskott 2016: 76, 175–182). Still most of these are relatively brief, in striking contrast to the earlier and later periods, and there is virtually nothing from the later 13th and earlier 14th centuries. This might simply be due to the loss of texts, as Weiskott (2016) argues, though Pascual (2017) replies with a vigorous defence of the possibility that a robust oral tradition carried alliterative verse through these periods. What is important here is that, as both Weiskott and Pascual emphatically agree, there must have been a continuous history of use and development of English alliterative verse (written or oral) during these centuries, but direct textual sources for studying this are, for whatever reason, relatively scarce, and generally short or fragmentary when they do survive.

[2] For an excellent and well-referenced review of different views on the history of alliterative verse, see Yakovlev (2008: 9–14).

The outstanding exception to this generalisation is the work of La3amon. At slightly over 16,000 lines in its longer version, his *Brut*, partly alliterating and partly rhyming, towers over not only other alliterative poems of his time in size, but is substantially longer than *Beowulf*, the longest poem in Old English (this is true even if one removes all of La3amon's rhyming lines). Despite its many difficulties, it is one of the richest and most valuable sources for early Middle English to survive.

7.2 La3amon's *Brut*

The title *Brut* for La3amon's only known work is modern; in the manuscripts it is known as *Hystoria Brutonum* or *Libri Brutonum*. It exists in two manuscripts, which differ notably in many respects. The more conservative manuscript is Cotton Caligula A ix (Caligula), the other is Cotton Otho C xiii (Otho). The latter represents an abridgement and reworking of the text, with many passages condensed or trimmed (both intentionally by a redactor as well as accidentally by fire), and the specific wording of many lines changed, frequently modernising the diction (Dance 2003: 56–60). Like many others, I focus entirely on the Caligula manuscript here, though there is much to be gained by considering the two versions together (Cooper 2013).

Both manuscripts date closer to 1300 than 1200 (Otho is probably the later of the two), but La3amon most likely composed the *Brut* in the later 12th century, before 1216 at the very latest (Le Saux 1989: 1–10). In a prologue to his poem, he claims to have been a priest at a place called Ernle3e, which is identified as Areley Kings, a village some miles north of Worcester. This places him in the West Midlands: broadly the same region as the AB texts discussed in the previous chapter, and their dialect is, though not identical with, closely related to La3amon's.

7.2.1 La3amon's Metre: Some Preliminaries

The metrical system of the *Brut* has proven rather troublesome to pin down. The clearest feature is a familiar one from other forms of alliterative verse: long lines are divided into two halves – an on-verse and an off-verse – which are linked together variously by either alliteration (not always on the first stresses, in contrast to Old English verse) or end-rhyme (which can sometimes strike the modern ear as rather loose or forced). In the manuscripts, the half-line break is graphically indicated by a punctus elevatus, a mark resembling an upside-down semicolon, though I will simply use extra white space as I do for other metres:[3]

[3] I cite the *Brut* from Brook & Leslie (1963, 1978), whose lineation I follow, with general reference to the outstanding older edition by Madden (1847). The Caligula manuscript is also available online in digital facsimile: http://www.bl.uk/manuscripts/Viewer.aspx?ref=cotton_ms_caligula_a_ix_f003r.

(118) Ān prēost wes on l̲ēoden L̲a3amon wes i·hōten
'There was a priest among the people, he was called La3amon' (*Brut* 1)

(119) On Itali3e hēo cōmen to l̲onde þar Rōme nou on st̲ondeð
'They came to land in Italy where Rome now stands' (*Brut* 55)

For anyone interested in resolution, such matters of rhyme and alliteration are among the least interesting aspects of a metre, except as clues to stress (§6.4.3). The internal rhythmical organisation of these half-lines is the important thing. In this respect La3amon was for many years very ill-served in the scholarly literature. As Cornelius (2017: 82; cf. 177, n. 71) aptly puts it:

> Indeed, the enduring legacy of Blake's 1969 intervention is that subsequent studies of Lawman's "prosody" have typically been studies of alliteration, assonance, and rhyme, leaving the metrical structure itself unexamined.

An important advance in understanding La3amon's metre has been made by Yakovlev (2008: ch. 3), who, building on Hanna (1995), successfully applies ideas developed with regard to later Middle English alliterative metre (§3.3) to establish, if not a fully worked out metrical system, at least a set of clear regularities and trends that show La3amon's metre to be much less chaotic and unregulated than it appeared to earlier generations of scholarship.

Not all mysteries are by any means solved, and La3amon's verse is certainly not identical either to Old English verse or to the later Middle English systems. Yakovlev (2008: 208–210) instead treats La3amon's rhythm as an 'intermediate stage' (Weiskott 2016: 73 uses the phrase 'evolutionary missing link') between these older and later phases. Strictly speaking, Pascual (2017: 257) is correct that this can't be literally true: the use of rhyme in the *Brut* and the closely related *Soul's Address to the Body* (Moffat 1987)[4] mean that these works represent a slightly different trajectory than the one that led to the poems of the Alliterative Revival. Nonetheless, La3amon has incorporated metrical innovations that are also found in later Middle English verse, and Yakovlev's success in viewing La3amon in light of what recent scholarship has uncovered about the workings of these later alliterative metres speaks for itself. La3amon may not be the direct forerunner of the *Pearl* Poet, but he and those like him were close cousins (poetically speaking) of those who were. Historical metrical trajectories aside, Yakovlev's findings shed considerable light on La3amon's metre in synchronic terms, and his approach provides a basis for investigating resolution.

[4] The 'Worcester' of §6.7.

7.2.2 The Anatomy of La3amon's Verse

Yakovlev (2008: 161–162) identifies 17 metrical principles at work in the *Brut*, including both abstract statements about verse structure, and specific points of linguistic-metrical correspondence, such as elision (which he does not find evidence for; point 10). Abstracting away from this detailed summary, a few points emerge in terms of what the basic building blocks of La3amon's verse are, and how they are put together.

These basic elements are familiar from descriptions of both Old (§3.1) and later Middle English (§3.3) alliterative verse: a stressed unit is a *lift* (*S*), and a weak one a *dip* (*w*). Among dips, there is an important difference between a simple monosyllabic dip and a *long dip* with two or more syllables. The way these elements are put together is in general less obviously systematic than in poems such as *Sir Gawain and the Green Knight*, but especially in the off-verses there are a number of regularities, and very frequently the rhythms do correspond well to those of later Middle English. Take line 55b, for instance, extracted from (119) and metrically annotated:

(120) þar Rṓme nou on stóndeð
'where Rome now stands'

This has the rhythm *wSwwSw*. In more abstract terms, there is one short dip, a lift, a long dip, a second lift, and a final short dip. This checks all of the boxes for a classical Middle English off-verse: two lifts, one (and only one) long dip, and an ending in *Sw*.

As in later Middle English poetry, aside from the very final position, short dips of just one unstressed syllable seem more or less optional, included or omitted freely:

(121) ségge to·súmne
'say together' (*Brut* 32b)

The rhythm is *SwwSw*, but in structural terms this is essentially equivalent to (120), as it would be in later Middle English. The basic elements in both are the two stresses, the long dip, and the final weak syllable. Neither the extra short dip at the beginning nor the varying syllable count within the long dip seem to matter much.

The similarities with later Middle English verse discussed so far are striking, but La3amon includes a substantial minority of verses that do not conform to these rules. Take the following line:

(122) and þā máðmes of his lónd
'and those treasures from his land' (*Brut* 450b)

The rhythm here may be notated as *wwSwwS*. This still has two lifts, but the arrangement of the dips is very different. There are two long dips instead of just one, and the line ends with a stressed syllable instead of the standard trochee. It is clear that La3amon does not follow the classical Middle English rules (which, after all, may not have fully come into being yet), but this does not mean that there are no trends in his rhythm. In particular, the presence of two anomalies together – the two long dips and the monosyllabic ending – is intriguing, both as a potential means of understanding La3amon's metre better in general, and as a way of identifying whether LX words resolve (to behave as monosyllables) or not (and behave as trochees).

7.2.3 Investigating Resolution in the Brut

In his study based on a 600-line sample of the *Brut*, Yakovlev (2008: 217–221, 252–260, 262) concluded that the poem does show a 'metrical equivalence of the "short+any" sequence to the long syllable'. That is, he argued that La3amon made use of metrical resolution. To test whether this holds up in a larger sample, and to focus in more narrowly on resolution alone, I have taken a sample of La3amon's poem, and parsed each off-verse into two components:[5]

1. The linguistic shape of the final word: H (monosyllable), HX (heavy trochee), LX (light trochee), LXX (light trisyllable), and HXX (heavy trisyllable).
2. The metrical pattern of everything else, which I provisionally call the *initial*, parsed in terms of lifts (*S*) and long dips (*ww*).

Other shapes for final words occur too rarely to give much useful information, and in any case I am not sure what rhythm to assign to longer names such as *Cassibellaune* and *Asclepidiot*. For the initial, I ignore monosyllabic dips and take no note of the exact number of syllables in long dips, so that both (120) and (121) are notated as *Sww* for the initial, plus HX for the final word.

The idea behind this division is essentially to test how certain linguistic units (the final words, notated in terms of their linguistic structure: H, HL, etc.) relate to metrical patterns (the initials, notated as metrical abstractions: *S*, *ww*, etc.). The central question is how LX and LXX words behave. Do LX words tend to follow the same range of initials as H words (which would imply resolution, LX = metrical *S*),

[5] The corpus is based on the first 8,000 lines of the poem (slightly under half its total length). I scanned all off-verses *not* ending in a simple HX trochee, which gave me a starting pool of 3,042 verses, though as discussed below a good number of these lines involve uncertainties or problems. In addition, to get a sample of the very frequent and generally fairly regular verses that *do* end in heavy HX trochees, I went through eight 100-line chunks from these 8,000 lines, and included every line that ended in HX, giving an additional 484 verses. An impressionistic read-through of the poem suggests that the findings for HX-final half-lines are robust, and Yakovlev (2008: 203–204) has also commented on their regularity.

or the kinds of patterns associated with HX words (which would suggest non-resolution, LX = metrical *Sw*)? And if resolution is present in LX words, then LXX words might be expected to behave metrically like HX ones (both metrically *Sw*) and unlike HXX words (metrically *Sww*).

7.2.3.1 The Range of Initials

The various arrangements of lifts and long dips in the initial in my sample fell out into six broad types. The examples for each give the full half-line, with the final word separated from the initial by |. I have tried to pick examples that illustrate how extra weak syllables are reduced down to these patterns:

1. *Sww* – þar Rőme nou on | stóndeð (55b)
2. *wwS* – þat wes a sélcuð | be̋arn (142b)
3. *wwSww* – i þon stúde hē hine | slő̄h (3177b)
4. Multiple *S* – þe gúldene cr̋une dude him | ón (2121b)
5. *ww* (no *S*) – þe was mid him i·|súnd (46b)
6. *S* (no *ww*) – his r̋æflac | mákede (4957b)

The selection of these categories is strongly influenced by the features that Yakovlev has found to be of metrical relevance. Off-verses with two stresses before the final word (so three, or occasionally more, in total) can vary in their internal rhythms, but as a group seem to be distinguished from the much more 'standard' type, with two stresses in total (Yakovlev 2008: 246–248). My distinction between types 1 and 2 aligns with the suggestion that the latter type might be more associated with monosyllabic final words (Yakovlev 2008: 244–246). Having made these divisions, the other types follow as the remaining possibilities on a similar level of abstraction.

I do not claim that these are metrical 'types' with any genuine realities. They are provisional classifications of *parts* of verses, whose final words have been cut off. Their value lies entirely in the possibility that some of these partial contours tend to be followed by monosyllables, others by disyllables: this is a contingent sorting of the data for the narrow purposes of testing for metrical resolution.

I should also add a caveat that will already be apparent to anyone who has looked at Laȝamon's metre: there are many uncertainties in how to assign stress patterns. The following verses illustrate the two most typical problems:

(123) þat hē a·midde to·clǣf
'so that he cleaved (the helm) apart' (*Brut* 10688b)

(124) bā bi dæie and bi niht
'both by day and by night' (*Brut* 1976b)

In (123), the overall pattern seems to be *wwwSwwS*, which, taken at face value, should be parsed with an initial of category 3 and a final word H. However, Yakovlev (2008: 198–200) argues that Laȝamon has an optional *prefix licence*, whereby unstressed prefixes – such as the *to* in *to·clǣf* – can be metrically ignored if need be (compare appendix E.1). If prefixes are set aside, then the scansion is instead *wwSwS*, with a category 2 initial. Yakovlev (2008: 244) in fact applies the prefix licence to this exact verse. I am much more sceptical about the arguments for the prefix licence in Laȝamon, however, and provisionally count syllables where they are found in the manuscript.

A different kind of uncertainty stems from the difficulty in assigning stress or metrical ictus to many words. Is the *bā* 'both' in (124) stressed or not? The answer is not immediately obvious, and there are many other words which present similar uncertainties (also remember the stress shifts discussed in §6.4.3). Yakovlev (2008: 195–198) lays out some useful heuristics for identifying stress, but these results should be regarded as provisional, and in any case, in my sample *bā* does not occur frequently enough to apply Yakovlev's tests.

To keep uncertainties to a minimum, the data presented in the following sections is based only on scansions I consider reasonably 'secure'. This is really a gradient metric, but for present purposes this means setting aside verses where relevant vowel lengths (particularly in proper names) seemed too uncertain, where there were severe uncertainties about the stresses of words, or where there were significant and relevant textual problems (though I have accepted simple and straightforward emendations based on non-metrical grounds). Taken together, the various problems affect a relatively large number of verses, and what remains is a core of some 1,835 verses, which I list in appendix G.

7.2.3.2 Final H and LX

Table 7.1 breaks down the range of types of initials found with final H words and with final LX. The first thing to note is that there is little in the way of absolutes. Either type of word can occur after almost any kind of initial. It is this kind of flexibility that has contributed to the long-standing impression of chaos in Laȝamon's metre.

That said, there are clear trends, and final H and LX words are not distributed evenly across different kinds of initials – and moreover, they broadly share the same relative ordering of preferences. The clearest pattern is that both H- and LX-final words come most often in verses with a single further lift and two long dips (initial type 3). That is, the most typical kind of verse ending in these word-shapes is:

(122) and þā máðmes of his | lónd
'and those treasures from his land' (*Brut* 450b)

Initial	H-final		LX-final	
1. *Sww*	75	9.1%	32	16.2%
2. *wwS*	213	25.7%	44	22.2%
3. *wwSww*	408	49.3%	90	45.5%
4. 2+ *S*	123	14.9%	25	12.6%
5. No *S*	7	0.8%	7	3.5%
6. No *ww*	2	0.2%	0	0%
Total	828		198	

Table 7.1 Types of initials before line-final H and LX words.

(125) þēr wēore fḗondes to | fḗole
'there were too many enemies' (*Brut* 645b)

For both types of word, the second most common pattern is type 2, a verse beginning with a long dip followed by a lift (with or without a short dip following this):

(126) þat wes a sélcuð | bĕarn
'that was a marvellous child' (*Brut* 142b)

(127) þe wes i kínges | <u>stúde</u>
'who was in the king's place' (*Brut* 121b)

These two kinds of initials together account for 75 per cent of verses ending in H words such as *lond*, and 67.7 per cent of LX words such as *fĕole*. Type 1 and 4 initials constitute most of the remaining verses. In itself, none of this data speaks strongly *against* a general metrical equivalence of H and LX words in line-final positions, but table 7.1 on its own can demonstrate no more than that. What is needed is a contrast in behaviour between, on the one hand, H/LX words and, on the other, HX/LXX words.

7.2.3.3 Final HX, LXX, and HXX

The majority of off-verses in the *Brut* end in HX sequences. As explained in note 5, the data for this word-type in table 7.2 is based a scansion of 484 verses extracted from across the first 8,000 lines of the poem, 328 of which scan clearly enough that I am willing to accept them as the basis of analysis. I also include the data for HXX words such as *lēuede* 'believed', which form a notable contrast to HX and LXX endings.

Whether a verse ends in an HX word such as *stondeð* or an LXX word such as *æðele*, the preferences for the kind of initial that precedes it are strikingly similar.

Initial	HX-final		LXX-final		HXX-final	
1. *Sww*	184	56.1%	129	52.4%	85	36.5%
2. *wwS*	63	19.2%	61	24.8%	22	9.4%
3. *wwSww*	18	5.5%	12	4.9%	16	6.7%
4. 2+ *S*	13	4%	4	1.6%	12	5.2%
5. No *S*	39	11.9%	35	14.2%	80	34.3%
6. No *ww*	11	3.4%	5	2%	18	7.7%
Total	328		246		233	

Table 7.2 Types of initials before line-final HX, LXX, and HXX words.

Both word types are most frequently found in the most common type of off-verse in the *Brut*: type 1, a verse with a lift (perhaps preceded by a single unstressed word), followed by a dip, and concluding with a HX word or what seems to be its metrical equivalent, LXX. Typical examples are:

(120) þar Rŏ̄me nou on | stóndeð
'where Rome now stands' (*Brut* 55b)

(128) his lĕ̄ode hine | hă̄teden
'his people hated him' (*Brut* 3506b)

While this is the most common type of initial for HXX finals as well, their preference is notably more muted, a moderate plurality rather than a slight majority.

The second most frequent type also involves a single preceding lift and one long dip, but in the other order (type 2):

(129) and of gŏ̄de | lónde
'and from a good country' (*Brut* 2028b)

(130) þat hē wolde þār cástel | mă̄kian
'that he wanted to make a castle there' (*Brut* 826b)

Again, there is a clear contrast with HXX-final verses, which occur in this type at a considerably lower rate.

In a smaller minority of verses there is no obvious further stress beyond the final word, apparently of type 5:

(131) æfter þone | kínge
'after the king' (*Brut* 1026b)

(132) bēo swīðe | swíkele
'are very treacherous' (*Brut* 7909b)[6]

This type is a smallish remainder for HX and LXX verses, contrasting both with H and LL verses (where apparently stressless initials are vanishingly rare) and with HXX verses, where such contours are remarkably common, in second place in terms of frequency:

(133) efter his | álderen
'following his elders' (*Brut* 3438b)

This point is a bit fuzzy, since it is possible that in at least some of these initials, a lower-stress word should be seen as metrically promoted. Still, it is striking that there should be a clear grouping of this kind of initial according to the final word.

The other possible initials are found, but generally only in smaller numbers before any of these word-shapes.

7.2.3.4 The Argument for Resolution

Taken together, the preceding subsections provide a strong basis for assuming resolution in La3amon. In §7.2.3.2, both final H and final LX showed a very strong association for verses with two long dips (type 3), a moderate dispreference for verses with a lift followed by a single long dip (type 1), and a strong dispreference for verses without any further stresses at all (type 5). As seen in §7.2.3.3, both HX and LXX words (which behave remarkably parallel) show a very different set of preferences: they most often occur after type 1 initials, are slightly more tolerant of following type 5, and show a marked dispreference for type 3.

In other words, H (*lond*) and LX (*stude*) tend to occur after one spectrum of verse contours (both are metrically *S*), while HX (*stondeð*) and LXX (*makian*) tend to occur in a distinct spread (both metrically *Sw*); HXX words (*lēuede*) have a different set of preferences yet (metrically *Sww*). These are not absolute, categorical rules (though it is possible that a better understanding of La3amon's metre in the future might sharpen the trends), but notable preferences that are clearly visible when enough verses are surveyed.

These equivalencies strongly suggest that La3amon employed metrical resolution. If he did not, then we would expect a set of parallel behaviours that do *not* occur: that LX would behave similarly to HX, and that LXX would be like HXX. The data in table 7.1 shows the metrical behaviour of final *S*, whether this

[6] Yakovlev (2008: 196) finds that *swīðe* is one of a group of words that 'can be stressed, but only occasionally are', and promotion in this verse would change the initial to type 6, an even less common pattern before this kind of ending.

is linguistically H or LX; and similarly, the first two columns of table 7.2 show the metrical preferences of final *Sw*, whether this is filled by HX or LXX.

Strictly speaking, this data demonstrates resolution only for the final words of the line. Yakovlev (2008: 254–260) further argues that resolution takes place freely in any stressed position. Though I have not systematically annotated my data to fully test this claim, my strong impression is that Yakovlev's argument holds up without qualification, and that medial lifts resolve as readily as final ones.

7.2.4 The Future of Laȝamon's Metre

The data discussed so far seems to establish resolution as a clear feature of Laȝamon's metrical system. But just what is this system, and how systematic will it prove in the end? Any answers to these questions will probably be reached step-by-step. Hanna (1995) and especially Yakovlev (2008) have already made the biggest initial leaps forward, and done much to clarify the relevant metrical units, and to make a start on cutting through the thornier problems of stress assignment that bedevil any attempt to scan the work of Leouenað's son. I have tried to make a very focused and specific contribution, confirming Yakovlev's suspicion of resolution in the *Brut*. Each step taken reduces the uncertainties a little more, and allows other patterns to be identified and analysed, and I am optimistic that this process can be carried on further.

I would emphasise that the approach taken here of dividing out very broad-brush categories of initials is designed to allow a fairly large amount of data relating to resolution to be gathered and evaluated in aggregate. I want to reiterate that I make no claims that this division captures essential metrical properties of Laȝamon's verse (for instance, I do not suggest that he conceived of his metre as having a metrical break after the initial, and my use of | in metrical markups is purely for convenience in exposition). Some metrical regularities are so strong that they emerge even in this very rough categorisation: 76.1 per cent of *Sw*-final verses (HX and LXX) conform to the later Middle English off-verse pattern of, in total, two lifts, a single long dip, and a verse-final short dip. And among verses ending in *S* (H or LX), there is a striking preference for verses beginning with long dips, with 73.6 per cent of such endings following type 2 and 3 initials. This might imply some kind of principle of metrical compensation, where the lack of a verse-final dip is 'made up' for by beginning with a longer dip.[7]

But this way of approaching the metre cannot answer all the interesting questions, and there is a great deal of fuzziness in many areas. The patterns I have grouped together as initial type 2 (a long dip followed by a lift and an optional

[7] Another way of looking at 'compensation' would be to concentrate on verses that have two long dips or three or more total stresses (types 3 and 4), which together account for 63 per cent of *S*-final verses, but only 8.2 per cent of *Sw*-final verses.

short dip, followed by the ending), for instance, are a robust minority for both *S*- and *Sw*-final off-verses, and some nearly exact parallels can be cited:

(134) þe on þan londe wes
'who was in the land' (*Brut* 65b)

(135) ⁊ fram þan londe hælde
'and passed from the land' (*Brut* 3048b)

Why should this kind of overlap be so relatively frequent, accounting for 25 per cent of *S*-final, and 21.6 per cent of *Sw*-final off-verses? Is this apparent overlap really genuine? Examples such as (134) and (135) are striking, but it may well be that a closer look at the average lengths of the first dips, the presence or absence of a medial short dip, the precise linguistic material used to fill the dips, the kinds of on-verses they pair with, or some other factor will reveal larger aggregate distinctions and trends that are invisible under the divisions adopted here. The work that remains to be done on Laȝamon's metre is very substantial indeed, and goes far beyond the questions of resolution that I have concentrated on.

7.3 The *Moral Ode*: Debated Resolution

Laȝamon's *Brut* may not be the only source of evidence for resolution in Middle English verse. Fulk (2002), building on Schipper (1910), has argued persuasively that the 12th-century *Moral Ode* (*Poema Morale*, *Conduct of Life*) employs metrical resolution. Here are the first four lines, adapted from the Lambeth text (Payne 2018: 505–506), with reference to Fulk (2002: 345, 2012a: 166):[8]

(136) Ich ém nū álder þén^{e} ich wés a wíntre ánd a lā́re.
Ich wélde mā́re þén^{e} ich <u>déde</u>; mi wít āh tṓ[9] bōn mā́re.
Wēl lóng^{e} ich hábbe chíld i·bṓn a wórde ánd a dḗde;
Þā́h ich bṓ a wíntre ā́ld, tō ȝúng ich ém on rḗde.
I am older than I was in years and in learning. I have more control than I did; my understanding ought to be greater. Quite long I have been a child in word and deed; though I am old in years, I am too young in wisdom. (Fulk 2002: 345)

I have attempted to explicitly convey the metrical form, the septenarius: each line is divided into to two verses (half-lines), elided *e* is written in superscript, syllables carrying metrical ictus are signalled with acutes, and long vowels are indicated with

[8] The manuscript situation for this poem is somewhat complex, as I will discuss shortly.
[9] MS *ahte*, emended after the two Egerton version, Jesus, Trinity, and partly Digby (Payne 2018: 506).

macrons. Underlining signals potential resolution. The rhythm is broadly iambic, with four feet in the first half-line, and three in the second (for seven feet in total, whence the name *septenarius*). Like most iambic verse, there is some leniency in the stress assignment of monosyllables and in the shape of early feet, such as the short foot beginning line 4.[10] By contrast, the ends of half-lines are fairly strictly regulated (cf. §3.4.2): on-verses usually end in stressed monosyllables (*wes*, *bōn*, *āld*), and off-verses end in heavy trochees of the shape HX: that is, a heavy, stressed syllable followed by a weak, unstressed syllable (*lāre*, *māre*, *dēde*, *rēde*).

This rather rigid structure is usually, in the earlier parts of half-lines, filled by syllables with no reference to their weight. Take the following off-verse:

(137) þe hít for·ʒe̋teð sō̆ne
'who forgets it straightaway' (*Moral Ode* 39b)

This scans with regularly alternating stresses, and both *hít for* and *ʒe̋teð* count as sequences of two metrical positions, the difference in the weights of the (metrically) stressed syllables notwithstanding.

Matters are different at the ends of half-lines, where two interesting features related to syllable weight can be observed. Firstly, the stresses of the trochees that end the line overall are almost always heavy. Words such as *ʒĕteð*, *dŭre* 'door', or *spĕken* 'speak' are avoided in this position (Minkova 2016: 131–132). This provides good evidence for vowel quantities (open-syllable lengthening has not yet taken place) and at least some kind of stress-to-weight principle for the line-final stress. It may also provide some evidence for resolution, since occasionally words such as *wunien* 'remain' and *sunien* 'avoid' are found in the same position (Minkova 2016: 132).

The other interesting feature comes at the end of the *first* half-line, where Fulk (2002: 346–350) identifies evidence of resolution. The on-verse typically ends in a single monosyllable H, such as *wes* 'was' (line 1) or *āld* 'old' (line 4), but a not insignificant minority end in LX words such as *dede* 'did' (line 2) and *stude* 'place' (line 43). From the first 100 lines of the poem, Fulk finds 20 such examples that involve no serious complications of etymology or metrical context, and 14 more than might well show resolution, but which are more ambiguous (usually because of uncertainies in scansion). Certainly at first glance this looks like a weighty body of evidence for the equivalence of LX and H: that is, for resolution.

In a response to Fulk, Minkova (2016) objects to his identification of resolution on several grounds. Some of her arguments are aimed at making a couple of Fulk's 'unambiguous' examples seem more ambiguous (Minkova 2016: 133–134), but the heart of her argument is that HX words such as *āre* 'grace, mercy' could also occur

[10] On some of the complexities of scansion, see further Minkova (2016: 128–130)

in the same position, at the end of the on-verse. Granting that Fulk's evidence for the first 100 lines is indeed very striking, she nonetheless concludes that beyond this initial stretch:

> [T]he rest of the poem suggests randomness in the choice of L+σ vs. H+σ [that is, between LX and HX] in the same segmental and metrical environments (Minkova 2016: 135).

In the second 100 lines of the Digby manuscript of the poem, Minkova finds perhaps 15 examples of LX words in this position, at the end of the on-verse, compared with 19 HX words, such as:

(138) Þet hḗ ne múʒe þann^{e} bídde *ṓre*
'that he cannot then pray for mercy' (*Moral Ode* 130)[11]

Fulk (2002: 350) did note the presence of HX words in this position, including line 130, and provided a comprehensive list of just seven examples from the entire poem, three of which he convincingly identified as linguistically or textually dubious. He maintained that such 'counterexamples are not to be ignored, but their evidence is not of sufficient weight to vitiate the larger generalisation that can be drawn', a conclusion that seemed very plausible given his count of just four unambiguous HX endings in the entire poem,[12] compared to 20 LX in the first 100 lines alone.

Minkova's very different count of HX forms would seem to tell a different story, one that allows the endings of on-verses to be much less regulated than Fulk held, and so to provide much less evidence for resolution (Minkova 2016: 135–140). How can these discrepancies be accounted for? Assessment here is a somewhat complex task, particularly since the poem exists in a number of manuscripts, which show a moderate degree of non-trivial variation. Both Fulk and Minkova take Bodleian Library, Digby 4 (Digby: Zupitza 1878; Marcus 1934) as the basis of their analysis, but this is just one text, and by no means the most linguistically conservative. I checked all of these examples of half-line-final HX words identified by either Fulk or Minkova in the parallel-text edition of Payne

[11] This is the line number in Payne (2018). Fulk and Minkova both use the numbering of the Trinity text, in which this is 125 (though they follow the text of Digby, where this is line 117). See below on lineation more generally.

[12] I would doubt three more of these. Line 155 (Fulk 148) is rather obviously corrupt in the Digby reading that Fulk follows. The first half-line of Lambeth (*swā méi of pī́ne þé ne cnā́uð*) or of the Egerton versions (*swā méi of pī́ne þé nāht nā́t*) are both preferable. Line 284 (Fulk 271) omits *þō* in the second half-line in the other manuscripts, which would let the *-e* of *wīse* stand as the first unstressed syllable of the second half of the line (cf. Fulk 2002: 349, and immediately below). And line 285 (Fulk 272) has a deficient second half-line, which makes the status of the *-e* of *helle* uncertain; Minkova (2016: 135, n. 29) may also have doubts about this line, since she does not include it in her list of HX forms. Between Fulk's own qualifications and these concerns, of his seven examples, only line 130 (example 138) seems really secure in having an on-verse genuinely ending in HX.

(2018: 505–656), in order to better evaluate how representative the Digby text is of the metre of this poem more generally. For linguistic variants, an especially important comparison is Lambeth Palace Library 487 (Lambeth: Morris 1988; Payne 2018: 365–382): this manuscript is in a very conservative orthography, and often seems to better represent what the first poet is likely to have written.[13] Since the various manuscripts have different numbers and selections of lines, I follow Payne's synoptic line numbering, while also supplying the numbering used by Fulk or Minkova where needed to allow a clearer comparison with their studies.

In one case, the strongest of Minkova's new examples, the difference may lie in variable choices of scansion:

(139) Swīnes brēd^{e} is swīþe *swēte*, swō is of wilde diere
'Swine's flesh is very sweet, as is (that) of wild deer' (*Moral Ode* 152)

Minkova seems to scan the off-verse as *swō ís of wílde díere*, but elision to *swṓ ^{i}s of wílde díere* also seems possible. This would allow the final syllable of *swēte* in the first half-line to serve as the upbeat to the second. That is, the line in full would scan:

(140) Swínes brḗd^{e} is swíþe swḗt- | -e, swṓ ^{i}s of wílde díere
'Swine's flesh is very sweet, as is (that) of wild deer' (*Moral Ode* 152)

This kind of scansion, where a weak syllable on the final word of the on-verse fills the upbeat of the off-verse, is defended by Fulk (2002: 349), and is taken into account in his assessment of potential resolution. Still, Minkova's apparent scansion is also plausible, and this remains one of the better candidates for an on-verse ending in *Sw*.

The remaining discrepancies are of two kinds: Minkova's acceptance of linguistic variants found the Digby manuscript, but not shared widely among other versions and probably secondary; and words that are identified as HX, but which are better understood as LX. An example of the first type is line 262 (Minkova 249):

(141) Þḗr is uḗr, þet éure *brénneð*
'There is fire which burns forever' (*Moral Ode* 262a)

Here the Lambeth manuscript reads *bernd*, and Fulk has apparently accepted the general evidence for a syncopated verbal ending in this and similar lines.[14]

[13] For a convenient overview of the manuscripts, see Minkova (2016: 128, n. 15), and for a very full discussion, Payne (2018: 4–95).

[14] Similarly 322 (Minkova 309) *singeð* (Lambeth *singð*). Other types of linguistic variation include 121 (Minkova 116) *workes* (Lambeth *werch*), 148 (Minkova 141) *þannes* (Lambeth *þǒnen*), and 361 (Minkova 347) *hesne* (not in Lambeth; Trinity *has*, Egerton 2 *hes*). In all these cases, the shorter form is

The second type concerns linguistic misidentifications. Minkova (2016: 135, n. 29) lists the words *wele* (233 [Minkova 224], 330 [316]), *ibede* (351 [337]), and *wane* (372 [357], 386 [370]) as examples of HX half-line endings, but etymologically all of these words have short vowels, and should still be *wĕle* 'wealth' (Old English *wela*), *i·bĕde(n)* 'prayers' (Old English *ge·bedu(m)*), and *wăne* 'lack' (Old English *wana*, *wona*), since open-syllable lengthening has clearly not yet affected the language of this poem. These examples serve rather as evidence for resolved LX half-line endings. A slightly different case is *uoluelð* (324 [311]), which is presumably an accented heavy syllable with an unstressed prefix, *uol·uélð* 'fulfils' (Egerton *fulð*). This counts as a monoysllabic verse ending H, not HX.

Linguistic variants such as *brenneð* and *hesne* might be taken as a sign that the Digby copyist was sensitive to scansion, but relatively tolerant of HX forms at the end of the first half-line. If so, the analysis of Minkova (2016: 137–140) could stand as an assessment of this one copyist's 'metrical mind' (though it may also be that this scribe was not so concerned with the metre). The further assertion that 'the poet, the copyists, and the audience of the poem … were of one metrical mind' (Minkova 2016: 137) is, however, not a supportable conclusion. In the family of the *Moral Ode* versions more generally, HX sequences were strongly avoided. The only really secure example remains line 130 (example 138), with *ā́re* or *ṓre*, with *swēte* in line 152 (139) being not implausible as a second example. To these, *betere* in 403 could probably be added: the variant *bet* would scan well as H instead, but all the manuscripts that have this line have *betere*, and the off-verse (beginning with weak *þan* in Trinity) has no room to absorb the final unstressed syllable. All the other possible instances HX at the end of the first half-line listed by Fulk (2002: 350) and Minkova (2016: 135, n. 29) seem either certainly incorrect, or suspect for one reason or another. Though it does not seem implausible that some of the merely suspect lines do reflect poetic intent – that of either the original poet or a redactor – the overall number of examples of final HX is very small even if viewed generously, and the word-shape was clearly generally avoided.

This forms a sharp contrast with the usual endings of first half-lines: the majority conclude with monosyllables, with a significant minority ending in LX, many of which cannot be eliminated or discounted on linguistic, metrical, or textual grounds. Such LX endings robustly attested, not just in the first 100 lines, but throughout the poem. In the second 100 lines of Trinity (lines 104–207 of the synoptic text), for example, I find 13 examples that seem reasonably secure.[15]

linguistically very plausibly the original, and in all but 148, the shorter reading has support from more than one of the more conservative manuscripts.

[15] Forms are cited after Trinity, but significant readings in Lambeth are also noted: 104 *write*, 109 *i·cleped*, 110 *bi·ȝiete*, 118 *muchel*, 123 *i·write*, 132 *dure*, 154 *speken*, 163 *cume*, 167 *bi·foren*, 174 *grameð* (a class II weak verb, syncope implausible), 183 *(þider) cume* (Lambeth alone has *cume þider*, but this is also LX), 189 *dure* (Lambeth alone has *gate*, also LX), 206 *hete*. Nine more examples are ambiguous

A drop-off from 20 reasonably good examples to 13 seems well within reasonable expectations of variation in vocabulary choice, and words such as *dure* continue to conclude a notable minority of all on-verses throughout the poem. Despite the complications of textual and linguistic variants that are pervasive in any study of this poem, the conclusion of Fulk (2002), that LX sequences are resolved and equivalent to single heavy monosyllables in this position, seems to be correct. This poem should be added to La3amon's *Brut* in providing evidence for resolution in Middle English verse.

7.4 Resolution in Middle English

Both La3amon's *Brut* and the *Moral Ode* are probably from the 12th century (the *Brut* could be from the early 13th), and are among the earliest texts conventionally considered to be Middle English. That both show resolution in at least some metrical positions is an indicator that some dialects of Middle English retained the bimoraic trochee on a phonological level, ready to be reflected in verse. Explanations such as a poetic conventionality carried over from Old English are particularly unconvincing in the case of La3amon, whose metrical system is decidedly innovative from the perspective of Old English verse. And above all, the congruity of metrical resolution and the evidence of *ie*-reduction – both found in very much the same times and places – is striking. Both approaches, phonological and metrical, reinforce each other in pointing to the maintenance of the bimoraic trochee in at least southern and western dialects of early Middle English.

An informative contrast is provided by a very substantial poem of a similar date: the *Ormulum*, by Orrm, who composed a long and linguistically interesting, though perhaps not poetically inspired, religious poem in his East Anglian dialect.[16] Orrm made use of the same septenarius metre found in the *Moral Ode*, but he thoroughly fails to supply the kind of evidence for resolution found in that poem. An illustrative example of words ending his on-verses (I randomly chose to take these from lines 9001–9012) are: *flocc*, *hemm*, *i·noh*, *inn*, *3uw*, and *sloþ*. LX equivalents are never used. The off-verses show the requirement to end in a heavy trochee:[17] *bōke*, *lāre*, *follȝhenn*, *preōstess*, *Crīste*, *hāldenn*. As these examples imply, this is always filled by HX, never LXX or LX. Orrm is not utterly insensitive to syllable weight, but it is metrically relevant only as a correlate of stress in the key line-final trochee. As noted in the previous chapter, Orrm also shows no evidence

for the reasons identified by Fulk (2002: 348–349), or because of textual concerns: 129 *dure*, 138 *later*, 150 *haueð*, 162 *wele*, 175 *grame*, 185 *fare*, 195 *fader*, 198 *luue*, 201 *misduden*.

[16] I have by necessity relied on Holt (1878). As I write this, a new edition by Johannesson & Cooper (2022) is expected to appear very soon, and this will undoubtedly become the standard edition of the text.

[17] Orrm's orthography makes vowel length clear in most cases, and I have not generally modified his forms further. For clarity, however, I do add macrons to the following examples.

of weight-sensitive *ie*-reduction: neither his phonology nor his metre give us much information about foot structure.

As far as I know, there is no further evidence for resolution anywhere in Middle English verse. Minkova (1997: 443–444) argues convincingly against finding resolution in the *Proverbs of Alfred*, another early alliterative poem perhaps also composed in the 12th century. Resolution in later Middle English alliterative verse can be excluded with some confidence. As noted in §3.3, the off-verses of classical later alliterative poems must end in a trochee, a stressed syllable followed by a weak syllable. While these final stresses are often heavy, due to the proliferation of heavy syllables caused by open-syllable lengthening (§8.2), there are words that certainly or possibly remained short, but which can – in sharp contrast to Orrm's heavy cadences – stand in the strictly regulated position of a line-final trochee:[18]

(142) þei áuntred hem ðíder
'they ventured to there' (*Alexander A* 230b)

(143) hym rúched in his sádel
'he turned himself in his saddle' (*The Green Knight* 303b)

(144) if nō wáste cóme
'if no destruction should come' (*Wynnere and Wastoure* 253b)

If resolution were a strong metrical principle, we might instead expect to find words such as *haþelez* 'heroes' being used in such positions. Much the same, mutatis mutandis, could be said of Middle English rhyming poets such as Chaucer and Gower, where resolution very clearly plays no metrical role.

Syllable stress alone (relative, sometimes metrically manipulated), and not syllable weight, appears to be the only linguistic feature to make it into the metrical set (§3.5) of at least most later Middle English poets. This kind of negative evidence does not say much about phonological structure one way or the other. In the *Brut* and *Moral Ode*, resolution provides positive evidence for foot structure,

[18] I have only specifically checked this feature in the works of the Pearl Poet (Tolkien & Gordon 1968; Anderson 1969; Andrew & Waldron 2007), *Alexander A* (Magoun 1929), and *Wynnere and Wastoure* (Trigg 1990). A spot-check of the alliterative *Morte Arthure* (Hamel 1984) did not turn up any comparable examples, and if my sampling is representative, it may be possible that this and perhaps other poets did maintain a more Orrm-like weight-to-stress principle in key metrical positions. I have not investigated this matter fully. A further point of potential interest is that in the alliterative *Alexander B* (Magoun 1929), there are a few lines ending in words such as *þolie* (50, 380, 866, 984), *wonye* (848), and *manie* (26, 654; Putter, Jefferson & Stokes 2007: 24–25 consider this to be an 'unproblematic' disyllable). I have also not looked into this matter fully, but it may be worth exploring the possibility that this particular work – probably relatively early among the 'classical' alliterative poems, and perhaps originally located in the potentially more conservative southwest (Putter, Jefferson & Stokes 2007: 11) – did continue to make use of resolution.

which when taken together with phonological data, paints a fairly consistent prosodic picture for southern and western dialects. The absence of metrical data for resolution is, however, not evidence of absence with regard to prosodic feet. Syllables have always played a significant role in the linguistic structure of English, and their increasing prominence in metre and insensitivity to weight could equally reflect either changing poetic conventions or a hypothetical shift towards the syllabic trochee foot. For later stages of Middle English, phonological developments alone will have to suffice as evidence for foot structure, and it is this that I turn to now.

Chapter 8

Later Middle English Prosody

In the previous two chapters, I gathered phonological and metrical evidence to argue that southern and western dialects of Middle English continued to use the bimoraic trochee. This was the state of affairs in areas without significant Norse influence in the 13th century (and at least in Kent, the 14th). It remains to be seen how this system developed in the later 13th and 14th centuries, and how the bimoraic trochee interacted with the various changes in vowel quantity that took place in Old and Middle English.

8.1 Continuity and Revolution in Middle English Prosody

The transition from 'Old' to 'Middle' English has traditionally been seen as a period of relatively rapid prosodic change. Murray (2000: 617) conveniently summarises five major innovations which are often attributed to 'Middle English'; similar lists can be found in any number of handbooks and overviews, such as Lass (1992: 57–60, 70–76), Smith (2007: 110–126), and Fulk (2012a: 31–35; degemination not discussed):

1. Homorganic-cluster lengthening: *haldan* > *hālden* (> *hǭlden*) 'hold'
2. Closed-syllable shortening: *cēpte* > *kĕpte* 'kept'
3. Trisyllabic shortening: *sūþerne* > *sŭþerne* 'southern'
4. Open-syllable lengthening: *năma* > *nāme* 'name'
5. Degemination: *sunne* > *sune* 'sun'

Although the aggregated effects of these changes was considerable, a bald list like this may give the impression of a more sudden break or even prosodic revolution than is perhaps the case. Lass (1974) has famously written of the 'Great Length Conspiracy', and Ritt (1994: 103) goes further, saying of all the changes except degemination:

> It may indeed be claimed therefore that the single rule of Quantity Adjustment proposed above can describe all Early Middle English changes of vowel quantity in

a unified and comprehensive way. Luick's intuition about the relatedness of Early Middle English quantity changes has thus been corroborated.

There are, however, problems with seeking too much unity among these processes. For one thing, these changes probably did not occur rapidly or in a compressed time frame. Homorganic-cluster lengthening in southern English predates the rounding of long *ā* to *ǭ* (probably [ɒː] or [ɔː]), and has often been dated to Old English, and not necessarily late in that period (Luick 1921: 242–246; Hogg 2011: 208–209; Liberman 1992b: 165–172; Minkova & Stockwell 1992; Stockwell & Minkova 2002: 449). Closed-syllable shortening is also a relatively early process, perhaps taking place in later Old English (Luick 1921: 327–328). These changes significantly predate open-syllable lengthening, perhaps by centuries. Trisyllabic shortening is conventionally divided into at least two stages, and so is not even chronologically coherent within itself. Geminates may have survived very late in southern dialects: Chaucer systematically avoids rhyming any pairs such as *sune* 'son' and *sunne* 'sun', which would be distinguished only by consonant length (Luick 1921: 1013; Kurath 1956).[1]

Beyond the chronology, the scale of these processes needs to be considered. Neither homorganic-cluster lengthening nor closed-syllable shortening had a drastic immediate effect on the overall prosodic system. Closed-syllable shortening is a very common type of process – Osthoff's law, known from various branches of Indo-European, is closely analogous (§13.1) – and both involve only the interchange of heavy and overheavy syllables in specific words. There may well be a prosodic 'coherence' to shortening, which eliminated trimoraic syllables in favour of bimoraic ones, but this would be on the level of an ever-possible type of adjustment, always latently potential in any language organised prosodically around a moraic trochee. Moreover, the phonetic basis for shortening before a consonant cluster is probably potential in any language. The most that can probably be said is that these changes in the lengths of specific vowels may have reduced the functional load of vowel quantity, and so perhaps made it easier for a more drastic change like open-syllable lengthening to become phonologised.

[1] The objections to Chaucerian geminates raised by Minkova & Stockwell (1997: 37–40) rest largely on the assumption that 'there is no question that in word-final position consonants can only be of one quantity – short.' They accordingly conclude that the presence of (some) elided or apocopated final schwas in Chaucer must imply degemination. However, their example of *Ware the sonne in his ascencioun* (*Nun's Priest's Tale* 2956) could potentially have both elision and gemination easily enough, [sʊn.nɪn], and much the same will be possible for any 'final' geminate in an elision context. More generally, final geminates (sometimes only surfacing in prevocalic or presonorant contexts) are found in a variety of languages, such as Old Norse (the First Grammarian explicitly gives *ǫll* 'all (NEUT. NOM.PL)' and *ǫl* 'ale' as a contrastive pair distinguished only by consonantal length; Haugen 1972: 30), Norwegian (Payne et al. 2017), Swiss German (Kraehenmann 2001), Tashlhiyt Berber (Ridouane 2007), many varieties of Arabic (e.g. Al-Tamimi, Abu-Abbas & Tarawnah 2010; Davis & Ragheb 2014; A. Z. Foreman, personal communication), and others (see further Ham 2001; Davis 2011; Topintzi & Davis 2017).

8.2 Open-syllable Lengthening and Its Limits

It is only with open-syllable lengthening that the overall prosodic structure of southern and western English received really serious shocks. Open-syllable lengthening went a fair ways towards establishing a standard syllable weight, with most light, stressed syllables being eliminated: *name* became *nāme*, *cle(o)pien* became *clēpen*, *cradel* became *crādel*, etc. But even with this shock, a full standardisation of stressed syllable weight was never achieved. In English, automatic correlation of vowel length and syllable weight, standardising all stressed syllables as either *-V̄-* or *-V̆C-*, never fully developed.[2] Words such as *sune* 'son', *sadel* 'saddle', and *bodi* 'body' have ended up with short stressed vowels in modern English, and probably often had short vowels in later Middle English too. The explanation for this lack of length is the basis for one of the great debates in the scholarship on Middle English prosody.

Regarding some cases, such as *sune*, there is wide agreement that lengthening simply failed in high vowels, probably a reflection of the phonetic shortness typical of higher vowels (Minkova & Lefkowitz 2020: 158).[3] But beyond this relatively clear category, the causes for non-lengthening (or reshortening) are heavily disputed. In a valuable and important paper, Donka Minkova (1982) kicked off the modern terms of the debate by proposing that 'open-syllable lengthening' was in fact no such thing, but rather a form of compensatory lengthening.[4] She

[2] Compare the idea of a 'syllable-cut' prosodic system, argued to be emerging in Middle English by Vennemann (2000), Murray (2000), and Mailhammer (2007, 2009), though such a model is generally open to critique for its dependence on the questionable concept of ambisyllabicity (Jensen 2000). More specifically, syllable-cut approaches to Middle English have turned heavily on analyses of Orrm's orthography, searching for one consistent interpretation of his use of double consonants in all environments. On this point, I refer to the assessment of Fulk (1996: 481):

> [O]ur dissatisfaction with the orthography of the *Ormulum* results not from any intrinsic fault of Orm's system, but from wholly modern preconceptions about what an orthographic system should express: that is, linguists expect a one-to-one correspondence between individual graphemic practices and phonemes that is demonstrably not a feature of Orm's method. An examination of the scribal tradition out of which the *Ormulum* grew reveals that what we perceive as orthographic inconsistencies in the latter seem surprisingly natural when viewed in the context of early medieval English scribal culture.

[3] For the more dialectally restricted, and probably later, lengthening and lowering of high vowels – whence *week*, *wood*, etc. in standard English – see Luick (1921: 408–409).

[4] A similar idea had been suggested by Brugger (1893: 272) and Sarrazin (1898: 79), but found little acceptance in the 20th century (Fulk 1996: 491). After Minkova's vigorous and extensive defence of the idea, a number of others have accepted and sometimes elaborated on the compensatory lengthening approach. Without attempting an exhaustive list, I would highlight in particular Lass (1985), Hayes (1989: 266–269), Ritt (1994), Fulk (1996: 491), Bermúdez-Otero (1998), and Minkova & Lefkowitz (2020). See also Liberman (1992a) and Kim (1993), who identify the reduction of vowels to schwa, not the loss of schwa outright, as the essential factor – a revision that avoids some of the major criticisms that apply to the classic form of this proposal, but which still does not readily account for the lengthened vowels of *body*, *many*, etc., discussed below. For particularly important or useful classic

proposed that the change occurred together with the loss of final schwa, with the vowel being lengthened to make up for the lost mora of this vowel. Under this view, a word such as *name* would change directly from *nămə* to *nām*, never passing through an intermediate stage such as *nāmə*. The lack of lengthening in *body* is a matter of course: this word had no final schwa, and its second vowel was never lost, so there was nothing to compensate for (Minkova 1982: 48). Much the same goes for *gannet* (the modern double consonant here is unetymological), whose schwa was non-final and not lost (Bermúdez-Otero 1998: 174–178; Minkova & Lefkowitz 2020: 159–161). The variable development of *cradle* and *saddle* might be explained through variable realisation of the second syllable with a schwa, [əl], or a syllabic resonant, [l̩], and hence variation in whether compensatory lengthening would take place (Bermúdez-Otero 1998: 174–178; Minkova & Lefkowitz 2020: 161–163).

This is not the place to fully review this major controversy – such a project could easily be a full monograph in its own right – but there are several important criticisms of the compensatory lengthening view which should be noted (Lahiri & Dresher 1999: 711–713). Leaving aside some concerns about the quality of data cited with regard to *gannet*-type words,[5] there are two major objections.

The first, raised by Liberman (1992b) and Kim (1993: 268–269), concerns the relative chronologies of open-syllable lengthening and schwa-loss. I won't enter into a full discussion of the problem here, but in general, Minkova's approach is to appeal to the (very real) fuzziness in dating both changes to try and reduce the gap between them to zero for any given dialect (Minkova 1982: 43–46). Partly on the basis of Minkova (1991), an excellent monograph which surveys a wide range of evidence for *e* loss (and retention), such a simultaneous application of the changes does not seem likely to me. Even given the vast amount of ink already spilled on

discussions before Minkova, see Morsbach (1896: 84–93), Luick (1921: 397–409), Wright & Wright (1923: 39–43), Bliss (1952, 1953), and Dobson (1962).

[5] Of the ten relevant short-voweled words attested before 1400 that are cited by Minkova & Lefkowitz (2020: 160), *chalice*, *parish*, *planet*, and *relic* were probably all originally trisyllabic, and *haddock* should be set aside on account of its medial geminate (Lahiri & Dresher 1999: 695). Furthermore, the *Oxford English Dictionary* casts doubt on the derivation of very late Middle English *eddysche*, *eddysshe* from Old English *edisc*, *collop* is etymologically obscure, and *provost* may have originally had a long vowel that was shortened (cf. Norse *prófastr*). Lahiri & Dresher (1999: 695) also suggest that *trivet* could largely reflect a later reborrowing, though I am not fully persuaded of this. This leaves *gannet* and *radish* (only forms from Old English with *-k* or *-ch* seem to be attested before 1400, but there is little doubt that the French forms with *-sh* had entered before 1400) among the pre-15th-century data that seems reliable. Some of the words attested later must, of course, have entered the language earlier, but the later the attestation, the greater the possibility that the borrowing simply postdated open-syllable lengthening, making the remainder of the data in general less reliable. Whether these issues really undermine Minkova's generalisation about obstruent-final words failing to lengthen is another matter – it is true that positive examples of lengthening in this type are very limited, the only reasonably clear example being *naked* – but the whole question is in need of a thorough reassessment from the ground up.

the topic,[6] the matter still needs further investigation, especially of non-poetic texts, but as it stands, the traditional chronology needs a much stronger refutation than it has yet received.

The second issue concerns words with the *-i* suffix (Old English *-ig*), which is held to block lengthening. In modern standard English, words such as *body*, *many*, *heavy*, and *any* all have short vowels, and the compensatory lengthening approach is designed in part to explain this lack of lengthening. But the modern lack of length may be misleading, and there is some evidence that open-syllable lengthening did originally affect such words. Some of the evidence comes from late medieval spellings such as *boody* and *moony* (Wright & Wright 1923: 42).[7] There is also testimony from early modern sources: *many* is reported to have a long-vowel reflex by Robinson and Cooper in earlier modern English, and *heavy* is reported with a long vowel by Gil (Dobson 1957: 467, 472). Most likely, the ubiquity of short forms in such words is due to later shortening, and is not good evidence against open-syllable lengthening. Shortenings before *-i* are independently motivated, since words such as *any* and *ready* etymologically have long root vowels: Old English *ǣnig*, *rǣde** (Lahiri & Dresher 1999: 694). However these shortenings (which are common but not universal, as shown by, e.g., *weary*) are to be explained, they have had a considerable effect in obscuring the original operation of open-syllable lengthening, and the early evidence of long vowels should not be dismissed as readily as it has been by, for example, Dobson (1962: 126). If such forms are taken seriously, they seem to speak against the hypothesis of compensatory lengthening.

The traditional view, and the main alternative to the compensatory lengthening approach, is that the process is best described by the term *open-syllable lengthening*, with *namə* first passing through a stage *nāmə*, and only later becoming *nām* after

[6] An abbreviated selection of classic overviews includes Morsbach (1896: 109–113), Luick (1921: 540–546), Wright & Wright (1923: 68–71), and Koziol (1939). Much of the literature emphasises poetic evidence, including Topliff (1970), Burnley (1982), Cowen (1987), Jefferson (1987), Putter, Jefferson & Stokes (2007: ch. 1–2), Werthmüller (2014), and Baumann, Prömer & Ritt (2020). What is above all needed is more extensive study of prose scribal habits, in the mode suggested by Samuels (1972: 445–446).

[7] I have found some 17 instances of *boody* by searching the *Corpus of Middle English Prose and Verse* (https://quod.lib.umich.edu/c/cme/), and have double checked every reference as far as I am able using editions and digital facsimiles: *Partenay*, line 417 (MS Trinity College, Cambridge R.3.17, folio 13r, https://mss-cat.trin.cam.ac.uk/manuscripts/uv/view.php?n=R.3.17#?c=0&m=0&s=0&cv=30&xywh=-406%2C957%2C4563%2C2601; line numbers after Skeat 1866: 21); *Richard Lionheart*, lines 2200, 2770, 5061, 5121 (MS British Library, Egerton 2862, folios 11v, 16r, 43r, 44r; cited from Schellekens 1989); *Assembly of the Gods*, line 501 (MS Trinity College, Cambridge R.3.19, folio 75r, https://mss-cat.trin.cam.ac.uk/manuscripts/uv/view.php?n=R.3.19#?c=0&m=0&s=0&cv=77&xywh=2502%2C548%2C1994%2C1136; line number after Triggs 1895: 16); *Edmund and Fremund*, Book II, 674, 699, 713, 875; Book III 685, 708; Continuation 281, 291, 378, 402 (MS Ashmole 46; cited from Horstmann 1881: 408–409, 412, 425–426, apparatus; 443–445); *Pilgrimage of the Life of Man* 4618 (MS Stowe 952, folio 85r; cited from Furnivall & Locock 1905: 121); *Beues of Hamtoun*, line 3102 (MS University Library, Cambridge Ff. 2.38; cited from Kölbing 1885: 143, apparatus). The spelling *moony* is found over two dozen times in the *Corpus*.

the loss of final *e*. Short-vowelled forms of words such as *saddle* and perhaps *body* are traditionally explained as arising through the competing process of trisyllabic shortening (Lahiri & Dresher 1999: 711–713; Lahiri & Fikkert 1999). At the time of these two changes, many words would have alternated between two and three syllables, for instance *cradel* 'cradle' and *sadel* 'saddle' with plurals *cradeles* and *sadeles*. In the disyllabic forms, open-syllable lengthening could be carried out as expected (*crādel*, *sādel*), while in the inflected forms trisyllabic shortening would give *crădeles*, *sădeles*. Short forms might also arise through closed-syllable shortening in syncopated variants of inflected forms, such as *crădles*, *sădles*. Over time, the normal pressures of paradigm regularisation, along with the loss of unstressed syllables that would make the conditions for these alternations opaque, one vowel quantity would be generalised for each word. The choice of which, the long or the short, was to some extent random, and dialects old and new sometimes reflect different outcomes (Wright & Wright 1923: 49–50): hence standard *cradle* but *saddle*, and also dialectal *creddle*. Medieval spellings such as *seeuene* 'seven', *heeuen* 'heaven', *caastelis* 'castles', etc., also point to a greater original variability in the generalisation of quantity than is apparent from modern standard pronunciations.[8]

The interplay of these two impulses – one towards lengthening, one towards shortening – is an important chapter in the history of English prosody. The role of trisyllabic shortening (and likely also closed-syllable shortening in syncopated forms) in disrupting an otherwise rather unremarkable prosodic trajectory is noteworthy – to see why, I will take a step back and consider the matter in comparison to English's closest relatives.

8.3 Prosodic Trajectories in Middle English and Germanic

In many respects, the overall development of English resembles that of other Germanic languages. The starting point, which can be reconstructed at least as far back as Proto-Germanic (§13.1), is the bimoraic trochee. In the later Middle Ages, partly through the effects of open-syllable lengthening, a general alignment of weight and stress was approached – and in some languages, achieved. This lengthening is found widely in West Germanic (Goblirsch 2018: 70–105), including in Dutch (Fikkert 2000; Sytsema & Lahiri 2018), Low German (Hoffmann 1887: 49–51; Lasch 1914: 35; Becker 2002: 44–48), various dialects of High German (Franck 1909: 30; Becker 2002; Paul 2007: 80–82), and Frisian (Hofmann 1969; Sjölin 1969: 57, 68; Markey 1981: 192). Similar changes also operated widely in North Germanic (Kristján Árnason 2011: ch. 2; Skautrup 1944: 236–237; Riad 1992: ch. 6; and see §13.3).

[8] For *seven* and *heaven*, see also Dobson (1957: 471).

The chronology of open-syllable lengthenings in different languages provides a context for considering their causes. Low German and Dutch are conventionally held to have undergone lengthening particularly early, and one possible scenario to consider is that the change diffused from the Northern European Plain to Britain – though it is of course not a given that there is any direct connection between these lengthenings in different languages.[9] English is, however, also conventionally held to have begun open-syllable lengthening relatively early, with Luick (1921: 399–400) dating the change to around 1200, or perhaps even earlier, in the North, spreading southwards during the next few decades.[10] This is not a very secure dating, unfortunately – our sources for early northern dialects are exceptionally scanty and poor, and the nature of the poetic system means that metrical evidence is often inconclusive – but the earlier open-syllable lengthening took place in northern English, the less plausible it is that it could have been caused by contact with Dutch or Low German.[11]

Whether or not contact played a role, it seems that most Germanic languages of this period were in some way receptive to lengthening their open syllables, given how easily the change took place so widely across the language group. The linguistic contexts were in some way primed to be open to a drastic reworking of vowel lengths, and the elimination of many light, stressed syllables. In North Germanic, open-syllable lengthening was a major step in replacing the bimoraic trochee with the syllabic trochee, as will be discussed in §13.3.[12] In languages such as Icelandic and Norwegian, where all stressed syllables ended up with the

[9] The exact chronology here is hard to pin down. The timeline for this change in Dutch has recently been shown to be slightly later than traditionally assumed (Fikkert 2000; Sytsema & Lahiri 2018), and it might be worth reviewing the Middle Low German evidence thoroughly. In particular, it is worth bearing in mind that qualitative changes, such as writing <e> for older **i*, need not inherently imply lengthening: compare the cautionary discussion of Latin by Loporcaro (2011: 57–58) with the comments of Becker (2002: 44–45).

Other contact-based models are also possible: Hreinn Benediktsson (2002a: 187) envisions open-syllable lengthening as rooted in Romance, and spreading into Germanic languages through gradual prosodic diffusion. On the much earlier development of such lengthening and the elimination of contrastive vowel length in early Romance, see the overview by Loporcaro (2011: 50–58, with references).

[10] I would emphasise that this change cannot have reached Kentish before Dan Michel, whose patterns of *ie*-reduction depend on the maintenance of etymological vowel lengths.

[11] If open-syllable lengthening began 'spontaneously' in northern English, this might instead – speculatively – be partly and indirectly attributed to contact with Norse some centuries before. As the following chapters will argue, while Norse retained the bimoraic trochee until relatively late, already in the later Viking Age vowel losses had significantly reduced the incidence of phonological resolution in the lexicon, and made bimoraism across multiple syllables somewhat less common. The discrepancies between English and Norse, when in contact in Britain, may have made the bimoraic trochee less relevant and salient as a prosodic framework. Certainly alternations dependent on the process, such as *ie*-reduction, appear to be absent from northern and eastern (i.e. Norse-influenced) dialects. The lack of such prosodically relevant processes might then, in turn, have provided more favourable preconditions for learners to innovate a change like open-syllable lengthening without outside prompting.

[12] Fulk (1996: 484, n. 4, 500, 503–504) draws the parallel between the potential outcomes in English and the actual ones in Icelandic very effectively.

same weight, and with no contrast between light and heavy syllables, it is difficult to speak of a moraic prosodic system. In English, when words such as *name* underwent lengthening, the number of stressed light syllables in the language was greatly reduced, and the language seemed to be solidly on the path towards eliminating phonological resolution entirely.

However, as already noted, this kind of system was not fully adopted in English.[13] In particular, trisyllabic shortening worked directly to retain, or even create new instances of stressed Ĺ. As Lahiri & Dresher (1999: 708–709) note, this suggests that an active role continued to be played by some kind of bimoraic foot.[14] It is almost as if English was going in two directions at once, prosodically: moving towards a syllabic trochee on the one hand, and shoring up the old bimoraic trochee on the other.

There are at least two possible factors I can see for why this double trajectory might have been in evidence. One concerns the interplay of different dialects of English. If there is anything to my speculations in note 11, and open-syllable lengthening got its start in Norse-influenced dialects of English, this may have moved those dialects considerably in the direction of the syllabic trochee. However, at the same time southern and western dialects of English retained the bimoraic trochee, and some varieties provided learners with ample cues for this foot type through *ie*-reduction alternations.[15] Perhaps more than any other variety of Germanic at the time, southern English was in a position to try and maintain the bimoraic trochee even as open-syllable lengthening spread south and west.

The other major factor is Romance borrowings. Trisyllabic shortening is evident in many French-derived words such as *vănity* and *chăstity*. These words begin to be attested already in the 13th century in English, with borrowing continuing into the 14th and 15th centuries (Lahiri & Fikkert 1999: 248–252). Such words would have potentially done much to increase the number of stressed Ĺ syllables in English at precisely the time when open-syllable lengthening was severely cutting

[13] Though it seems possible that some varieties of English, particularly those that underwent open-syllable lengthening and schwa loss particularly early, may have indeed adopted a syllabic trochee foot for a time. They may then have reintroduced the bimoraic trochee through Romance and Latinate borrowings, or under the influence of other dialects of English. There is no law that 'Duke of York' alternations, from one state to another and then back again, can't take place in prosodic history. Even the presence of shortened stressed vowels as such in such dialects might be consistent with a syllabic trochee, since shortening in syncopated forms such as *sadles* would be entirely regular in maintaining stressed syllables of a standard weight. It is only the extension of short vowels to open syllables, in *sădel*, etc., that would run counter to this trend, and it might, perhaps, be the case that in some dialects such generalisations only began after the reintroduction of the moraic trochee. I should emphasise that this kind of scenario, though intriguing, is very speculative, and sources for the most relevant periods – the 12th and 13th centuries – are exceptionally poor for northern dialects.

[14] Lahiri & Dresher (1999) specifically invoke their Germanic foot, but the same results can be achieved by assuming widespread final-syllable extrametricality (Prince 1990). Extrametrical (or weak-branch) schwas in words such as lengthened *nāme* were eventually lost.

[15] This may not have been the only cue, of course. It is now impossible to determine what other signals for foot structure, if any, were available to listeners and learners but left no trace in our sources.

down on their number. This factor is in some ways potentially both a cause and an effect of the previous one: the motivation for borrowing *vanity* and *chastity* with short vowels – in striking contrast to the way that *vain* and *chaste* were adopted – may have been due to the greater robustness of the bimoraic trochee in (southern and western?) English, while the presence of such loans may in turn have done much to help learners continue to acquire the bimoraic trochee even after the loss of *ie*-reduction. Later on, Latin loans would have a similar reinforcing effect.

It is, of course, impossible to know how English would have developed without these factors. The late change of degemination could potentially have reintroduced short, stressed vowels in open syllables in words such as *runneth*, *(rʊn)(-nəθ)* > *(rʊ-nəθ)*, and such words could have been understood within the context of the bimoraic trochee.[16] But phonological and morphological losses of schwas had drastically reduced the number of cases where degemination could produce an open short vowel: the paradigm of *run* shows this form as both the shortened infinitive and the past participle (earlier *runnen*), and the shorter form *runs* (from *rennes*, *runnes**, with an originally northern inflection) would (slowly) displace *runneth*. Would such forms as did endure, such as lingering *runneth*, have had much effect on the prosodic system of English? If the language had moved fully to a syllabic trochee, would degemination have caused any major disturbance? I do not think so, but, thanks to trisyllabic shortening and loanwords, the language never reached the point of putting the matter to the test.

8.4 The Bimoraic Trochee in Middle English

From a certain point of view, it is fair to say that medieval (and indeed modern) English showed a remarkable degree of prosodic continuity (Dresher & Lahiri 2022). The bimoraic trochee in particular is a plausible foot type from prehistory down to the present day (Bermúdez-Otero 2018), and if foot formation and main stress are now oriented from the end of the word instead of the beginning, so that we say *barbárity* instead of the *bárbaritie* indicated by Levins' 1570 rhyming dictionary (Wheatley 1867: 109), this is an understandable consequence of the immense Romance and, especially, Latinate influence on the lexicon (Minkova 2006; Lahiri 2015).

Yet, in another way, this apparent continuity is almost peculiar. Given the early and extensive moves towards a syllabic trochee in northern and eastern Middle English, it probably wouldn't have been surprising if the modern system had ended up resembling that of, say, Icelandic more than anything else – and indeed,

[16] Degemination of course had similar results in close relatives of English such as Dutch and many varieties of Low and High German. For example, *rennen* 'run' went from having a real intervocalic geminate closing the first syllable to having the structure *rɛ-nən*. Due to a much greater tendency to retain weak vowels, such developments are arguably more important in the history of those languages than they are in English.

it is perhaps possible that some varieties of English abandoned the bimoraic trochee for a time only to acquire it again (note 13). The retention, and if necessary reacquisition, of the bimoraic trochee from late Middle English on is most likely due in large part to borrowing, first of Romance words, and later Latin ones. The apparent prosodic continuity of English may therefore, ironically, be at least partly a product of extensive outside influence.

Chapter 9

The Norse Syllable Controversy

In this and the following three chapters I turn from medieval English to the prosody of Old Norse, tracing the fate of the bimoraic trochee and phonological resolution in the sound changes and metrical systems of North Germanic from the early runic inscriptions through to classical Icelandic. Before I can begin to look at this prosodic history, however, there is an important preliminary issue that needs to be dealt with: the presence in the scholarly literature of two competing and fundamentally incompatible approaches to how Norse syllables are divided and classified as light (L) or heavy (H).

9.1 The Syllable Controversy

In §2.2.1 I outlined the rules for dividing Old English words up into syllables. Quite a few people – myself included – hold that these same rules also apply to Norse (Heusler 1890: 119–122, 1925: 62; Sievers 1893: 58; Kristján Árnason 1991: 117–118; Russom 1998: 15). As a reminder, this view sees syllabification as depending on three main principles, starting with the most important (or least violable):

1. The onset requirement: where possible, each syllable should have a consonant in the onset.
2. The syllable-weight requirement: where possible, a syllable should not end in a short vowel.
3. The sonority requirement: where possible, a syllable should begin before the least sonorous (most obstructing) consonant.

Syllable weight would then work just as in Old English (§2.3), being measured by moras: each short vowel (or short diphthong) contributes one mora, as does each consonant in the syllable coda, while long vowels (and long diphthongs) contribute two moras. Syllables with one mora are light, those with two are heavy, and those with three or more are overheavy.

By this view – which I will call the sonority-based view, since it roots syllabification in general principles of sonority widely found in languages around the world – a word such as *gras* 'grass' consists of one heavy syllable, while its dative form *gra-si* has two light syllables. A longer noun such as *land* has a single overheavy syllable, while the dative *lan-di* has a heavy syllable followed by a light one.

There is, however, an alternative approach to Norse syllables with a long history in the literature, adopted most prominently by Pipping (1903: 1–2) and Gade (1995: 30–32, 2002: 859). This approach, which I will call the coda-maximalisation approach, both divides syllables in a different way, and defines syllable weight differently. As my name for it might suggest, this approach has nothing like the onset requirement – quite the opposite, since it holds that all consonants that occur between vowels belong to the coda of the earlier syllable. That is, instead of *gra-si* and *lan-di*, these would be divided as *gras-i* and *land-i*.

Moras are then asigned to syllables in the usual way, so that *gras* still has two moras, and *gras-i* has one bimoraic syllable followed by a single-mora syllable. Under this view, it takes *three* moras to count as heavy. Thus *gras* and the first syllable of *gras-i* both count as light syllables, while *land* and the first syllable of *land-i* are considered heavy (not overheavy) because they have three moras each.

Here are the differences between the two schemes laid out side by side:

	Sonority		Coda	
	Syllabification	***Weight***	***Syllabification***	***Weight***
gras	gras	heavy	gras	light
grasi	gra-si	light-light	gras-i	light-light
land	land	overheavy	land	heavy
landi	lan-di	heavy-light	land-i	heavy-light

In many words, including *grasi* and *landi*, the final weight judgements are the same, though achieved in different ways. In others, however, there are clear differences, including the monosyllables *gras* and *land*.

9.2 Hesitations

Both these views have been adopted in studies that have made enormous and genuine contributions to the study of Norse metrics, and some recent scholars have clearly hesitated about how to decide between them. Myrvoll (2016: 242–249), in an excellent overview of the *dróttkvætt* metre, ponders both sides, but seems to almost default to the coda-maximalisation view without strongly endorsing it. Ryan (2011: 428–430) is also rather noncomittal, focusing on the points of overlap in weight judgements, and seeing the mismatches as too negligible for his purposes.

A different kind of approach to the two views is taken by Fulk (2016: 252–253, 269, n. 3), who accepts the coda-maximalisation approach for the purposes of the metre, while firmly stating that the sonority-based view is the correct one for linguistic structure. Such a mismatch between phonological and metrical structure goes against the expectation of metrical coherence: that, as a default guideline, metrical and phonological structures should by and large align with one another, and at a minimum should not be excessively contradictory (§3.5, Dresher & Lahiri 1991). That poets would employ a wholly distinct scheme of syllable division and weighting in their verse as compared to their normal speech is, at the least, a hypothesis that needs some very strong evidence to support it.

9.3 The Weight of *Trúa*

The weightiest argument in favour of the coda-maximalisation approach is the fact that in Norse poetry in general, long vowels in hiatus (that is, when immediately followed by another vowel, with no intervening consonants) scan as light syllables. That is, a word such as *trúa* 'trust' seems to scan as LL, equivalent to a word such as *koma* 'come'. The coda-maximalisation approach can indeed account for this equivalence very simply: in both *trú-a* and *kom-a*, the initial syllable would have two moras, and this would (under this view) make them both light (Bugge 1879).[1]

This treatment of hiatus vowels is well known, playing out in several domains in skaldic verse (Gade 1995: 29–34), and also visible in eddic poetry. Perhaps most notably in the latter, in the verse form known as *ljóðaháttr* – one of the two major eddic metres – certain types of lines are prohibited from ending in a plain trochee,[2] and typically end instead in a single monosyllable or a resolved disyllable. The normal type can be illustrated with this famous stanza from *Hávamál*, with the relevant position, the final word of the even lines (the full-verses, as they are known), in italics:

(145) Deyr fé, deyja frændr,
deyr sjalfr it *sama*;
ek veit einn at aldri deyr:
dómr um dauðan *hvern*.
'Wealth perishes, relatives perish, the very self perishes; I know one thing that never perishes: reputation for each dead person.' (*Hávamál* 77)

[1] It may be worth noting that this is not a case of simple linguistic shortening. For instance, *trúa* in modern Icelandic is [tr̥^{h}u:.a], whereas shortened ^{x}*u* should have fronted to give ^{x}[tr̥^{h}ʏ:.a].
[2] This is known as *Bugge's rule*.

These words could not have been replaced by heavy trochees (HX) – so, for instance, *hvern* could not be replaced by the archaic variant *hverjan* (on which see Noreen 1970: 320–321). With this in mind, compare the following line:

(146) hvat skal hans tryggðum *trúa*?
'how should one trust in his trustworthiness?' (*Hávamál* 110.3)

Here *trúa*, though superficially of the shape HX, is allowed. This metrical treatment of hiatus words, and hiatus words alone, as having light initial syllables is very consistent throughout the corpus of medieval Norse poetry: words such as *trúa* scan just like *sama* or *koma*, resolving in the same kinds of contexts, and occurring in positions where a normal heavy trochee such as *hverjan* would be prohibited.

Without a doubt, words such as *trúa*, with long vowels in hiatus, do behave metrically as if their initial syllables were light. This is the strongest evidence for the coda-maximalisation approach to Norse syllables. The question is, can this evidence support the hypothesis of a novel, typologically unusual scheme of syllable division and weighting for Norse?

There are reasons not to take the evidence of *trúa* words too far. Metrical shortening in hiatus is known from other poetic traditions, such as *epic correption* in Greek (Clapp 1906; West 1982: 11–12) and *vocalis ante vocalem* shortening in Vedic (Arnold 1905: 134–137; Macdonell 1916: 437; Malzahn 2001: 160–164; Gunkel & Ryan 2011: 55–56). These parallels make it clear that long vowels can have peculiar metrical behaviour even in a system of syllable division and weight that (in the cases of both Greek and Sanskrit) is very certainly of the sonority-based type.

Rather than pointing to a wholesale reorganisation of syllable division and weight, words such as *trúa* are only able to provide evidence that something unusual was going on in hiatus sequences. Kristján Árnason (1991: 111–118) argues that one mora was transferred from the first syllable to the second in order to compensate for the lack of an onset in the second syllable. Another possibility would be to interpret hiatus vowels as phonetically somewhat shortened: long enough that they were not affected by the qualitative changes to short vowels, but short enough that they were not considered heavy enough to fill out a foot on their own (an account that turns on a phonetically oriented view of sound change).[3] Other explanations are also imaginable: what matters less is the precise explanation itself, and more the scope, that the only thing to be accounted for is the hiatus environment specifically.

[3] More precisely, this would imply that *trúa* was phonetically half-long, [tr̥^{h}u·ɑ], counting as phonologically short – *(tru-a)* – but phonetically too long to be caught up in the general fronting of truly short *u* in Icelandic. Mutatis mutandis for other vowels.

9.4 Rhymes

The other possible support for coda maximalisation comes from the in-rhymes of *dróttkvætt* (on rhyming patterns in general, see Kristján Árnason 2007: 97–107; Myrvoll 2016: 237–241). Full rhymes, which classically occur in off-verses, are equivalents of vowels plus usually one or more following consonants. In very many cases, metrical rhymes involve sequences that the sonority-based approach would place in different syllables, but which the maximalisation model would take as single syllable rhymes (on *rhyme* as a phonological term, see §2.2):

(147) hvé hr*ein*gróit st*ein*i
'how (I praise the shield) purely implanted with (precious) stone' (Bragi inn gamli Boddason, *Ragnarsdrápa* 1.2; Clunies Ross 2017)

(148) fl*ot*na randar b*ot*ni
'(the fall) of seafarers at the base of the shield' (Bragi inn gamli Boddason, *Ragnarsdrápa* 7.2; Clunies Ross 2017)

When the full corpus is considered, however, it becomes difficult to simply equate the unit of in-rhyme with any specific linguistic constituent. Less often, a verse sometimes seems to show in-rhyme that would match the phonological rhyme under a sonority-based view, but not under the maximalisation approach:

(149) hræva d*ǫgg*, þars h*ǫgg*nar
'dew of corpses where hewn (arms and legs)' (Bragi inn gamli Boddason, *Ragnarsdrápa* 4.3; Clunies Ross 2017)

(150) H*ęr*gauts vinu b*ar*ðir
'attacked by … the lover of the Battle-Gaut'[4] (Bragi inn gamli Boddason, *Ragnarsdrápa* 5.8; Clunies Ross 2017)

(151) sverða gn*ý*s at fr*ý*ja
'to reproach for the din of swords' (Sigvatr Þórðarson, *Nesjavísur* 4.2; Poole 2012a)

The first of these involves a metrical rhyme that would correspond well to the phonological rhyme assumed under a sonority-based syllable division.[5]

[4] *Hergauts vinu*, 'of the lover of the Battle-Gaut (i.e. Odin)' is part of a larger kenning for 'stones'.
[5] This verse is, it should be said, unusual – though hardly unparalleled – for showing a full rhyme in an on-verse.

The same is true of the second, except that the rhyme is more inexact, with a differing vowel, and of the 'empty rhyme' of the third, if (as seems likely on other grounds; §3.2.2.1) the final *-s* of *gnýs* was syllabified across the word boundary: *gný-sat-frý-ja*.

There are also verses – again, only a minority – that show metrical rhyme patterns that just don't map perfectly onto a syllable rhyme under either model:

(152) m*ǫg*r Sigvarðar H*ǫg*na
'the son of Sigurðr … the (daughter) of Hǫgni'[6] (Bragi inn gamli Boddason, *Ragnarsdrápa* 2.4; Clunies Ross 2017)

(153) hjǫrd*yn*r svalar br*yn*jur
'sword-din … cold mail-shirts' (Sigvatr Þórðarson, *Nesjavísur* 5.4; Poole 2012a)

(154) dr*aug*r ī þæimsi h*augi*[7]
'a comrade in this mound' (Karlevi 1.4; Naumann 2018: 101–105)

Either approach would take *-ǫgr* and *-ynr* as syllable rhymes, and while the sonority model might allow a resyllabification to *draug-rī* in (154), moving a segment out of a coda and into an onset would go against the principle of coda maximalisation. Morphological constituency could play a role (Kristján Árnason 1991: 101–102, 2007: 100–101), but this would only be evidence that rhyme was at least partly built on features other than syllable rhymes.

Even more than alliteration (which depends on initial consonants, not syllable onsets), rhyme seems to reflect not the natural prosodic constituents of the syllable, but a more linear arrangement of sounds. As Kristján Árnason (1991: 101, in 96–103) puts it: 'in the case of in-rhyme, no [prosodic] constituent seems to be involved, since the syllabic position of the participating segments varies so much'.

9.5 Non-metrical Evidence Against Coda Maximalisation

While the two preceding sections might be taken as presenting some evidence for the coda-maximalisation approach, they do not tell the whole story. Fix & Birkmann (1998) examined the evidence of where Icelandic scribes divided words that were split over line breaks. They found a robust pattern of such divisions falling between consonants in a word-medial cluster: *nef-niz* 'is named', *mar-gan* 'many', etc. (see especially 1998: 26, 28). This is indirect evidence,

[6] *meyjar … Hǫgna* 'of the daughter of Hǫgni' is part of a longer kenning for 'shield'.
[7] This runic inscription transliterates as **traukr : i : þaimsi · huki**.

but is most simply interpreted as suggesting that this is where the syllable divisions fell in such words.

Further evidence comes from later phonological developments in North Germanic, such as the various types of vowel weakening in many dialects of Norwegian and Swedish known as *vowel balance* (Riad 1992: ch. 4). A typical form of this weight-sensitive change can be illustrated using the weakening of final *-a* in Norwegian infinitives: light-stemmed words such as *stela* 'steal' maintain the final vowel, while a heavy stem such as *drøyma* 'dream' may reduce it to *drøymə*. A further particularly interesting feature is that words like *velja* 'choose' behave variously in different vowel-balance dialects, becoming *veljə* in some varieties, but remaining *velja* in others (Grønvik 1998: 46–48; Iversen 1973: 8). This kind of patterning can technically be described under either syllabification model under discussion, but it is much harder to motivate under the coda-maximalisation model: it comes across as an arbitrary weakening of certain syllables, with an equally arbitrary variation in syllabification between *velj-a* and *vel-ja*.

In a sonority view, the weakening is easy to not only describe, but also to motivate, and it matches a pattern seen already in high-vowel deletion and *ie*-reduction in English: *a* is preserved within the bimoraic foot, and weakened outside of it (Riad 1992: 171–177, 189). That is, *(ste-la)* undergoes no reduction, while *(drøy)-ma* does. The variation in *velja* would be between *(vel)-ja* and *(ve-lja)*.[8] This variation is straightforwardly motivated by the competition of two principles in syllabification already assumed under the sonority approach (§9.1): the first option privileges the principle of syllable weight, the latter the principle of beginning each new syllable before the point of lowest sonority. It is entirely understandable that some dialects would, as an innovation, readjust their preferences so that the syllable-weight requirement became less strong than the sonority-break requirement.

9.6 Choosing an Approach

A general typological view of how languages in general seem to divide syllables strongly favours the sonority model. The preference for syllable onsets over syllable codas, and a sensitivity to the sonority of the sound involved, is widely seen in languages around the world. Though the details of syllabification can and do vary from language to language, the widespread recurrence of these factors suggests that there is something about the way the human mind interacts with the pulses of speech that, among other things, tends to strongly favour syllables with

[8] The syllabification *vel-ja* is the necessary one for Norse metres. This can be easily shown by the ability of words such as *benja* 'wound (GEN.PL)' to fill the final trochee of the *dróttkvætt* cadence, and the absence of such words from the end of *ljóðaháttr* full-verses. In other words, the distribution of words such as *velja* and *benja* in such contexts is precisely inverted from that of words such as *koma* and *trúa*.

overt onsets (Pulgram 1970: 47; Clements & Keyser 1983: 37–38; Topintzi 2011; Goldsmith 2011). The typological oddness of syllabifications such as *flotn-a* 'of sailors', *geml-is* 'of an eagle', or *niðj-a* has not, as far as I can tell, been acknowledged by anyone promoting a coda-maximalisation approach, and I know of no attempts to defend or explain it on linguistic grounds.

Closer to home, there is a further problem with coda maximalisation: Old English, as already discussed, is widely acknowledged to follow the sonority-based model, in keeping with typological expectations. Much the same system can easily be reconstructed for Proto-Germanic as well.[9] This raises the question of how a coda-maximalisation system might have evolved in Norse and (apparently) in Norse alone. That is, this model needs to be justified both on typological and immediate diachronic grounds.

Metrical evidence can often be a valuable window onto linguistic prosody, but the nature of that evidence always needs to be carefully weighed against other sources of data and the probability of a given hypothesis in a wider framework. The coda-maximalisation approach, while an understandable attempt to explain the genuinely noteworthy behaviour of words such as *trúa* and the normal patterning of the in-rhyme, is at odds with all available typological and non-metrical evidence for North Germanic. Furthermore, the testimony of *trúa*-type words is limited to a single class, which may have a specific explanation as exceptions, and the evidence of rhymes does not fully map onto syllable rhymes under any model. All things considered, I retain the standard model, and in the rest of this book will apply a sonority-based approach to Norse syllable division and weight without comment.

[9] On the syllabification rules for Gothic, an essential touchstone for Proto-Germanic, see especially Riad (2004).

Chapter 10

Vowel Loss in Runic Inscriptions

The two chapters following this one will each deal with different aspects of metrical evidence for Norse prosody. None of the poetry in question is likely to predate the year 800 or so, and most of it is clearly rather later than that.[1] This means that it largely comes after some very significant prosodic developments in North Germanic: (at least) two major waves of vowel reductions that had an immense effect on the details and distributions of syllable weights.[2] These are often referred to as *syncope periods*, though this term is somewhat inexact: strictly speaking, *syncope* should refer to reductions in the middle of a word, and *apocope* to reductions in absolute finality. In North Germanic, however, there were a number of vowel reductions and losses that do not divide neatly into distinct syncope and apocope processes. There is also the question of what 'final' really means: if a loss can occur in true finality and before an extrametrical final consonant, but not before other consonants, this would seem to be a type of apocope rather than syncope (Riad 1992: 142). I favour neutral words such as *loss* or *reduction* (including reduction to zero) in the following discussions.

The workings of these loss periods is mainly attested in runic inscriptions, and though their general chronology is well known in the phonological literature,[3] a number of outstanding problematic issues remain. I won't try to resolve all of them, or deal with every messy philological issue involved, but instead will focus on trying to extract the main implications for foot structure: Do these vowel losses provide evidence for foot structure during these periods, what kind of consonant extrametricality might be at work, and what was the state of the language after all this was said and done, going into the later Viking Age and the manuscript age that followed?

[1] The most recent attempt at a linguistic dating of the eddic corpus is Sapp (2022). For the chronology of skaldic verse, see Myrvoll (2014).

[2] It may be worth noting that these changes also preceded the main periods of contact between Norse and English (cf. the speculations in note 11 in §8.3).

[3] See especially Riad (1992: 106–151), Birkmann (1995: 160–186), Grønvik (1998: 13–26), Schulte (1998: 76–149), Nielsen (2000: 95–103, 259–263), and Kiparsky (2009: 19–26).

10.1 The Starting Point: Early Runic

The earliest direct written records of any Germanic language (not counting names recorded in Hellenised or Latinised forms) come from inscriptions in the Older Futhark script. This is an alphabetic script, almost certainly derived from Alpine alphabets of northern Italy (Mees 2000; Stifter 2020), used to write over 200 surviving inscriptions on stone, wood, and metal. Though the corpus is not large, and many inscriptions are problematic in one way or another – due to brevity, damage, and/or lack of context for interpretation – enough inscriptions can be read with enough confidence to give a fairly good picture of the state of North Germanic in the period of roughly 200–500 AD. I call the language represented in these inscriptions *Early Runic* (following Nielsen 2000), but it's known by many names: especially Proto-Norse,[4] Ancient Nordic, or Primitive Norse, and terms such as Urnordisch and Urnordisk are sometimes taken over into English as well.

The value and difficulty of Early Runic can be seen in one of the longer inscriptions, the famous Tune stone (KJ 72),[5] found some 70 kilometers south of Oslo. The inscription is generally dated to around 400 AD. Transliterating the runes in bold, as is the normal convention when emphasising the precise reading of an inscription, and indicating partially legibile letters with a dot underneath, the two sides of the stone read:[6]

(155) a. **ekwiwazafter · woduri**
dewitadahalaiban : worahto · ṛ

[4] I prefer to reserve the label 'proto' for linguistic stages that are reconstructed through the comparative method.

[5] For the sake of having clearer names, I typically refer to runic objects by a standard name or title, where one is in use, but on the first citation of a source I also provide its runological abbreviation and number. Here, this indicates inscription number 72 in Krause & Jankuhn (1966), the standard corpus of texts in the Older Futhark. DR stands for *Danmarks runeindskrifter*, and refers to Jacobsen & Moltke (1941). Ög, Sö, Sm, and Vg stand for *Östergötland* (Brate 1911), *Södermanland* (Brate & Wessén 1924), *Småland* (Kinander 1935), and *Västergötland* (Jungner & Svärdström 1940), respectively, and refer to entries in the substantial series *Sveriges runinskrifter* (SR). All these inscriptions are conveniently and freely available through the wonderful *Scandinavian Runic-text Database* (https://app.raa.se/open/runor), which uses the same sigla to identify inscriptions.

[6] Note that I transliterate the rune ᛉ as *z*. This was partially rhotacised at some point in the history of North Germanic, resulting in a sound that was widely perceived as a rhotic by speakers of other languages (Jiriczek 1926), but which remained distinct from Proto-Germanic **r* in most positions throughout most of the Viking Age. As the exact chronology is unclear, I use *z* when transliterating the Older Futhark ᛉ, and ʀ when transliterating the Younger Futhark ᛦ or ᚱ. In phonetic interpretations, I will use [z] or [rʲ] depending on my judgement, without making any strong commitments to the exact pronunciations.

b. **zwoduride : staina ·**
þrijozdohtrizdalidun
arbijasijostezarbijano

A boldfaced block like this might seem entirely impenetrable, and there are indeed many real obstacles to interpretation. Word boundaries are only sporadically indicated, two or three words have probably been lost due to damage, there is at least one likely scribal error (**dalidun** is probably for *da[i]lidun*), and certain phones and important phonological features are not systematically indicated (including nasal consonants before stops). That said, generations of interpretative work on the stone have produced a consensus reading of most (not all) words. Here is the text as analysed by Eythórsson (2013), to my mind the most convincing reading to date (the text is no longer in boldface, to show that a basic linguistic interpretation has been imposed):

(156) a. ek Wǐwaz after Wōdurīdē wita*n*da-h^{a}laiban wor^{a}htō r[…][7]
'I, Wiwaz, made [runes] in memory of Woduridaz, the bread-guard.'

b. […z][8] Wōdu-rīdē staina […][9]
'[?Wiwa]z [set up] a stone for Woduridaz.'

c. Þrijōz dohtriz da[i]lidun arbija, sījōstēz arbijanō.
'Three daughters shared the inheritance, the very closest of heirs.'

The superscript vowels are epenthetic, and are potentially of considerable prosodic interest. Such vowels are common in Early Runic, but not normally reconstructed for Proto-Germanic and certainly absent in classical Norse. They tend to appear between a liquid and a neighbouring consonant, but aren't universally present in such contexts: *doht<u>r</u>iz*, twice *ar<u>b</u>i-*.

Epenthesis aside, this inscription preserves many vowels whose reductions and losses will be the subject of this chapter. Final *-a* in *staina* and *arbija*, and before *z* in *Wǐwaz* are all preserved, as is the sequence *-iz* in *dohtriz*. Strictly speaking, there is no overt indication that the vowels in the endings *-ē(z)* and *-ō(z)* are still long, but the fact that they are not lost in later Norse – only reduced to *-i(r)* and *-a(r)* – suggests that they are indeed still bimoraic, as they were in Proto-Germanic. Medially, unstressed *u* is also preserved in *Wōdu-*, where it would eventually be deleted.

This is not to say that there have been no changes at all to unstressed vowels by this date. Proto-Germanic final **-ō* appears to have been shortened and raised to **-u*

[7] Probably *rūnōz* 'runes'.
[8] Plausibly *Wǐwaz*, a proper name, though *mez* 'for me' is also a possibility.
[9] Possibly a word such as *satidē* 'set up' has been lost here.

in Northwest Germanic (Ringe & Taylor 2014: 15–16), and this is reflected in words such as *mīnu* 'my (FEM.NOM.SG)' (Opedal, KJ 76, c. 350 AD). This falls together with Proto-Germanic short **-u*, which are both retained during the main period of Early Runic, and share the same patterns of retention and loss in the later periods. Another inscription, the Vetteland stone (KJ 60, c. 350 AD), has the verb *ist* 'is', from Proto-Germanic **isti*, which shows the loss of a final high vowel in the second syllable of a low-stress, high-frequency word. This is the only example I know of for loss of **i* (or indeed any final vowel) in Early Runic before the major loss periods discussed below, and the vowel is normally retained in inscriptions in words such as *hal(l)i* (Strøm, KJ 50, probably after 450 AD, perhaps as late as 600; Düwel 2008: 34). There have also been monophthongisations (Early Runic unstressed *ē* is often from **ai*). On the whole, such changes to Early Runic unstressed vowels are of little real significance, and outright losses are very restricted indeed before the 6th and 7th centuries. It is the following centuries – the language of which may be called 'Transitional Runic', defined negatively as the period after classic Early Runic and the late Viking Age language attested in abundance starting in the 10th century – that see the vowel losses that are the main focus of this chapter.

10.2 Early Vowel Loss: One Phase or Two?

By around the year 600, runic inscriptions had begun to show unmistakable losses of at least some unstressed vowels in at least some contexts. Because of difficulties in the data, there isn't a full consensus about the exact lines of development, but these early changes are often grouped together into a single *first loss period*.

A useful anchor point in a period where the data is typically sparse, hard to interpret, and difficult to date comes from a group of closely related stones from the area of Blekinge, in what is now the far South of Sweden. The three earliest of these are the Stentoften, Gummarp, and Istaby stones (DR 357/KJ 96, DR 358/KJ 95, and DR 359/KJ 98, respectively), and a fourth, the Björketorp stone (DR 360/KJ 97), probably dates from slightly later than the others in the Blekinge group. The following list gives a selection of important forms from the earlier three inscriptions, illustrating both retentions and losses of unstressed vowels in (probably) the beginning of the seventh century. Note that the old rune for *a* is often used to write epenthetic vowels, with full [ɑ] being represented instead by the letter (which has variant forms) that used to stand for [j].[10] This new *a*-rune is transcribed as ᴀ, and is very common (ls). As above, all epenthetic vowels are written in superscript (on the uncertain final vowels of 157c and 157e, see below):

[10] The rune's name was **jāra*^{n} 'year', and when initial **j* was lost, this became **ār(a)*. By the acrophonic principle, the sound value of the rune also shifted to be *a*. In later runic inscriptions, the old *a*-rune would go on to stand for the nasalised vowel *ą*. This development is also driven by the acrophonic principle, since its name is originally **ansuz*, with the *n* nasalising the preceding vowel.

(157) a. hʌþu-wol^{A}fz < **haþu-wulfaz* (Stentoften)
b. hʌri-wol^{A}fz < **harja-wulfaz* (Stentoften)
c. hʌþu-wol^{A}f^{A} < **haþu-wulfaz* (Gummarp)
d. ʌf^{a}tz < **aftir* (Istaby)
e. hʌri-wul^{a}f^{a} < **harja-wulfa^{n}* (Istaby)
f. hʌþu-wul^{a}fz < **haþu-wulfaz* (Istaby)
g. h^{A}eru-wul^{a}fiz < **heru-wulfijaz* (Istaby)[11]

On the data from the 'curse formula' portion of Stentoften, see §10.2.1 below.

Three more data points might date from a similar period, though they all involve extra problems:

(158) a. Hrōzēz< **Hrōzijaz* (By, KJ 71, 6th century)[12]
b. W$\check{\text{ī}}$z < **W$\check{\text{ī}}$waz* (Eikaland, KJ 47, 450–600)
c. hʌukz < **haβukaz* (Vallentuna, before 650)[13]

This small dataset is just for what might be called 'Early Transitional Runic', from a narrow window in the late 6th and early 7th centuries. It is small, and decidedly ambiguous on a number of points. Still, it does show, very clearly, that at least some words that had once had a final **-az* (157a, 157b, 157f, 158b, 158c), have lost the unstressed **a*. Most of these examples occur after historically heavy syllables, though in *W$\check{\text{ī}}$waz* > *W$\check{\text{ī}}$z* the original length of the root vowel is uncertain (Kroonen 2013: 590).

There is also reduction in the ending **-ijaz* (157g, 158a), which most likely represents a slightly earlier and distinct change (Birkmann 1995: 176, Schulte 1998: 83–87, 97). Certainly the example of *Hrōzēz* (158a) suggests this, since it occurs alongside unreduced forms such as *irilaz* in the same inscription. That this was a special development is further suggested by its outcome as a long vowel, **-ī-*, which escapes any further deletion: contrast **hirðijaz* > *hirðir* 'shepherd' with **niþjaz* > *niðr* 'relative' and **winiz* > *vinr* 'friend'.

One point is unclear, but doesn't necessarily have a strong bearing on the wider picture: this is the accusative singular **-a^{n}*, reflected in *-wolʌfʌ* (157c) and *-wulafa* (157e). These have a final graphic ʌ/*a* where this original **-a^{n}* stood, and where epenthesis would be fairly unexpected. Perhaps the nasalisation of the vowel made

[11] The spelling *h^{A}eru-*is probably simply an error, the carver beginning to write *haþu-*, echoed from the start of the preceding word, but catching the mistake before writing any further. When something is written in stone, it is hard to erase.
[12] This is read as *hrōzē*, a dative singular, by Antonsen (1975: 80), in part because he thinks the reading *hrozez* is 'linguistically impossible'. Antonsen's reading is rejected, I think rightly, by Birkmann (1995: 152).
[13] The discovery of this die postdates Krause & Jankuhn (1966); I have relied on the description by Birkmann (1995: 91–93).

**-aⁿ* more resistant to deletion than was **-az*, but just how much of a gap there was between the losses of the two vowels is fairly unclear. At least by the time of the Eggja inscription (c. 700), nasalised **-aⁿ* had disappeared (*land* < **landaⁿ*, probably also *stain* < **stainaⁿ*, if this really is accusative).

So far, what can be really safely concluded is that the non-nasalised **a* was lost after at least some heavy monosyllables and in the *ja*-stem ending **-ijaz* by the early 7th century. More than this requires a closer examination of some problematic data, which may or may not support a further division of this early vowel-loss period into two periods – and which involves a closer consideration of syllable weight during this time.

10.2.1 Kiparsky on Overheavy Syllables

One of the most interesting features of the Blekinge group is that the Stentoften stone shares part of its content – the so-called *curse formula* section – with the later Björketorp stone, with the latter showing some identifiable linguistic innovations. Reading the two side by side is almost like watching Early Runic take small steps towards later Norse right before your eyes. There are three forms in this repeated section that Kiparsky (2009: 25, ex. a4) cites as evidence for a hypothesis that the earliest vowel deletions should be separated into two distinct phases – phases Ia and Ib, let's call them – with the dividing line falling sometime between Stentoften and Björketorp.

Specifically, Kiparsky sees the first phase as allowing vowel loss only when two constraints are satisfied:

1. The Overheavy Constraint: Deletion can't produce overheavy syllables (with three or more moras).
2. The Minimal-Word Constraint: Deletion can't produced a word with fewer two moras.

For Kiparsky, epenthetic syllables are taken as real and important factors in determining how many syllables a word has, and how heavy they are. He is rather unusual in taking this approach, but at least in the Blekinge group, epenthesis does seem relatively stable and consistent, and it seems fair to explore the idea that it might be prosodically significant. Just as importantly – though I think wrongly, as I will argue shortly – Kiparsky considers all final consonants to be extrametrical, invisible for purposes of syllable weight.

Kiparsky's first constraint, his ban on overheavy syllables, seems to have some merit – though the evidential basis for it is rather slight. He is certainly correct that in the early Blekinge group (and a couple of other inscriptions, some of which do not provide good evidence), vowel loss never produces any overheavy syllables, assuming that epenthesis counts as real, and that at least final *-z* is extrametrical.

For instance, ᴀ-*fat⟨z⟩* (157d) would have one light syllable, *a*-, and a second with two moras: one from the epenthetic *a*, and another from the *t*, with the *z* being discounted as extrametrical.

Such negative evidence is not very strong. The amount of data is very small, and a mere absence of words overheavy from vowel deletion could very easily just be due to chance. Positive evidence is much more important, and there is indeed a little: specifically, three words from the curse formula section of Stentoften, which might show vowel deletion being blocked by a constraint against overheavy syllables. In all three cases, I also give the parallel word from the slightly later Björketorp version, which Kiparsky (2009: 25, ex. a4) sees as evidence that the overheavy constraint was relaxed during the intervening years:

(159) a. bᴬriutiþ 'breaks' < **briutiþ* (Stentoften)
b. bᴬrūtz [bərȳtrʲ] (Björketorp)

(160) a. hidez '?bright(ness)' ?< **haiðiz* (Stentoften)
b. hᴀidz (Björketorp)

(161) a. -lᴀsᴀz '-less, without' < **-lausaz* (Stentoften)
b. -lᴀusz (Björketorp)

Example (159) is particularly complicated and important – though it provides no support for Kiparsky's chronology – and I discuss it separately in §10.2.2, before considering (160) and (161) in §10.2.3, and the qualified evidence they do provide for the theory of two distinct early phases of deletion.

10.2.2 Extrametricality and Non-deletion in bᴬriutiþ *and* brjótið

The *bᴀriutiþ* of (159a) has been reduced by one final syllable from Proto-Germanic **briutidi*, but this change may well have happened centuries earlier, perhaps in parallel with the reduction of **isti* to *ist* mentioned above. If so, then the source form in Early Runic was **briutiþ*, and this clearly underwent no further vowel loss by the time the Stentoften inscription was carved. This contrasts strikingly with the matching form *bᴀrūtz* from Björketorp (159b).

For Kiparsky, the lack of vowel loss in *bᴀriutiþ* could be a matter of his constraint against overheavy syllables during this earliest loss period (though he doesn't explicitly cite this particular form in that context, or indeed comment on its vowel retention at all). If the final vowel were lost, the word would be left as ˣ*bᴀriutþ* [bəriutθ] or the like. The stressed syllable would have two moras from the diphthong, and a third from the *t*. Even if the *þ* were extrametrical (as per Kiparsky's rules), and not contributing a fourth mora, the syllable would already be overheavy. Kiparsky, as noted above,

suggests that the overheavy constraint was relaxed by the time of Björketorp, allowing a form such as *bᴀrūtz* to arise through vowel loss.

This particular pair, however, won't sustain this kind of analysis. Specifically, the lack of vowel loss in *bᴀriutiþ* can't be due to an archaic constraint with chronological significance, since this form would, most likely, have never undergone deletion at all. This can be shown by the development the second-person plural verbal ending, which was probably identical to the third-person singular in Early Runic: both **briutiþ*. This plural form remained unreduced in literary Norse, which has *brjótið* 'you (plural) break'.[14] It seems clear that the change between Stentoften's *bᴀriutiþ* and Björketorp's *bᴀrūtz* was not phonological, but purely morphological: the replacement of the old third-person ending in *-iþ* with the second-person singular form in *-(i)z* > *-(i)ʀ* (literary Norse *-r*). This change affected not only the consonantism of the ending – something this inscription has long been famous for illustrating (Nielsen 2000: 263–264, with references) – but the vocalism as well.

	Early Runic		Stentoften		Björketorp		Norse
2sg	*briutiz	>	*brȳt(i)z	>	*brȳtrʲ	>	brýtr
3sg	*briutiþ	>	bᴬriutiþ	→	bᴬrūtz = [bəry:trʲ]	>	brýtr
2pl	*briutiþ	>	*briutiþ	>	*briutiþ	>	brjótið

Table 10.1 Sound change and analogy in Norse *brýtr, brjótið*.

The development of these forms can be shown schematically in table 10.1, with > indicating (mostly) regular sound change, and → major analogical replacement. This lack of deletion in *brjótið* is particularly important because it suggests that **briutiþ* and **briutiz* did not have the same prosdoic structure in Early Runic. In particular, it suggests that Kiparsky's rule that *all* final consonants count as extrametrical is likely incorrect. More likely, only the word-final *-z*/*-ʀ* was extrametrical.[15] The status of final *-þ* as fully metrical and moraic is what accounts for the lack of deletion in **(briu)(-tiþ)* > *brjótið*: the final consonant made the final syllable closed and heavy, and not elligible for vowel deletion of any sort. In **(briu)-ti⟨z⟩*, the unfooted **i* is deleted, to give eventual *brýtr*. This different view of final-consonant extrametricality will lead me shortly (in §10.3) to depart from Kiparsky's conclusions on vowel losses.

[14] The vocalism *jó* rather than *ý* is probably due to levelling from the first- and third-plural, much as the first-person singular *brýt* analogically received *i*-umlaut from the other singular forms.

[15] In later verse, *-s* was, or could easily be, extrametrical too (§12.2.2). Possibly etymological *-r* was as well, given the deletion in ᴀfᵗtz in Istaby, which is etymologically from **aftir*. It is, however, written with a final *z* ('ʀ'): perhaps the two consonants had already merged after coronal consonants – as they would widely in the later Viking Age – though I suspect the ending was remained analogically to **aftiz* on the model of the comparative formant **-iz-*. The lack of deletion in **under* > *undir* and the like – contrasting with the deletion in **wulfaz* > *ulfr*, genitive **wulfas* > *ulfs* – suggests that *-r* wasn't extrametrical.

More immediately, the non-deletion in *brjótið* means that *bʌriutiþ* is simply uninformative about the chronology of vowel deletion. It retained its vowel not to satisfy an archaic overheavy constraint, but simply because that vowel was never open to deletion at any point in the history of Norse. This means that the possible existence of the early overheavy cosntraint turns largely on two other words from Stentoften.

10.2.3 hidez *and* -lʌsaz

Stentoften's *hidez* (160a) looks rather peculiar, especially when taken on its own. The matching word on Björketorp is *hʌidz* (160b), which is somewhat easier to make sense of. The latter form points to a root syllable in **hai-*, which probably lies behind Stentoften's spelling with *i*. This is most likely just a simple error for **ʌi*, though it could potentially represent a dialectal monophthongisation (compare Swedish *heder*, Danish *hæder*, with East Norse monophthongs). Either way, the root syllable is heavy, with two moras from a diphthong or monophthongised long vowel.

The second syllable of Stentoften is spelled *e*, which under the traditional reading of this inscription stands for unstressed **i*, either as an orthographic variant or as a phonetically reduced vowel. This interpretation of *hidez* as [hɑiðiz], [hæːðɪz], or some other variant along such lines, might seem like a rather drastic interpretation of the letters in question, but is nonetheless probably the best conclusion – see Schulte (1998: 113–119) for a thorough discussion of the philological and etymological problems involved. He concludes that it does indeed stand for **haiðiz*, a neuter *s*-stem meaning 'brightness'. Despite some reservations and the many uncertainties involved, I agree that this is the most plausible view.

If this interpretation is right, it provides one positive example of the kind of non-deletion that Kiparsky proposed for the earlier Blekinge group, and which is meant to motivate the overheavy constraint. This **haiðiz* couldn't undergo vowel loss at the earliest stage, because the resulting ***haidz* would contain an overheavy syllable: even discounting the final *-z* as extrametrical, the diphthong already provides two moras, and the *d* a third. The introduction of vowel deletion by the time of Björketorp's *hʌidz* really does seem to represent a new development taking place during the 7th century, between the time of the two inscriptions.

This conclusion is probably supported by (161). As with *hidez*, the exact interpretation of the letters here is not entirely clear-cut, but the most likely view is that *-lʌsʌz* (161a) is a form of **-lausaz*. The etymological diphthong would then be represented by a single vowel sign, again either as an error or due to monophthongisation (Schulte 1998: 136). The key feature is again the lack of vowel loss in the final syllable, and Kiparsky's overheavy constraint does account for this well. Björketorp's *-lʌusz* (161b) would then seem to show the loss of the overheavy constraint, and the introduction of deletion, in between the two inscriptions.

In general, then, the Blekinge group does seem to offer support for Kiparsky's view. A plausible interpretation of the evidence is that vowel deletion was blocked in the Stentoften period, when it would produce an overheavy syllable. Deletion was able to take place in *-wulafz* (157a, 157b) even at this early stage due to vowel epenthesis. By the time of Björketorp, however, the constraint against overheavy syllables was lost, so that deletion could also operate in forms such as *-lʌusz*.

10.2.4 Was There a Phase Ia?

Unfortunately, despite the attractiveness of Kiparsky's overheavy constraint, uncertainties remain. Kiparsky posits a plausible and prosodically interesting constraint – 'don't produce overheavy syllables' – which is never violated in the early Blekinge group, and which *could* explain both the variations on Stentoften itself, and between Stentoften and Björketorp. The tiny number of data points is of course reason enough for caution already, since slight reinterpretations of the inscriptions could easily remove one or both forms from consideration entirely.

It has also been suggested that the curse formula section of Stentoften could be earlier than the rest of the inscription (Krause & Jankuhn 1966: 214), a possibility that would entirely undermine the overheavy constraint. Instead of seeing a contrast between forms such as *-wulafz* (with vowel loss) and *-lʌsʌz* (without) in the same linguistic stratum, *-lʌsʌz* would simply be an older, pre-loss form and *-wulafz* a younger, post-loss form. Schematically, the two possible chronological implications are:

	Kiparsky	**Krause & Jankuhn**
Pre-Loss	Tune	Tune, Stentoften curse
(Loss Ia)	Stentoften	[Non-existent]
Loss I(b)	Björketorp	Stentoften, Björketorp

That is, if Krause & Jankuhn are right about the curse formula, then Kiparsky's two early deletion periods – separated by the presence or absence of the overheavy constraint – loses all empirical basis.[16] Specifically, the curse formula could simply belong to the pre-deletion period altogether, while the remainder of Stentoften, along with the other Blekinge inscriptions (including Björketorp), and most other

[16] Kiparsky (2009: 24) does cite two further words that are meant to show vowel loss being blocked by the need to avoid overheavy syllables: the name *Hrōzaz* from the By inscription and *fāhidē* 'painted' from Halskov. The former of these occurs immeidately after the word *irilaz* 'a noble rank', which is unreduced even though **irilz* would satisfy Kiparsky's constraints. There is reduction in this inscription in *Hrōzēz* (158a above), but, as noted above, this probably only suggests that **-ijaz* underwent special and earlier developments than did **-az* in general (Schulte 1998: 86–87). This inscription therefore

inscriptions down to around 800 AD or so, would all show the effects of one single round of vowel deletion, a general phase I not restricted by an overheavy constraint, and not to be subdivided into Ia and Ib.

How seriously we should take the possibility of the curse being older is hard to say. Krause & Jankuhn's suggestion is broadly plausible given the layout of the inscription, but hardly seems necessary on general runological grounds. The idea is instead based essentially on linguistic criteria – that is, on precisely the unstressed vowels under discussion. But the possibility, along with the general extreme slenderness of the data, means that the question of whether there was just one early loss period or two is rather hard to answer decisively – not an uncommon kind of conclusion when working with earlier runic data. On the whole, I am inclined to think that Kiparsky's two-loss model has merit. It is simplest to take Stentoften as a single inscription, and Kiparsky's hypothesis is an elegant way to explain which words on it show vowel loss, and which ones don't. This approach would also fit well with a larger view of early Germanic prosody as centred around the bimoraic trochee: just as with Kaluza's law, strict bimoraism may have been preferred where it could be achieved during the very earliest vowel reductions. Possible further reinforcement, though of a very indirect kind, for Kiparsky's two phases of early vowel loss may also come from umlaut, as I will argue in §10.4. But the doubts just raised make it hard to lean on this conclusion very strongly, and the supporting evidence of the umlaut is very indirect and involves a specific analysis of a highly contested issue.

10.2.5 Phase Ib: Björketorp and Beyond

As Kiparsky (2009: 25–26) notes, if there ever was an overheavy-syllable constraint on vowel loss, this was relaxed by the time of Björketorp, and is absent in subsequent inscriptions. Overheavy syllables resulting from vowel deletion are amply attested (by runic standards), not just by the Björketorp data given in (159–161), but by many other inscriptions from the following century and a half or so:

(162) a. mænnz < **manniz* (Eggja, KJ 101, c. 700)
b. fiskz < **fiskaz* (Eggja)
c. Rhōaltz < **Hrōþu-waldaz* (Vatn, KJ 68, c. 700)[17]
d. Þiaurīkʀ < **þeuda-rīkz* (Rök, Ög 136, c. 800)
e. Hraiþ-maraʀ < **Hraiði-maraiz* (Rök)

is to be placed after *ija*-reduction, but before any other losses of any kind. As for *fāhidē*, the Halskov inscription is difficult to date precisely, and shows no clear signs of vowel reduction at all. It plausibly simply predates the first loss period.

[17] *Rh* here is presumably for what is more typically written *hr-*. The loss of **þ* is likely pre-consonantal, and so implies earlier loss of the **u* (Noreen 1970: 66; Iversen 1973: 41). This points to an intermediate form **Hrōþ-waldz*, which would involve two overheavy syllables (assuming that **-þ* is not extrametrical).

These examples, which are illustrative rather than comprehensive, show deletion of all the Proto-Germanic short unstressed vowels – **a*, **i*, **u* – after heavy syllables (with nasalised **-a*^{n}, at least, perhaps being very slightly slower to be deleted than the others). This creates an array of new overheavy syllables, significantly changing the overall frequencies of different syllable weights in the language. Some overheavy monosyllables had certainly existed since Proto-Germanic (§13.1.4), but they were becoming notably more common. Whether or not there was a short phase of more restricted vowel deletion, as per Kiparsky, the bulk of the inscriptions from c. 600–800 attest to a language that had readily lost vowels after heavy syllables in a way that often created overheavy syllables. As in Old English (chapter 4), this was an important prosodic shift in the language that, though it probably didn't disturb the bimoraic trochee as such, was still of considerable importance prosodically.

10.3 Phase II: Losing Vowels After Light Syllables

It is clear that a number of vowels that disappeared by the time of literary Norse did manage to survive the initial 7th-century period(s) of vowel loss. These were lost in a second wave of deletions that, to judge by the runic evidence, took place sometime during the 9th century. As usual, there are complications. Most of the words in question concern high vowels after light syllables, but there are questions about whether all of these had survived the earlier deletion period, or if some of them had already been lost in round one.

In general, it is clear that **i* and **u* survived after stressed light syllables when no consonants at all followed. Examples of the elements *hʌþu-*, *hʌri-*, and *h*^{A}*eru-* have already been cited (157a, 157b, 157c, 157e, 157f, 157g). There are, furthermore, a number of examples of accusative *sunu* 'son' from inscriptions up into the early 9th century (Birkmann 1995: 178).

Kiparsky (2009: 25–26) has a ready explanation for why such words would retain their final vowel: the mimimal word constraint (§10.2.1). This holds that vowel deletion can't produce a 'word' (a minimal prosodic word: individual elements of compounds, including names, would count as words for this process) with fewer than two moras. The bimoraic minimum is a well-known and important constraint in Germanic generally (§13.1.1), but in this case, it is only relevant under Kiparsky's view that *all* final consonants originally counted as extrametrical. This would mean that *sunu* couldn't lose its final vowel, because the resulting **su⟨n⟩* would have been too light: one mora from the vowel, and that was it (since the consonant wouldn't count). Note that Kiparsky argues for a divergence between the nominative and accusative forms of this and similar words: since nominative **sunuʀ* can freely lose its second vowel and still meet the minimal-word constraint, he thinks that it should have done so already in phase I. During the period between phases Ib and II, nominative **sun⟨ʀ⟩* and accusative

**sunu* should (he predicts) exist side by side. Phase II,[18] beginning around 800 or so, would be triggered by the elimination of final-consonant extrametricality, which would allow forms such as *sun* to finally meet the bimoraic minimum.

The hypothesis that the key change concerned final-consonant extrametricality can be criticised on theoretical grounds. Firstly, as discussed in §10.2.2, the idea that all final consonants were extrametrical is doubtful: only *-ʀ*, and perhaps *-s*, are really likely to have been extrametrical. Secondly, it is unclear why there should be the same vowel-deletion impulse surviving for over two centuries, ready to raise its head whenever a new change in extrametricality or other general parameters takes place.

Beyond this, there is an empirical problem. A number of forms from the end of the 'transitional' period – shortly before the second major vowel losses took place – seem to show the retention of the high vowels not only when truly final, but also before *-ʀ*. The simplest examples are the following, but the data in (164) below is also relevant:

(163) a. sunuʀ < **sunuz* (Gursten, Sm 144, 9th century)
b. maguʀ (**makuʀ**) < **maguz* (Sparlösa, Vg 119, c. 800)
c. sitiʀ < **sitiz* (Rök)

Kiparsky tries to provide explanations for these forms, and draws attention to forms from the 'transitional' period (between Ia and II) that do potentially show high-vowel deletion. In the following subsections, I consider the relevant data from various angles: supposed evidence for deletion in *sunuʀ*-type words at an earlier date (§10.3.1), evidence for earlier medial syncope (§10.3.2), and counterevidence from words eventually undergoing double vowel loss (§10.3.3), before returning to the counterevidence of words such as *sunuʀ* (§10.3.5), and examining the implications of these patterns of vowel loss and retention for foot structure (§10.3.6).

10.3.1 Possible Earlier Examples of Loss After Light Syllables

Kiparsky (2009: 26) invokes a certain number of forms from 600–800 that might appear to support his view that early vowel loss would take place to the greatest extent possible, just so long as the word maintained an overall minimum of two moras (so also Riad 1992: 108–118). On inspection, however, much of this data doesn't hold up very well, or is better explained in other ways.[19]

[18] Kiparsky's Stage 3.
[19] Kiparsky (2009: 26, ex. b2) interprets Flemløse 1's (DR 192) **staþʀ** as *staþʀ* < **staðiz*, but this must be an accidental misinterpretation. This stands rather for *stændʀ* < **standiz*, with vowel loss after a heavy syllable.

Two early forms mentioned by Kiparsky probably show consonantal developments rather than vowel deletion directly. Björketorp's **sba**, assuming it really is a form of *spǫ́* 'prophecy', from **spahu*, reflects the loss of the medial **h* with subsequent contraction, not the direct loss of the vowel (Noreen 1970: 167).[20] A similar, though more complicated, case is the **nʌhli** on Strand (KJ 18), if this really is from **nawi-hlewai* '(for) corpse-protection'. Here the question is probably tied to the developments of **-VwV-* sequences, which tend to result in a lengthening of the first vowel and loss of the **-wV-* (Noreen 1970: 77). *Pace* Noreen, this is not likely to be simply due to vowel deletion alone, since that should have simply resulted in a diphthong in Norse: e.g. ˣ*strauði* 'spread out, strewed' from **strawiðē*, rather than the actual outcome *stráði*. The same loss of **w* is also probably seen in **hlewai* > **hli** = *hlē*, where no vowel loss has taken place. Such words involving complex sequences of high-sonority consonants are very poor evidence, at best, for general vowel losses.

From rather later on in the period, the Sparlösa stone (c. 800) shows the reduced form *sunʀ*.[21] This *sunʀ* does not, however, occur as an independent word, but as part of a patronymic formation, *Airīkis sunʀ* 'son of Erik, Erikson'. I suspect this is an example of an exceptional reduction or remodelling in what amounts to the later part of a high-frequency type of compound word, comparable to the regular use of nominative *-son* rather than *-sonr* in patronymics in Old Icelandic (Noreen 1970: 274). Note that the same inscription goes on to supply the form *maguʀ* 'son', without vowel reduction.

10.3.2 Loss in Words of Three or More Syllables

Three of Kiparsky's examples involve the middle syllables of longer words, which makes sense: this would be an environment where the minimal-word constraint would not be an issue, and if deletion did occur inside the boundaries of the bimoraic foot during the earlier loss period(s), it would be in this position. Riad (1992: 114, 126, n. 24) also suggests that such medial syllables were deleted during the initial loss period, regardless of the weight of the first syllable. He would place the syncope of a word such as **katilōz* 'kettles', which becomes literary Norse *katlar*, in this same period. The actual data is, however, at best ambiguous. There are four relatively clear examples where vowel deletion has taken place (see §10.3.4 on a complicated fifth potential case, Eggja's **nakdąn**).[22]

[20] Kiparsky's own principles wouldn't predict vowel loss in this word in any case, since either ˣ*spah* (with vowel loss only) or ˣ*spa* (with loss of both vowel and consonant) would fail to meet the bimoraic minimum under his system.

[21] This might perhaps be read as *sunuʀ*, but see the objections of Birkmann (1995: 179).

[22] Medial reduction, whenever it takes place, also affects original **ī*, which presumably merged in this position with short **i* relatively early on (Stausland Johnsen 2012).

The first example is the very early reduction of **satiðē* to **sate**, *sattē* 'set, placed' on Gummarp. This could be interpreted according to Kiparsky's model, or taken as a simple haplology. Partial haplology is also a possibility in the second example: the participle *fatlaþʀ* 'buckled', from **fatilōðaz* (Rök). Scribal error – omission of a single stave <ᛁ> *i* between <ᛚᛁ> *tl* – is also hard to confidently exclude. This is a potential example of a regular syncope, but a weak one.

The other two examples are both past participles of strong verbs: Rök's *numnaʀ* 'taken' and *bornīʀ* (**burniʀ**) 'born'. Kiparsky does not cite these, probably because the history of the medial vowel in such words is highly problematic, and (at least to my mind) nowhere near being satisfactorily resolved.[23] One key question – though not the only relevant one – is whether such forms still contained a reflex of **a* during the period in which syncope was established in such words, or whether this had already been replaced by **i* analogically at such a date.[24] If the former, this may be evidence for earlier loss of **a* after light syllables.

All in all, it seems difficult to sustain Kiparsky and Riad's view of early medial syncope taking place hand-in-hand with the earliest wave of vowel deletions in Norse. All of these four examples involve problems, and the least useful, **sate**, is also the only particularly early attestation. All the other forms come from Rök, one of the last 'transitional' runic inscriptions before the main second period of vowel loss. Even if these forms are taken at face value as examples of syncope, it could well be that Rök simply reflects a slightly earlier application of second loss to medial syllables, following the general tendency of medial vowels to be somewhat weaker (compare §4.4.1.1).

There are admittedly no positive examples of retained medial high vowels in the corpus: no examples such as **framiðun* 'carried out', which would show that such medial vowels definitely were retained – contrast Old English *fremedon*, where the medial **i* was retained just as much as it would be in a shorter word such as *wine* 'friend'. This leaves an almost complete void of data, with no reliable forms before Rök at the start of the 9th century. On theoretical grounds, I find it very unlikely that Kiparsky and Riad's ideas of early medial syncope can be sustained, resting as they do on untenable assumptions about general final-consonant extrametricality, but this is not a point that I can demonstrate empirically.

[23] Compare Kock (1898), Sturtevant (1921), Blau (1949: 40–57, 123–124), Syrett (1994: 191–196), Boutkan (1995: 78–82), Mottausch (2013: 22–24), and Ringe (2017: 217–218).

[24] Rök does have *borinn* (**burin**), which suggests that **i* had been generalised by the time the inscription was written, though this does not necessarily clinch the matter regarding syncope: an alternation between **boranʀ* and **bornīʀ* (< **boranīz*) could have been established first, with subsequent restructuring to Rök's *borinn*, *borniʀ*.

10.3.3 Words Showing Double Vowel Loss

Some words show sequences of a glide plus a vowel where, once the vowel was lost, the glide might be expected to vocalise into a new vowel, whose patterns of loss and retention add a further layer to consider in reconstructing the history of Norse vowel loss. Kiparsky (2009: 25–26) would see such forms as losing the new vowel in what I am calling phase Ib:[25] that is, as long as the minimal-word requirement would still be meant, vocalised glides should also vanish as quickly as possible.

The best example Kiparsky cites for this is *niþʀ* 'relative' from Rök, which seems to show double vowel loss. The earlier Germanic form would have been **niþjaz*, with the **a* presumably dropping in the initial vowel-loss period. This should have produced **niþiz*, with the glide vocalised into a vowel. This may actually be what the Rök inscription is meant to read, according to Grønvik (1983), though this interpretation involves taking the border line as simultaneously standing for <|> *i*. If Grønvik's suggestion is rejected, then the lost vowel in *niþʀ* would indeed need to be explained.

As it happens, the Rök stone also contains two other examples of words with lost **a*, which retain vocalised glides that would later be lost in Norse. A further example comes from the Oklunda slab, from a similar time period:

(164) a. fiaru < **ferh*^{w}*a*^{n} (Rök)
b. garuʀ (**karuʀ**) < **garwaz* (Rök)
c. sækiʀ < **sakjaz* (Oklunda, Ög N288, 9th century)

These become later Norse *fjǫr* 'life (accusative singular)', *gǫrr* 'prepared' and *sekr* 'guilty', respectively, but in the Rök inscription this further reduction is only potentially present in *niþʀ*. (164a) is not problematic for Kiparsky – the **-a*^{n} was lost early on, as was the **h*, and he argues for retention of truly final **-u* during his Stage 2 – but I am not certain how the other two forms might be explained under his model. He cites *niþʀ* as an example 'of the earlier type of syncope which began at Stage 1' (Kiparsky 2009: 26). This implies that syncope is meant to have operated cyclically in the earliest period, so that both the **a* and **i* (< **j*) were syncopated in short order, which should, per Kiparsky, produce ^{x}*gǫrʀ* and ^{x}*sækʀ* already in the 7th century. Why didn't this happen?

All in all, the evidence of *niþʀ* is ambiguous. This may not even be the form intended by the carver, and if it is, it is at odds with the majority of data concerning short high vowels after stressed light syllables. The best case that could be made for it, I think, is not that it is a reflection of the first deletion period(s) some two

[25] Kiparsky's Stage 2.

centuries earlier, but that it might – perhaps along with *fatlaþʀ* – be among the first examples of a new, initially variable vowel deletion that would, by the 10th century, go on to become the general rule in Norse.

10.3.4 Double Loss in a Medial Syllable: nakdąn

Of interest to both the preceding sections is **nakdąn** from the Eggja stone, probably carved over a century before Rök. This is widely taken as an earlier form of *nøcþan* 'naked (MASC.ACC.SG)' (Birkmann 1995: 100–102), which would make it cognate with Gothic *naqadana* (nominative *naqaþs*). The starting form for Norse is something such as **nakʷiðanō* (with medial **i* for Gothic's *a* attested by the umlaut), with **kʷ* at some point ejecting its labial element as a distinct consonant, **kw*, and subsequently geminating to **kkw* (cf. the Icelandic nominative *nøcquiþr*).

The absolute and relative chronologies of these changes are rather obscure, however, which makes it extremely difficult to use as evidence for medial vowel loss. The key question is whether the medial vowel was lost from a geminated form such as **nøkkwiðann* > **nøkkuðann* > **nøkkþann*, or in a non-geminated form such as **nøkwiðann* > **nøkuðann* > **nøkþann*.[26] In the former case, this word is uninformative about vowel losses after light syllables, since the doubled **kk* would keep the initial syllable heavy throughout the word's history. Only in the latter case would the word be evidence for early vowel syncope. It would then push the chronology for medial loss after light syllables back considerably earlier, by over a century, from the time of Rök to the era of Eggja. But I don't think **nakdąn** can bear that kind of weight as evidence: its exact route of development is simply much too uncertain.

10.3.5 Non-Deletion in 'Transitional' sunuʀ*, etc.*

It should now be abundantly clear that the data from runic inscriptions is not straightforward to work with. Nonetheless, the balance of evidence seems to point rather to the forms such as *sunuʀ* (163) and *sækiʀ* (164) as being regular developments, without reduction of a final (high) vowel after a light syllable. It is relatively easy to explain the few potential counterexamples, such as Sparlösa's *sunʀ*, as either doubtful or as reduced by independent processes, but hard to account for the examples of vowel retention as anything but evidence that early vowel loss was less widespread than Riad or Kiparsky predict.

For example, in order to explain away *sunuʀ*, etc., Kiparsky (2009: 26) invokes the highly improbable suggestion by Birkmann (1995: 178, 313) that such forms were in fact reduced, but then inserted epenthetic vowels – that is, that Rök doesn't

[26] It may be worth noting that the Icelandic spelling *nøcþan* (*Icelandic Homily Book*, 12v, line 32) could represent either a singleton or a geminate *k(k)*. Compare spellings such as *drvcner* 'drunken', with /kː/.

have *sitiʀ*, but rather *sitⁱʀ*. It seems an unlikely coincidence that such epenthesis should always just happen to exactly match the etymological vowel in question, and only take place after light root syllables – there are no examples in Rök of this supposed epenthesis in words such as **-rikʀ** (*-rīkʀ*) or **histʀ** (*hæstʀ*).[27] Indeed, it is doubtful that in these inscriptions epenthesis took place in the neighbourhood of ʀ at all, since the only compelling example in the late transitional inscriptions is Rök's **uintur**, where the consonant in question is the phonologically distinct *r*. This attempt to explain apparent non-deletion through epenthesis can be safely dismissed.

The upshot is that Kiparsky's explanation of vowel loss after light-root syllables is not only theoretically problematic (§10.3), but empirically makes the wrong predictions. Forms such as *sunuʀ*, *maguʀ*, *sækiʀ*, and *garuʀ* regularly retained their second vowels through the 'transitional' period, and were disyllabic right up until the second major wave of vowel deletions removed them, along with truly final vowels such as those in *sunu*, *fiaru*, and so on.

10.3.6 The Prosody of the Second Vowel Loss

Kiparsky's explanation for the second vowel-deletion period is simple and elegant – final consonants stopped being extrametrical, which meant that vowel loss could take place without violating the minimal-word constraint – but it doesn't seem to hold up either theoretically or empirically. This naturally raises the question of just why the vowels of *sunuʀ*, *sunu*, etc. survived the first vowel-loss period(s) in the 7th century, but were then lost a couple of centuries later in the 9th.

The simplest explanation for the initial retention of such vowels is they are within the bimoraic foot, and so protected from the scope of the first deletion period (phases Ia and Ib both). This would imply that the development of Norse fairly closely paralleled that of Old English in this way, as in so many others (notably breaking and umlaut) – without suggesting that they were identical in every detail, or even directly connected processes. Rather, it was simply that vowels in initial feet were, in general, more resistent to being reduced than were unfooted vowels. This explains most of the data very straightforwardly:

(165) a. *(hrai)-ði- > Hraiþ-
b. *(briu)-ti⟨z⟩ > bᴬrūtz > brýtr
c. *(man)-ni⟨z⟩ > mænnz
d. *(stan)-di⟨z⟩ > **stątʀ**, stændʀ

[27] There is apparent epenthesis with *u* in the much earlier Ribe inscription (Moltke 1985: 151–153), which has a name *ulfuʀ*, presumably from **ulfʀ* 'wolf'. This is not probably of any relevance to Rök, and – if it is to be contextualised at all – is instead more likely to be a hangover of the older type of epenthesis seen in the Blekinge inscriptions.

(166) a. *(si-ti⟨z⟩) > sitiʀ
b. *(su-nu⟨z⟩) > sunuʀ
c. *(su-nuⁿ) > sunu
d. *(gar)-wa⟨z⟩ > *(ga-ru⟨z⟩) > garuʀ
e. *(sak)-ja⟨z⟩ > *(sa-ki⟨z⟩) > sækiʀ
f. *(briu)(-tiþ) > bᴬriutiþ > brjótið

This does not present a very detailed picture of the interactions of foot structure and vowel loss, not compared to the details of medial syncope recoverable for Old English (chapter 4). The case of longer words in particular is very difficult to recover. Assuming a general bimoraic trochee, the forerunners of *fatlaþʀ* and *katlar* would have been footed as:

(167) a. *(fa-ti)(-lō)-ða⟨z⟩
b. *(ka-ti)(-lō⟨z⟩)

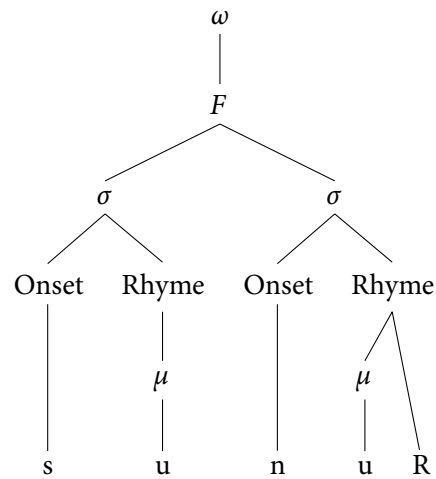
Were these protected after all, giving 'transitional' **fatilaþʀ* and **katilă̆ʀ*? Or was syncope introduced early, despite the protection of the bimoraic foot (Riad 1992: 116–118; cf. further Schulte 2004: 10–11 for a defence of initial degenerate feet in longer words)? It would be very helpful indeed to have a clear answer to this question, but the data is, to my mind, too sparse and ambiguous to warrant any conclusive analysis (§§10.3.2, 10.3.4).[28]

If it correct that footed (high) vowels were saved from the earlier vowel loss period – at least in final syllables, where the situation seems clearest – then a major shift in the importance of the bimoraic trochee took place during the second major wave of vowel losses during the later 9th century. One possibility is of course that the foot structure changed so that words such as *sunuʀ* were no longer contained in a single foot, and there was another round of deleting unfooted vowels. It is possible to imagine that the syllabic trochee of modern Icelandic (Hayes 1995: 188–198) was already introduced at this very early stage.

On the other hand, it may be more likely that the bimoraic trochee was maintained, but with a shifting preference to align feet and syllables more closely. Compare the foot structures of *sunuʀ* and *sunr* before and after the second round of loss, assuming a bimoraic trochee (and extrametrical ʀ/*r*) for both:

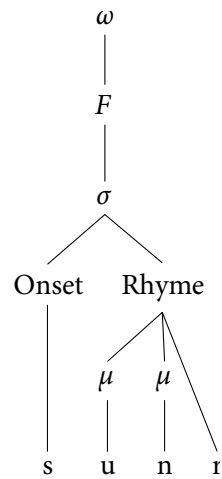
[28] A further outstanding question of considerable interest is whether short **a* followed this same pattern or not. It was certainly generally lost after heavy syllables (§10.2), but there is very little good data about its behaviour after stressed light syllables from the crucial period between 600 and 800 (Riad 1992: 112–113). It may have behaved in parallel to the high vowels, but this need not have been the case. It wasn't in West Germanic, where the very early – probably Proto-West-Germanic – reduction of **dagaz* to **dag* contrasts sharply with the retention of forms such as *sunu* and *gĕaru* throughout the entire Old English period.

(168) a.



sunuʀ 'son' (Gursten)

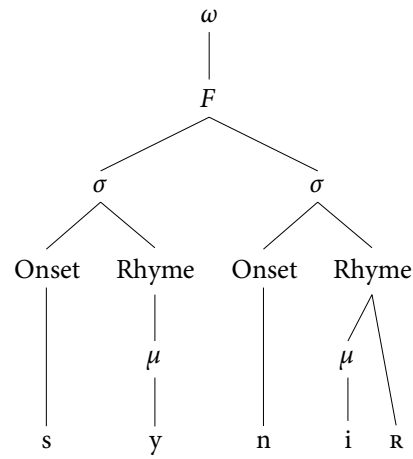
b.



sunr 'son' (Sö 137)

In both instances, the foot remains bimoraic, with the difference lying in whether the two moras come from two different syllable nuclei, or from a single syllable's rhyme. The old alignment could, indeed, still be maintained in forms such as the plural *syniʀ*, whose vowel was long until after the operation of the second deletion period:

(169)



syniʀ 'sons' (Sö 166)

This structure is supported by the metrical evidence discussed in the next chapter, but on the phonological evidence alone, the foot structure of *synir* after the vowel losses of phase II would not be certain.

10.4 Umlaut Obscurities

As a brief final note, I can hardly let a discussion of runic vowel losses or prosody pass without acknowledging the potential relevance of the umlaut for both. It has long been noted that Norse shows a striking weight-based contrast in how *i*-umlaut played out. A classic example is Norse **dōmiðē* > *dǿmði* 'judged' versus **framiðē* > *framði* 'performed, promoted'. These are both class I weak verbs, in which the same grammatical desinence resulted in umlaut in the heavy stem, but not in the light.

This subject has been treated extensively from many angles,[29] but it seems hard to avoid the impression that the operation of umlaut either depends directly or, perhaps, indirectly on metrical structure. A recent and significant argument for indirect influence has been put forward by Schalin (2017a,b), who suggests Proto-Germanic **i* was frequently altered to a non-coronal – and so non-umlauting – sound that he notates **ï*. Only when it remained coronal **î* could *i* trigger umlaut: this coronalisation happened before **z* and – significantly – when **i* stood outside of a bimoraic foot (Schalin 2017a: 10–12, 37–43). Thus:

[29] See, among many others, Hreinn Benediktsson (1982), Liberman (1990), Suzuki (1995b), Grønvik (1998: 52–65), Schulte (1998), Lahiri (2000b), Iverson & Salmons (2004, 2012), Kiparsky (2009), and Schalin (2017a). For an in-depth research history and summary, see especially Schulte (1998).

(170) **(fra-mi)(-ðē) > *(fra-mï)(-ðē) > framði* (no umlaut)
(171) **(dō)-mi(-ðē) > *(dō)-mî(-ðē) > dóməði* (umlaut)

Schalin's approach is insightful and interesting, but involves one major complication whose rejection, I think, both simplifies the operation of umlaut, and potentially supplies some (very indirect) evidence for the operation of the overheavy constraint in the earliest Norse vowel losses (§10.2.1).

This complication comes from Schalin's suggestion that (pre-)Proto-Germanic **e* remained distinct from unstressed **i*, and developed unconditionally to coronal **î*. The weight- and context-sensitive developments to non-coronal **ï* only apply to old **i*. That is, perhaps counterintuitively, it would be old **e* that would most uniformly trigger umlaut, while the effects of **i* would be much more variable. This idea is, however, rather weakly supported etymologically, and depends particularly on abstracts in Northwest Germanic **-iþu*, like *dygð* 'virtue', whose suffix is etymologically at best ambiguous.[30] The other evidence Schalin brings to bear is weaker, including the third-person singular of verbs such as *ferr* 'goes', and the noun *gleðill*.[31] A modified approach, still leaning on Schalin's overall insightful explanation, might be to assume a uniform unstressed **i* in Proto-Germanic (from a merger of **i* and **e*), which during the first vowel-loss period becomes non-coronal unless:

1. The **i* stands outside of a main foot, or
2. is followed by a tautosyllabic coronal other than **s*.[32]

Long **ī* would also, unsurprisingly, remain coronal, except when shortened medially (Stausland Johnsen 2012), with some morphological complications

[30] The question is whether this reflects **-e-tah*$_2$ or **-i-tah*$_2$, bearing in mind that apparent parallels in Indo-European may be the result of (inexact) convergence. Overall, abstracts formed with this suffix in Germanic show enough connections to *i*- and *j*-stems to make etymological **i* very likely (Seebold 1968: 10–11), and this class therefore provides at best slim evidence for the special development of unstressed **e*.

[31] Schalin claims that umlaut in *ferr* cannot be due to *iʀ*-umlaut (this is only true if umlaut predates the analogical change of the ending from **-þ* to **-z*, and if the possibility of umlaut analogically spreading with the ending is discounted). Perhaps more significantly, to use this as evidence means assuming that such verbs would have retained the unstressed **e* unraised before **i* in Proto-Germanic **faridi*, though raising of **e* before **i* and **j* (if not more generally) seems assured by the merger of earlier **ej* and **j* as **ij* after heavy stems, by Sievers' law (§13.1.3). Additionally, *ferr* could potentially be analogical after the very frequent heavy-stemmed verbs such as *stendr* 'stands', where coronal **î* would have developed by Schalin's own principles. For its part, *gleðill* is potentially derived and certainly open to heavy influence from *gleði*.

[32] The exemption of **s* is necessary to explain the lack of an umlaut in forms such as *baztr* < **batistaz* 'best' and *danskr* < **daniskaz,* unless these are due to early deletion between dentals. While a complication, it seems plausible that something about the often distinctive phonetics of [s] could have inhibited its role in conditioning coronalisation. Alternatively, depending on the exact distributions of **ð* and **þ* at that period, perhaps the conditioning could be stated as coronalisation before tautosyllabic voiced coronals.

Early Runic	*(dō)-mi(-ðē)	*(du-gi)-ðu	*(fra-mi)(-ðē)
Early Loss Ia	*(dō)-mi(-ðē)	*(du-gið)	*(fra-mi)(-ðē)
Coronalisation	*(dō)-mî(-ðē)	*(du-gîð)	*(fra-mï)(-ðē)
Umlaut	*(dø̄)-mî(-ðē)	*(dy-gîð)	*(fra-mï)(-ðē)
Early Loss Ib	*(dø̄m)(-ðē)	*(dy-gîð)	*(fra-mï)(-ðē)
Late Loss	*(dø̄m)(-ðē)	*(dygð)	*(fram)(-ðē)
Classical	(dǿm)-ði	(dygð)	(fram)-ði

Table 10.2 Possible chronology of vowel deletion and coronal **î*.

(Schalin 2017a: 43–45; cf. Schulte 1998: 205–223). This revised framing is itself not without exceptions and counterexamples, but most of these are explained easily.[33]

A point of chronological interest in this view is that umlaut occurs both in**dōmîðē* (so before the loss of this medial **î*), and in **dugîð* (where the **î* would arise, by rule 2, only after loss of the final vowel of **dugiðu;* I assume here an overheavy licence already, but see Schulte 2004: 9–12 for a different view). Those two forms should only coexist if there really were two phases of early syncope, one (Ia) operating with an overheavy constraint, the other (Ib) without, as shown on table 10.2.[34] Unfortunately, while I find this chronology attractive and plausible, the explanation of umlaut remains extremely tricky and controversial. The very clear role of syllable weight in, for instance, class I weak verbs, allows umlaut to be safely used in a general way as support for the bimoraic trochee during the relevant period, but it is hard to press this process for any more specific prosodic details without relying on speculative and highly contested hypotheses.

10.5 Conclusion

Despite difficulties with the runic data, vowel deletions in Norse can be broadly grouped into two major phases: an early one, which did not affect vowels protected by bimoraic trochees, and a later one, which was much more general and insensitive to foot structure in deleting short vowels in open syllables. Within these two broad periods, there is potentially some evidence for a finer-grained

[33] The most significant would be the non-umlauting nominative singulars of *i*-stems such as *staðiz* > *staðr* 'place', a well-known issue where even Schalin (2017a: 39, n. 24) seems open to considering analogical paradigm levelling from forms such as the accusative **staði* > **staði* > *stað*.

[34] If medial vowel loss is taken as being earlier than that in final syllables – an idea discussed inconclusively in §10.3.2 – then Late Loss could also be divided into two subphases: IIa, affecting **framïðē*, and IIb, affecting **dygîð*.

chronology. Among the earliest losses, it is likely that the unstressed sequence **-ija-* was reduced to **-ī-* even before other deletions took place (§10.2). More interestingly, there is some evidence – though none of it is decisive – that vowel loss was at first restrained by a limitation against creating overheavy syllables (§10.2.1 and §10.4). If this restriction really ever held, it was relaxed by the later 7th century at the latest. During these earlier phases, vowels protected by bimoraic trochees were retained, as shown by forms such as *sunuʀ* and *sitiʀ*, which are still in evidence on the Gursten and Rök stones at the start of the 9th century (§10.3). It was left to the second phase of vowel deletions to delete these remaining short vowels in open syllables and before final **-ʀ*. There is slight evidence that this process, too, may have taken place in two stages: first in medial syllables (§10.3.2), and later in final ones (§10.3.6). Taken together, the following overall chronology might be suggested:

1. **ija*-reduction: By (6th century) *Hrōzēz*, alongside *irilaz*.
2. Deletion Ia, not creating overheavy syllables (epenthesis allowed to avoid such), not affecting foot-internal (high?) vowels: Stentoften (7th century?) *-wol^{A}fz*, alongside **hidez** (if *haidiz*).
3. Umlaut? (§10.4)
4. Deletion Ib, allowing overheavy syllables, not affecting foot-internal (high?) vowels: Eggja (c. 700) *fiskz*.
5. Deletion IIa, deleting short medial vowels, regardless of foot structure: Rök (c. 800) *fatlaþʀ*, alongside *sitiʀ*, Gursten (9th century) *sunuʀ*.
6. Deletion IIb, deleting short vowels in remaining open syllables, and finally before **ʀ*: Sö 137 (later Viking Age) *sunr*

Generally speaking, the maintence of forms such as *sunuʀ* through the first deletion period(s) is most straightforwardly explained with reference to a bimoraic foot, whose presence is also suggested by the operation of umlaut (§10.4). There should be nothing surprising about this kind of chronology. Vowel loss waves need not form a single process, as the developments in Old English amply demonstrate: compare the loss of **u* in **handu* > *hand* 'hand' around perhaps 600 with the weakening of *u* to schwa in *sunu* > *sune* only achieved half a millennium later, and only being actually lost in southern English in the 14th century (or perhaps even later in some dialects). In some Flemish varieties, the final vowel of *zeune* [zʏːnə] < **sunu* still survives (Taeldeman 2013: 215–216), while that of *hand* was lost at an uncertain date before the earliest records of any kind of Dutch.

What is striking in the Norse losses of unstressed vowels is not that they should have taken place over multiple stages which operated over the span of three centuries or so (as if this were a long period of time for so many reductions), but that they should have been so swift and far-reaching. In a wider Germanic

context, the deletion in words such as *sunuʀ* occurs remarkably early in Norse.[35] Such deletions from the second major phase can be framed in terms of the moraic trochee, but they represent a significant innovation prosodically, leading to a much greater alignment of foot and syllable than had been the case previously. While this in itself did not lead North Germanic to shift at once to a syllabic trochee, it may have allowed that shift to occur more easily later on.

[35] Forms such as Old High German *sun*, alongside *sunu*, reflect the shift of this word to the *i*-stems, a category itself under influence from the *a*-stems, not a phonological reduction of the final vowel (Braune 2004a: 202, 205). The phonological development can be seen in words that did not undergo such reformations, such as *frithu* 'peace' or *quiti* 'speech'.

Chapter 11

Resolution in *Fornyrðislag*

Did the vowel losses outlined in the previous chapter affect the larger structures of Norse prosody? At the least, these changes had an enormous impact on the lexical and morphological distributions of light syllables. Words that had once had two light syllables resolved into a single bimoraic foot now typically consisted of one single, heavy syllable: the type of change where **sunuⁿ* became *sun*, *son* 'son'. But this certainly did not eliminate the possibility of resolution. Many words that had the shape LH in the earlier Viking Age retained this shape – e.g. *gamall* 'old' – or even became LL through vowel shortening, as with the dative singular *degi* from **dagē* 'day', for instance. Still, even if the changes weren't wholesale, the number of tokens beginning with light syllables decreased, and it is conceivable this had an effect on the status of phonological 'resolution' and the ways that light syllables were incorporated into feet.

This chapter takes on one potentially valuable source of information about the prosody of Norse after the major vowel upheavals had taken place: metrical resolution, particularly as represented in the well-attested *fornyrðislag* metre. This is the most frequently used 'eddic' metre, found especially in the late 13th-century Codex Regius (MS GKS 2365 4º) and in a number of poems preserved elsewhere (in sagas and in miscelleneous collections of texts) that are generally considered part of the wider 'eddic' corpus (Sievers 1893: 63–64; Suzuki 2014: 1–8).[1]

Fornyrðislag certainly makes use of resolution, and also – like Old English metre – sometimes 'suspends' resolution, allowing a single light syllable to

[1] Specifically, the poems from the Codex Regius are: *Vǫluspá*, *Hymiskviða*, *Þrymskviða*, *Vǫlundarkviða*, *Helgakviða Hundingsbana I*, *Helgakviða Hjǫrvarðssonar*, *Helgakviða Hundingsbana II*, *Grípisspá*, *Brot af Sigurðarkviða*, *Guðrúnarkviða I*, *Sigurðarkviða (in skamma)*, *Helreið Brynhildar*, *Guðrúnarkviða II*, *Guðrúnarkviða III*, *Oddrúnargrátr*, and *Guðrúnarhvǫt*, as well as portions of *Fáfnismál* and *Reginsmál*. From other manuscripts, I have also included *Baldrsdraumar* (sometimes known as *Vegtamskviða*), *Rígsþula*, *Hyndluljóð*, *Grottasǫngr*, *Hervararkviða* (also known as *The Waking of Angantýr*), and the relevant verses from *Vǫlsungasaga*. Where multiple manuscript sources for a poem exist – most notably for *Vǫluspá*, whose three manuscript sources diverge in significant ways, and for *Hervararkviða* – I take these into account. For further details on sources and normalization, see note 6 in chapter 3.

serve as a lift (compare §3.1.1 and §5.1). This aspect of resolution, the times it does *not* occur, will be my main preoccupation in this chapter. I focus on two metrical contexts – the second lifts of type A (§11.1), and the first lifts of type C (§11.2) – which have been claimed to allow light syllables where these would not be permitted in Old English verse. Not all these claims about 'unconditioned' suspension hold up under scrutiny, but both metrical contexts nontheless cast light on the phonological peculiarities of Norse relative to Old English.

11.1 Non-resolution in Type A

As argued in chapter 5, resolution in *Beowulf* is, at best, very rarely random, either in its application or its failure. Generally speaking, there resolution is mandatory unless the two conditions of the 'sandwich rule' are both met: both the preceding syllable (with some degree of stress) *and* the following syllable (usually unstressed) must be heavy. It has been repeatedly doubted whether either of these conditions applies to *fornyrðislag*, and I will now take them each in turn – starting with the second condition, the following syllable. The data for (non-)resolution in type A is gathered in appendix H.

11.1.1 Kaluza's Law in Norse?

A simple place to look at the kinds of words that show non-resolution is the type of verse that Sievers labeled A2k, with *k* for *kurz*, i.e. short: type A verses with a heavy first dip and a light (short) second lift. Here the first condition for non-resolution – a preceding, partly stressed heavy syllable – is clearly met. The question is what kind of syllables follow the light lift.

As a reminder, in *Beowulf*, such light lifts must be followed by a heavy syllable:

(83) Hrun-ting *be*-**ran**
'(he commanded the sword) Hrunting to be carried' (*Beowulf* 1807b)

If the next syllable is also light, then the two syllables must resolve together into a bimoraic lift, and a third syllable must be present to fill the verse-final dip:

(85) ate-līc *e-ge*-sa
'terrible fear' (*Beowulf* 784a)

The situation in *fornyrðislag* is strikingly different. Resolution following a heavy (partly) stressed syllable seems instead to simply be prohibited altogether. This means that after a secondarily stressed element, not only are LH words unresolved (as in 83), but resolution equally fails to apply to LL words:

(172) am-bótt *fy*-**rir**
'the servant (sat) in front' (*Þrymskviða* 26.2)

(173) am-bótt *ve*-**ra**
'(I will) be a servant' (*Þrymskviða* 20.4)

Since resolution is prohibited in this kind of suspension environment, verses comparable to (85) are entirely absent. This is not merely a matter of a few exceptions, and there is no obvious bias towards ending this kind of verse with an LH sequence. That is, the failure of LL sequences to resolve, as in (173), can't be dismissed as a rare anomaly or quirk, since they constitute nearly half of all type A2k verses in *fornyrðislag*, or well over half if extrametrical *-r* and *-s* are discounted.[2]

This suggests that resolution follows a very simple set of rules in *fornyrðislag*:[3]

1. If an LX element (that is, either LL or LH) occurs after a heavy, at least partly stressed syllable, resolution cannot occur.
2. Conversely, if an LX element does not occur in a suspension environment, then it is expected to resolve.

The first of these, at least, seems to be an extremely robust rule, probably applying to all Norse metres with no serious complications or reservations. The second rule will be considered further below.

[2] Specifically, there are some 178 verses that are clearly A2k: made of just two words, the first of which is a *Ss* compound (including names) or ends in a clearly heavy syllable such as *rjúfendr*. Of these, 84 (47.2 per cent) end with superficially LL words. A further 23 would do so if the final *-r* and *-s* are counted as extrametrical (§12.2.2), which would make for 60.1 per cent of type A2k being LL-final in total. See appendix H.1. To this list might be added five verses from the *catalogue of dwarves* section of *Vǫluspá*, though in general I leave this passage out of consideration as not necessarily representing standard *fornyrðislag*: LH: 11.3, 12.2; LL: 13.7, 15.4, 15.6. This list does not include three-word verses that could be A2k or Da (Suzuki 2014: 114–116).

[3] These rules should also apply to much of Norse verse more generally, with the potential exceptions of the on-verses in *ljóðaháttr* (Fulk 2016: 261) and *kviðuháttr*. Both metres show ample evidence for rule-bound resolution in their off-verses and (in *ljóðaháttr*) full-verses, but allow or even prefer what appears to be a single initial light lift in the on-verse. The reason for this interesting phenomenon is not fully clear to me. It suggests that poets were alive to the potential for counting syllables as a metrical device, but for some reason applied this principle, in these metres, in a highly restricted way, and alongside a language-to-metre mapping that still involved resolution much of the time. It is perhaps relevant that the on-verses of these two metres are among the shortest and lightest verse locations in Norse poetry. For *ljóðaháttr*, the relative rarity (though not necessarily complete absence) of clear cases of resolution in the on-verse is apparent from the data gathered by Gering (1902) and Suzuki (2014: 577–645). For *kviðuháttr*, see especially Sievers (1879: 291–294) and Þorgeir Sigurðsson (2019: 155–157), both of whom find that resolution may occur in on-verses, but is strikingly less common than its unconditioned suspension.

11.1.1.1 Excursus: Syllable Length Over Time

When I spoke of light syllables in the previous section, I was referring to their weight in the later Viking Age and classical Norse periods, after the elimination of length distinctions among unstressed vowels. The workings of Kaluza's law in *Beowulf*, however, are a warning that we should not simply assume the phonology of the 'classical' language for poems that may predate this by some time. So when exactly did the final syllables of words such as *vera* become short? All genuinely old (Proto-Germanic) final light syllables were lost in Norse, and many formerly heavy syllables subsequently became light through vowel shortening or consonant loss: *vera*, for instance, reflects older **wesan*, with loss of the final consonant.

'Exactly' is, of course, a tall order for proto-historic sound changes, but the loss of the final **-n* probably took place fairly early on, in the 6th or 7th centuries. The accusative plural *staba*^{n} *þría*^{n} on the Gummarp stone, from **stabanz þrijanz*, shows this loss, and is probably to be dated to the 7th century (Syrett 1994: 125–132, with further references). This is well before even the earliest surviving eddic poetry is likely to have been composed. Still, the loss of the nasal doesn't guarantee shortening of the syllable: prepositions such as **an* and **in* became *á* and *í*. The lengthening here may have simply been to maintain the two moras needed for a minimal word (§13.1.1), but it's conceivable that there was compensatory lengthening even aside from this factor. If so **wesan* might have come to end for some time in [ɑ̃ː] or the like, before this final long vowel was again shortened.

Just when such reshortening might have taken place isn't clear, but there was a general shortening of final long vowels sometime after the second vowel-loss period, which took place during the 9th century (§10.3). This is when the final **-ī* of **dōmī* 'judgement' and the **-ē* of **orðē* 'word (DAT.SG)' merged as, probably, short [ɪ], reflected in early Icelandic as <e>, and later as <i>. Direct evidence isn't really available until the 12th century, when manuscript spellings (richer in vowel graphs than the younger futhark) become available. These clearly show the reduced system of three unstressed short vowels, a system that is further attested to in the descriptions of the *First Grammatical Treatise* (Haugen 1972). But in all likelihood, these reductions took place much earlier than that, and probably followed on very quickly from the second loss period.

The upshot of these chronological considerations is that it *might* perhaps be possible that some of the very earliest eddic poems were composed during a time when words such as *vera* ended in a heavy syllable, in which case their non-resolution could, as in *Beowulf*, have to do with constraints against overheavy feet. But it is not certain that the final vowel in *vera* was ever lengthened,[4] and even if

[4] Its retention through the second loss period is not necessarily relevant. As observed in note 28 in chapter 10, there is virtually no evidence for how vowel losses after phase I affected **a*, and it may not have been affected by the second phase(s) of deletion at all, regardless of length.

it was, it was probably reshortened before the majority of the *fornyrðislag* corpus was composed. This suggests that the suspension of resolution in verses such as (173) works very differently than in *Beowulf*: it is not directly due to constraints against overheavy feet, since *(ve-ra)* would not, probably, have been overheavy.

11.1.2 Unconditioned Suspension in Type A?

Based on the discussion so far, resolution in Norse might fairly be described as somewhat more 'fragile' than in Old English: where in *Beowulf* an LL sequence would resolve in most circumstances, in *fornyrðislag* such a sequence would fail to resolve in any context that would trigger suspension of resolution. But the verses listed in appendix H.1 do resemble the Old English system in one key respect: the failure of resolution occurs after a heavy syllable that plausibly bears at least some degree of stress. This is also true for over 400 type-C verses with a short second lift (Suzuki 2014: 94, 251–255), and several dozen type-Da verses (Suzuki 2014: 113). These types together account for the vast majority of examples of non-resolution in *fornyrðislag*, and the presence of the preceding stressed, heavy syllable as a conditioning factor is striking.

It has nonetheless been repeatedly suggested that such a preceding syllable as the conditioning factor was not really necessary, and that a light syllable could fail to resolve even after a fully unstressed syllable (Kristján Árnason 1991: 57–58; Russom 1998: 107; Suzuki 2014: 40). So alongside (172) and (173), where the suspension is conditioned by the preceding syllable *-bótt*, there are also a few verses such as the following:

(174) fló þá Loki[5]
'then Loki flew' (*Þrymskviða* 5.1, 9.1)

(175) kropnir knúar[6]
'gnarled knuckles' (*Rígsþula* 8.5)

If these are taken as examples of type-A verses, with the pattern *SwSw*, then resolution would indeed seem to fail without any obvious factor to prompt this.[7]

One possibility is that these verses do actually have a heavy syllable conditioning the suspension. Sievers (1885c: 525), who was clearly uncomfortable with the idea that resolution could be suspended at random, explained away examples such as (174) as having a moderate stress on the *þá*, making this really a variety of type

[5] Alliteration on *f*.
[6] Remember that long vowels in hiatus scan as short; §9.3.
[7] On the question of whether comparable verses might be found in *Beowulf*, see §5.4.

A2k, with a stress contour *SsS̆w*. This does not seem supported by the behaviour of *þá* metrically in general, however, so Sievers' explanation is rather ad hoc.[8] In any case, as Sievers rather grudgingly acknowledges, there really is no hope at all of explaining verses such as (175) this way.

I would, instead, question why verses such as (174) and (175) need to be 'explained' at all. Russom (1998: 107) calls the idea that these verses might scan as *SwS*^{w} 'barely imaginable', but there is no serious problem with accepting that resolution applies here.[9] While it is true that the type-A pattern *SwSw* is very common, *fornyrðislag* also tolerates 'three-position' *SwS* verses. I count 76 *SwS* verses such as the following, most not easily emendable to give an extra final syllable (Suzuki 2014: 75–80):

(176) Þrúðugr áss
'powerful god' (*Þrymskviða* 17.2)

There are perhaps 30 more *Sww…S* verses, with an extended dip, for 106 *Sw(…)S* verses with non-resolved final *S* in total. By contrast, the number of potential *Sw(…)S*^{w} verses is much smaller, amounting to around 16 examples with a monosyllabic dip, including (174) and (175), and another six with expanded dips.[10]

In other words, verses such as (174) can be scanned as resolved variants of verses such as (176). As might be expected, most *Sw(…)S* verses end with a simple monosyllable, with a notable minority showing a resolved final lift. Positing resolution in this position requires assuming no further verse patterns than are clearly present in *fornyrðislag* anyway, and allows the simple rule of resolution given at the end of §11.1.1 to stand without modification or qualification. Or looking it things the other way around, it hardly seems justified to take the 21 verses such as (174) as grounds for positing new principles for suspending resolution when they can be unproblematically scanned as showing resolution.

[8] That's not to say that there aren't a few ambiguous cases where it really is hard to assess the stress of the potential conditioning syllable. In *Hymiskviða* 8.4, does *hundruð* scan with its later, highly reduced vowel, or might this word – historically a compound – still have a second element with some stress? Such uncertainties are rare, however, and do not seriously affect the overall picture, and this is indeed the only verse I would consider truly ambiguous.

[9] Russom's only argument on this point is that he finds resolution on second lifts in general to be rare. This objection will be addressed in §12.1.

[10] For all these verses, see appendix H.2. Suzuki (2014: 75–76, n. 53) counts 267 *Sw(…)S* verses altogether, the difference lying in what medial elements are taken as stressed or unstressed. My counts provide a conservative core of evidence for this three-position pattern, where Suzuki's list might suggest how extensive the pattern could be under a more inclusive analysis.

11.2 The *Konungum*-problem

There is one potential wrinkle to the simple system of resolution argued for so far in this chapter: the presence of a few type-C verses that seem to have non-resolved lifts. These are verses such as:

(177) af *ko*nungum
'from kings' (*Guðrúnarkviða II* 34.2)

This alliterates on *k*. The conventional scansion, which I will defend shortly below, is as type C, *wŠsw*, which implies a failure of the light syllable *ko-* to resolve with the following *-nun-*. The preceding *af* is not a plausible candidate for conditioning suspension of resolution, and resolution in fact frequently occurs in broadly similar metrical contexts:

(178) né *svalar* unnir
'nor cold waves' (*Vǫluspá* 3.4)

This scans as *wS*^{w}*Sw*, a classic type-C pattern. As in (177), the preceding syllable is an unstressed word, and the following syllable is heavy. The only real difference is that in (178), the resolved sequence encompasses the entire word – a disyllabic word is resolved into a single unit – while in (177) *konungum* is a single trisyllabic word with a long medial syllable, having the shape LHX. In the remainder of this section, I argue that this word-shape (rather than the metrical contexts that such words appear in) is unsuited to resolution in *fornyrðislag* – a conclusion that has consequences for evaluating Norse prosody in general.

11.2.1 Could Konungum *Be Resolved?*

The first question to address is whether verses such as (177) could simply show resolution, scanning as *wS*^{w}*w*. The exact count of such verses is, as usual, hard to pin down precisely, but there are perhaps seven good examples, listed in appendix H.3.[11] With one exception (*Vǫlundarkviða* 3.5), these are all in the off-verse and have a single syllable in the initial drop. These two features are very much at odds with the usual characteristics of non-resolved type-A3 verses, such as:

[11] There are a number of further possible examples that involve problems of one kind or another, also given in appendix H.3. *Guðrúnarkviða II* 24.5 could be taken as type A with resolution. The other examples involve forms of *faðerni* 'patrimony' or *ørindi* 'errand', or of the names *Sigurðr* or *Vǫlundr*, all of which could be argued to have linguistic variants with heavy initial syllables (Chapter 12, note 2; Goering 2016b: 200–205).

(179) ok hann þat orða
'and he that by way of words' (*Þrymskviða* 2.1)

The alliteration here is vocalic, with the scansion being *wwwSw*. This example is representative: such A3 verses usually have relatively long initial dips, and while they can in Norse occur in the off-verse, they strongly favour the on-verse (Suzuki 2014: 59–60).

As far as I can find, there is only one potential example of a comparable *wSw* off-verse without resolution worth mentioning:[12]

(180) á foldu
'on the earth' (*Oddrúnargrátr* 4.2)

The textual basis of this verse isn't very secure – it is paired with a very light on-verse, raising the question of whether part of the line has gone missing in transmission (Gering & Sijmons 1931: 328) – but even if it is accepted, one lone example without resolution is far from a sufficient basis for taking the 7–21 verses such as (177) as resolved *wS*^{w}*w*. The same reasoning that suggests that half-lines such as (174) *do* show resolution (§11.1.2) suggests that those such as (177) do not: assuming resolution makes these verses an unusual type with an unusual distribution, while assuming suspension aligns them as a minority variant of a well-attested pattern.

11.2.2 Avoidance of Light Trisyllabic Words

There is a further peculiarity to LHX words such as *konungum* in *fornyrðislag*: they are very rare, and almost never appear in any metrical context, in any verse type.

[12] *Vǫlundarkviða* 9.1, an on-verse, is the only further potential example of *wSw* (this verse is usually emended, but not in a way that affects the metre). Suzuki (2014: 58) would identify two more off-verse examples, *Vǫluspá* 64.4 and *Reginsmál* 17.2, and he furthermore groups these together with 23 examples of what he takes to be the catalectic 'C-' pattern *wSs* or *wSS* in the off-verse (Suzuki 2014: 60, 105–110). Most of these verses (20 of the 25) end in historically contracted words, where Suzuki – without discussion or argument, and in striking contrast to his ready acceptance of decontraction in *Beowulf* (Suzuki 1996: 20–21) – assumes that the scansion should rest on the late, contracted version. That is, he scans verses such as *Guðrúnarkviða I* 13.4, *fyr vífs knjám* 'before the woman's knees', as *wSs*. In eddic poetry, however, such words should clearly generally be scanned with their pre-contraction values, in this example as *fyr vífs kn[éu]m*, a normal type-C verse pattern *wSSw*. This is a widely accepted conclusion based on the general evidence of eddic and skaldic metrics (Sievers 1893: 56; Noreen 1970: 115–118; Myrvoll 2014: 309–328), and is reinforced by the testimony of the First Grammarian in the 12th century (Haugen 1972: 20–23). Once such spurious verses are set aside, just two possible examples of *wSs* off-verses remain: *Sigurðarkviða* 28.2 and *Rígsþula* 28.2 (26.2). Suzuki would also include *Vǫlundarkviða* 17.2, *Grípisspá* 39.8, and *Guðrúnarhvǫt* 17.2, but the latter two involve further textual or linguistic uncertainties, and in any case all have longer dips and could be seen as off-verse A3b. There are perhaps five more on-verse examples of *wSs*: *Guðrúnarkviða I* 24.11; *Sigurðarkviða* 62.7; *Rígsþula* 43.1 (41.1), 46.1 (44.1); and *Hyndluljóð* 26.3. All in all, these *wSs* verses provide no support for scanning verses such as (177) as ^{x}*wS*^{w}*w*: they are just as rare, slightly favour the on-verse, and have an extra stress.

In *Beowulf*, there are verses such as the following, which are straightforwardly scanned as type A, *S*^{w}*wSw*:

(61) *woru*lde līfes
'of the life of the world' (*Beowulf* 2343a)

Comparable verses in Norse are perfectly imaginable, but in practice seem to be avoided by poets. There is precisely one compelling example of this pattern in *fornyrðislag*, from what is usually held to be one of the very latest eddic compositions (though see Sapp 2022: 198–199):

(181) *Sigur*ðar ok Gunnars
'of Sigurðr and Gunnarr' (*Grípisspá* 43.3)

This gap is not for lack of linguistic material. It is very easy to imagine hypothetical verses such as the following:

(182) ^{x}*konun*gi húnskum
'for a Hunnish king'

Compare the following example of a much more regular type, which has a nearly identical shape except that the first word is disyllabic instead of trisyllabic:

(183) *konungr* inn húnski
'the Hunnish king' (*Sigurðarkviða* 8.9)

It is furthermore the case that LLX words such as *svaraði* are also very rare, though the few times they do occur they seem to resolve as expected:[13]

(184) *svara*ði Hǫgni
'Hǫgni answered' (*Guðrúnarkviða II* 10.1)

That resolution really is taking place here is suggested by the one example of a comparable word-shape in *dróttkvætt*:

(185) *maka*ra's mér at mæla
'it is more pleasant for me to speak' (Kormákr Ǫgmundarson, *Lausavísur* 9.5; after Finnur Jónsson 1967a: 82)

[13] The only other example with verse-initial resolution is *Rígsþula* 21.6. See further §12.1.1.

But in addition to confirming resolution, this lone skaldic example highlights how strongly such words were avoided by poets in general, whatever the metre. There was apparently something about words of these shapes – trisyllables with light initial syllables – that made them largely unsuited to the needs of poets.

11.2.3 Overheavy and Overlight Feet

Based on the previous two subsections, the following conclusions about the metrical behaviour of light trisyllables (LHX and LLX words) seem reasonably secure:

1. Such words are strongly avoided by *fornyrðislag* poets.
2. When LHX words such as *konungum* do get used, they tend not to resolve but rather to show light lifts.
3. When LLX words such as *svaraði* are used, they seem to resolve.

When compared to *Beowulf*, these points may seem puzzling at first glance, but I suggest they can be readily explained within a foot-based framework, reflecting the same prosodic issues at work elsewhere in Germanic adjusted to the phonological context of Norse.

The most striking context is the ready resolution of *konungr* compared with the avoidance of trisyllabic inflections such as *konungum*, and the lack of resolution in the latter type. This suggests that resolution is very much possible in this lexeme, even when it results in an overheavy foot: *konungr* could only be analysed as bimoraic by assuming that all three final consonants are extrametrical, a move that does not seem warranted by any other fact or feature of Norse. This in turn suggests a pressure to align the foot and the word where possible, even at the cost of a suboptimal (overheavy) foot. Norse does have, it would seem, an *overheavy licence*, at least partly comparable to that of Old English, which permits overheavy initial feet in some circumstances.

By contrast, the scansion of *konungum* as three metrical positions is suggestive of a foot parsing as *(ko)(-nun)(-gum)*. This implies that the overheavy licence applies more restrictedly than in Old English: not generally to initial feet, but to whole-word feet. When the overheavy licence can't apply, light feet are tolerated instead (as is the case within compounds in Old English). In verse, most poets seem to have found such word-shapes awkward to accommodate within the traditional rhythms, and so avoided using them entirely, though they were certainly present in ordinary speech.

The metrical behaviour of words such as *svaraði* might be best explained diachronically. From a synchronic perspective, as long as resolution is possible in such words – and the few examples in verse suggest it is – there would seem no reason to avoid using *(sva-ra)-ði* as an exact equivalent of *(kvó)-mu* 'they

came' or the like. However, all words that are synchronically of this shape in classical Norse earlier on had long medial vowels. As discussed in §10.3.2, words that earlier on had the shape LLX lost the middle vowel due to syncope, as happened to *fatlaþʀ* < **fatilaþʀ*. If the avoidance of LHX words is old – and it seems to be widespread even in verse that is widely thought to be fairly early in composition – then the use of all light trisyllables may have become disfavoured by poets at that point. Once words such as **swarōðē* had been rejected from the poetic repertoire, they could, in a conservative poetic tradition, plausibly have continued to be avoided even once they shortened to the more useable structure of *svaraði*, etc.

I should emphasise that the evidence for a contrast between *konungum*-words and *svaraði*-words rests on a relatively small number of examples of each. The most robust distinction is that between the common occurrence of whole-word resolution of the *konungr* type, and the extreme rarity of light trisyllables of any sort. This association of resolution with whole-word feet, and the more problematic nature of resolution in longer words, rests on very widespread patterns of attestation and avoidance in *fornyrðislag*.

11.3 Preliminary Features of Norse Prosody

In §11.1, the key finding was the regularity of resolution: there is no equivalent of Kaluza's law, but a simple rule that in a suspension environment, resolution is not possible, while otherwise it is mandatory. The only exception to this is LHX trisyllables such as *konungum* (§11.2), which seem to be prohibited from resolving in any context. Such words are usually simply avoided, but on the rare occasions they do occur, they seem to be unable to resolve.

Together, these two metrical phenomena suggest that resolution was much more restricted than in Old English, and accordingly there was a greater pressure to align syllables and feet – a pressure also seen linguistically in the vowel reductions discussed in the previous chapter. Resolution could not follow a preceding heavy, partly stressed syllable. This may suggest that resolution was phonologically possible only word-initially, with tightly bound strings of feet being metrically treated as part of the same prosodic unit (compare the role that this kind of cohesion arguably plays in Kaluza's law in *Beowulf*, §5.5.2). And while resolution can be employed together with the overheavy licence to form feet with three or more moras, this is only possible when those feet are aligned with the full word.

If this view of Norse resolution is correct, then the following are the key principles at play:

(186) 1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.

3. *Overheavy licence*: Trimoraic feet are tolerated only in word-initial position, or to prevent overheavy single syllables from being unfooted.[14]
4. Polysyllabic feet are allowed word-initially.
5. Feet that are both overheavy and polysyllabic are only permitted when the foot aligns with the whole word.
6. Final feet are extrametrical for the purposes of stress assignment (excepting overheavy feet, which require a special licence to be footed).
7. The heads of (non-extrametrical) feet are stressed.
8. The leftmost foot carries the primary word stress (end-rule left).

The last three principles here follow from the general operation of secondary stress, as reflected in the metre, and principle 3 is inferred from the ability of overheavy final syllables to count as stressed when triggering suspension of resolution (note 2 above).

Overall, these principles are largely the same as those proposed for Old English, with points 4 and 5, both representing additional constraints on phonological resolution, being added to the list. These likely arose hand-in-hand with the extensive loss of syllables described in chapter 10, which eliminated many light disyllabic sequences from the language. In the Norse of the later Viking Age and onwards, resolution would have been a strikingly less common feature in the lexicon, especially in non-initial position. The absence of anything like Kaluza's law from Norse is presumably a straightforward metrical reflection of the rarity of non-initial resolved feet in the language. Beyond reflecting the increasing constraint on resolution, principle 5 may also suggest that foot formation is sensitive to the full prosodic word: the optimal prosodic word would (in Norse) be a single foot, and other complexities are tolerated in the foot to achieve this alignment.

[14] Unless final overheavy feet are instead footed through limited final-consonant extrametricality.

Chapter 12

The Constrained Position: Non-resolution and Craigie's Law

The previous chapter covered the issue of suspended resolution in Norse *fornyrðislag*, the question of when a light syllable would fail to resolve and count as a distinct metrical position. Further evidence of mora-based constraints in Norse comes from the final position of the (non-catalectic) half-line in *fornyrðislag*, which seems to be subject to two distinct but presumably related constraints (both mirrored, with differences, in *dróttkvætt*).[1] The first of these is that this position is strongly disfavoured for resolution: it must be filled by a single heavy syllable. The second is known as *Craigie's law*, which holds that a nominal in this position can't be *over*heavy. Between these two constraints, the result is that any nominal in the fourth position of a verse must be monosyllabic and precisely bimoraic. Of course, terms and conditions apply, and this chapter will focus on establishing that this 'constrained position' exists, characterising just how the constraints work in *fornyrðislag* (with reference to *dróttkvætt*), and seeing what they can tell us about the prosody of Norse overall.

12.1 Resolution in the Fourth Position

In Old English metre, resolution can potentially occur in any metrical position, even the last one in a half-line. I repeat from chapter 5 an example of resolution in the fourth position of a verse:

(72) hwæt mē Grendel *hafað*
'what Grendel has (done) to me' (*Beowulf* 474b)

[1] The corpus of *dróttkvætt* is being edited as part of the ongoing *Skaldic Poetry of the Scandinavian Middle Ages* project, and many poems are available online through the project's website: https://skaldic.org/m.php?p=skaldic. When complete, this will supersede the classic edition of Finnur Jónsson (1967a,b, 1973a,b). A valuable recent chronological assessment of the corpus is Myrvoll (2014).

In some Norse metres, this kind of resolution is at best strongly disfavoured. This includes *fornyrðislag*, where Suzuki (2014: 238–239) finds just ten possible examples of verses such as the following (see appendix H.4):

(187) til smiðju *borinn*
'brought to the smithy' (*Vǫlundarkviða* 18.10)

Suzuki (2014: 238–240) argues that these verses show suspended resolution, making them, in his view, varieties of type A with anacrusis: *w(…)SwS̆w*. This depends on both the assumption of anacrusis, and there being a 'type A1s', with unconditioned suspension of resolution. However, anacrusis is doubtful in most of *fornyrðislag* (§3.2.1; though it is more plausible in *Vǫlundarkviða* than in most poems), and I have already argued that there is no reason to accept type 'A1s' (§11.1). It is probably better to scan these verses with resolution, making either type B (such as 187), *w(…)SwS*^{w}, or else type E, *SswS*^{w} (such as *Vǫlundarkviða* 4.3 (4.5)). Furthermore, some should possibly be understood to linguistically end in HX rather than LX, meaning that resolution would simply not be a relevant issue.[2]

Resolution in the fourth position is clearly very rare and restricted. The, at best, ten examples like (187) suggest that resolution was not favoured in that context, and most poets seem to have avoided it entirely: seven of the ten possible examples come from just one poem, *Vǫlundarkviða*, and two more are from *Hyndluljóð*, both poems which show other peculiarities compared to standard *fornyrðislag* practice.[3] The testimony of *dróttkvætt* is less helpful, since resolution is highly restricted outside of initial metrical positions in that metre (Sievers 1878: 468–471; Kuhn 1983: 55–56).

This avoidance of resolution is certainly not due to any inherent linguistic or compositional limitations, as a comparison with the other major eddic metre,

[2] The most likely to really end in HX, in my view, are those with the name *Vǫlundr*. Though usually printed with a short vowel, this could sometimes reflect the long-vowelled variant *Vǫlundr*. Such a form would improve the scansion in four other verses in *Vǫlundarkviða*: 13.3 (14.3), 32.1 (31.1), 39.3 (38.3), and 41.3 (40.3). It would, however, make for notably worse scansion in 31.8 (30.8), which would become type A with anacrusis, very unusual in the off-verse, even if anacrusis in general were accepted in this particular poem. Of the verses given in appendix H.4, *Vǫlundarkviða* 29.5 (28.5) and 38.1 (37.1) could potentially be taken as plain type A, if the second syllable of *hlǽjandi* scans as *w* rather than *s*; 37.3 (36.3) would be type A with anacrusis, but since this is an on-verse, this is less problematic than it would be for 31.8 (30.8). Beyond *Vǫlundr*, two further names involve real uncertainties, though I suspect both should be taken as LX. *Sigurðr* etymologically began with a heavy syllable, **Sigw*-, but the **w* was regularly lost in some case forms, including the nominative (in vocative use in *Fáfnismál* 41.7, which I take as probably LH). In other case forms, the **w* would not vanish by sound change, and there is the possibility of analogical interchange in both directions. *Jǫrmunrek(k)i* in *Hyndluljóð* 25.6 should have a single *k* historically, but here too the quantity could be changed analogically, and the manuscript indeed reads *-rekki* (Sievers 1893: 65). Compare note 11 in Chapter 11.

[3] If *Vǫlundarkviða* was composed in an Anglo-Scandinavian context, as argued by McKinnell (1990: 1–13), then these peculiarities may be at least in part due to West Germanic influence.

ljóða-háttr, clearly shows. Lines in these metre not only allow, but seem to actively favour patterns ending in resolved S^{w}, such as:

(188) þeim er víða *ratar*
'for the one who wanders widely' (*Hávamál* 5.2)

(189) unz um·rjúfask *regin*
'until the gods are destroyed' (*Grímnismál* 4.6)[4]

It seems rather that there is some special metrical constraint or pressure active in *fornyrðislag* that blocks resolution in the fourth metrical position (the final one in a full-length half-line).

12.1.1 Resolution in the Third Position

I have so far focused on the fourth metrical position as showing a particular reluctance to employ resolution. It has been argued that in *fornyrðislag*, the entire later part of the verse is subordinated to the point that resolution is impossible or highly exceptional (Russom 1998: 103–105, 2002a: 314; Suzuki 2014: 266). In *dróttkvætt*, some poets do allow resolution in position three, but it is not common (Kuhn 1983: 68). In *fornyrðislag*, the same thing appears to be broadly true, and at first glance, one might well think that the later positions in the verse were inherently inimical to resolution in both these metres.

A closer consideration of the word-shapes and wider metrical contexts of *fornyrðislag* shows a more complicated picture, and suggests that the rarity of resolution in the third position is epiphenomenal: it just falls out of other factors at work in the metre. The key question is what linguistic material poets had at their disposal to create resolved sequences in an *Sw* context. This was possible by employing any of the three options:

1. An LLX trisyllable: *svaraði*, *þoriga*
2. An LL-H compound: *vala-rift*
3. A two-word phrase: *konung und*

Option 1 was common in Old English (cf. 68), but as noted in §11.2.2, this was extremely rare in all varieties of Norse poetry (Kuhn 1939: 182). Counting instances formed with clitics, such as *þorig=a* 'I do not dare', there are perhaps six

[4] This line is found in nearly identical form in *Lokasenna* 41.3, *Sigrdrífumál* 19.9 (20.9), and *Fjǫlsvinnsmál* 14.6, and slightly more divergently in *Vafþrúðnismál* 52.6.

examples of resolution coming from this option in the initial lifts of type A verses (see appendix H.5 for the full list of these and other verses discussed here):[5]

(184) *svaraði* Hǫgni
'Hǫgni answered' (*Guðrúnarkviða II* 10.1)

There are no simple examples of a verse ending in *Sw̆w*, though there are two half-lines that should be mentioned in this context:

(190) slíks dǿmi *kvað=at=tu*
'such a thing you said (would) not (be)' (*Oddrúnargrátr* 12.5)

(191) mál ǫll *meginlig*
'all mighty pledges' (*Vǫluspá* 26.7)

In (190), the exact scansion of the half-line is unclear (though it probably involves the resolution of *kvaðat-*, unless there is a serious error in the transmitted text), and it involves a sequence of two clitics that together make for the shape LHL rather than LLL. In (191), the word also isn't a simplex, but a derived adjective in *-lig*. Possibly this could be considered a secondarily stressed ending.

Option 2 is to use a compound word such as *vala-rift* 'exotic clothing', of the shape LL-H. But while such words are common enough in prose and in other metres, they are – for some reason – strongly avoided in *any* metrical position in *fornyrðislag*.[6] Only two type-A verses show resolution of an initial lift through use of such a compound:

(192) *vala-rift* vel fáð
'exotic clothing excellently coloured' (*Sigurðarkviða* 66.3)

(193) *fǫður-leifð* hafi
'should have his paternal inheritance' (*Hyndluljóð* 9.7)

There are two comparable examples from second lifts, one involving the compound *ǫgur-stund* 'period of tides', the other the name *Jǫsur-marr*; depending on the stress assumed for *meginlig* in (191), that might also be counted here.

[5] I also include there the data for the single lift of type A3, as a further point of reference. 45 such verses end in two-word *S#w* or *S#s*, of which ten show resolution in the lift. The only other examples of resolved lifts in A3 are four verses ending in *valarift*-type compounds.

[6] Inflected forms, such as *regin-þinga* 'mighty council (GEN.PL)', and non-resolved equivalents such as *hjǫr-þing* 'sword-meeting' (*Helgakviða Hundingsbana I* 51.2 and 50.12, respectively) do both occur at rates that don't seem unusually low. It is only the specific shape LL-H that is so vanishingly rare.

See appendix H.5, group 'second lift: S^{w}w, S^{w}s', for all four possible second-lift examples of options 1 and 2.

This leaves only option 3, two-word phrases, to account for the overwhelming majority of instances of resolution anywhere in type-A verses. In the on-verse, there are some 106 examples of initial resolution where the verse begins with *S^{w}#w* or *S^{w}#s* (with # representing the word boundary):

(194) *konung und* hjalmi
'king beneath helmet' (*Helgakviða Hundingsbana II* 14.6)

The word breaks here are normal also for verses without resolution, and there are several hundred examples of verses with a monosyllabic initial lift followed by a word break (Suzuki 2014: 27):

(195) *hugr á* vífi
'(the king's) mind (turned) to the woman' (*Helgakviða Hundingsbana II* 14.8)

That resolution is relatively normal in the first lift of type A seems to follow entirely from the routine possibility of following this lift by a word break. This option is, however, severely curtailed in the second lift, since type-A verses are much less likely to end in *-S#w* or *-S#s*.[7] There are perhaps 27 examples in total of verses such as the following (not including those with resolved lifts):

(196) mjór ok *mjǫk fagr*
'slender and very beautiful' (*Vǫluspá* 31.7)

Thirteen of these – almost half – come from one poem, *Hyndluljóð*, and ten of those instances are exact repetitions of a refrain-like formula (appendix H.5, group 'second lift: S#w, S#s'):

(197) allt er þat *ætt þín*
'that's all your lineage' (*Hyndluljóð* 16.9, etc.)

Given how much rarer verses such as (196) are compared to ones such as (195), it is not surprising in the least that the same disparity is seen among their resolved

[7] The reasons for this are probably partly syntactic, since proclitic elements such as prepositions can't be placed in a verse-final dip. There may be additional metrical pressure from the principle of closure, specifically the desire to align final words and final word-feet.

equivalents. Against the 106 examples like (194), there are only ten like the following (appendix H.5, group 'second lift: S^w#w, S^w#s'):[8]

(198) hóf sér á *hǫfuð upp*
'(he) lifted (the kettle) up onto his head' (*Hymiskviða* 34.5)

Seven of these come from *Hyndluljóð*, the same poem that accounts for far more than its share of final *S#w* in general, and six of them are exact repetitions or slight variations of another refrain, ending in *viti svá*.

It seems unlikely that there is some special restriction against resolution in the third position of the verse. The relative rarity of resolution there follows entirely from other causes: the only ready option for metrical *S^ww* and *S^ws* being two-word sequences, interacting with the strong preference to avoid word breaks after the second lift in type A. If there were any further metrical bias against resolution in the third position, then the question would arise of why resolution is found in the second lift of type A at all. Resolution there is already difficult to achieve given the linguistic material available in *fornyrðislag* and the metrical restrictions on word breaks, and if there were a special metrical pressure against resolution as well, it would be hard to imagine that even a single example of a resolved third position could be identified.[9]

12.2 Craigie's Law

Returning to the fourth position of the verse, alongside a sharp bias against resolution, there is another restriction that applies here. This is a phenomenon known as *Craigie's law*, first described by William Craigie (1900). Craigie originally focused on *dróttkvætt*, where he noticed that the fourth position – the one immediately before the trochaic cadence, in that metre (§3.2.2) – could not be freely filled by just any kind of syllable.

To see what's involved with Craigie's law, take stanza 6 of Glúmr Geirason's *Gráfeldardrápa*. I mark the break before the cadence with |, and italicise the word immediately beforehand (the one in the fourth position):

(199) Austr rauð jǫfr*a* | þrýstir orðrakkr fyr *bý* | norðan
brand, þars bjarms*kar* | kindir, brinnanda, *sák* | rinna.
Gótt hlaut gum*na* | sættir (geirveðr) í *fǫr* | þeiri
(ǫðlingi *fekksk* | ungum) orð (á Vín*u* | borði).

[8] I assume that *Guðrúnarkviða II* 5.5, *hnipnaði Grani* 'Grani sagged', is type A with transverse alliteration *hg:gh* (the off-verse, 5.6, is *drap í gras hǫfði* 'dropped (his) head into the grass'), and not type A3, since class II weak verbs usually count as stressed.

[9] Also compare §11.1, where I argue for resolution in the third position of three-position verses. The findings in that section further support the argument made here, and vice versa.

> 'The word-bold crusher of princes [KING = Haraldr] reddened the flashing sword in the east, north of the settlement, where I saw Permian people flee. The reconciler of men [KING = Haraldr] gained a good reputation on that expedition; a spear-storm [BATTLE] was granted to the young prince on the banks of the Dvina.' (Finlay 2012: 255)

In four of these verses, the fourth position is filled by a monosyllable: the verbs *sák* 'I saw' and *fekksk* 'was granted', and the nouns *býʀ* 'settlement' and *fǫʀ* 'expedition'. Each of the verbs is overheavy, *fekksk* quite strikingly so, but the nouns are not: they are each bimoraic. This is the basic rule of Craigie's law: that a nominal (a noun or an adjective) in the fourth position must be precisely bimoraic. Other word classes – not just verbs, but also pronouns and other function words – are not subject to this restriction, and may be freely bimoraic, trimoraic, or even heavier.

Craigie was able to show that his law holds up very strictly, particularly once a couple of further features are noted. Firstly, the law doesn't seem to apply under secondary stress, so that we find verses such as the following:

(200) sýnisk svart*leitr* | reyni
'seems dark-faced to the tester' (Jórunn skáldmær, *Sendibítr* 2.3; Jesch 2012a: 146)

Here *-leitr* is an overheavy nominal, but as the second element of a compound it isn't bound by Craigie's law.

The second caveat concerns how to measure syllable weight, and provides a valuable bit of information about Norse prosody. Alongside obviously bimoraic nouns such as *býʀ* and *fǫʀ*, we also find verses such as:

(201) margnenninn *sonr* | hennar
'her very energetic son' (Sigvatr Þórðarson, *Ástríðr*, 2.4; Jesch 2012b: 648)

Here the noun would be bimoraic, except for the inflectional *-r*. It seems that this sound, along with inflectional *-s*, could be at least optionally counted as extrametrical, and so ignored when reckoning syllable weight (Craigie 1900: 345). I will return to this point in §12.2.2 below.

Craigie's law is now well-described for *dróttkvætt*, where, as Gade (1995: 30) puts it, 'it has been neither challenged nor fully explained'. I will consider possible explanations of this law later, in §12.3, but for the present purposes I simply want to highlight that this is a real restriction on the fourth position of the half-line, a position in which resolution is also systematically prohibited in *dróttkvætt*.

12.2.1 Craigie's Law in Fornyrðislag

Craigie himself noticed that the law applied to at least some poems in *fornyrðislag*, and though its applicability to this metre has been doubted (Kristján Árnason 2009: 48), its operation as at least a strong tendency has been demonstrated well by Alexander (1981) and Suzuki (2014: 324–328). Alexander's article in particular shows that the majority of overheavy verse-final nominals meet at least one of the following two conditions:

1. The element is subordinated in stress, either as the second element of a compound or through directly following another element of greater stress.
2. The verse in question has fewer than four positions.

The first of these conditions is also present in *dróttkvætt* (see example 200 in §12.2), but the second is necessarily more distinctive to *fornyrðislag*, since *dróttkvætt* is too rigid a metre to allow verse openings of fewer than four positions.

Based on Alexander's findings, during the remainder of this discussion I systematically set aside all verses such as the following, considering them to fall outside the scope of Craigie's law (affecting fully stressed nominals in the fourth position):

(202) svása *bróðr*
'my own brothers' (*Guðrúnarkviða III* 8.4)

(203) bítia þér þat *sverð*
'may that sword not bite you' (*Helgakviða Hundingsbana II* 33.1)

(204) eða gull glóð*rautt*
'or gold glowing red' (*Guðrúnarkviða II* 2.7)

(196) mjór ok mjǫk *fagr*[10]
'slender and very beautiful' (*Vǫluspá* 31.7)

Verses such as (202) and (203) have fewer than four positions, while those such as (204) and (196) have the relevant nominal in subordinated stress. It may be noteworthy that three-position verses of the shape *SwS* allow both resolution and overheavy nominals in the final lift.

Even granting these constraints, there is a little fuzziness about just what elements Craigie's law applies to. Craigie excluded non-nominal elements from

[10] Note that the *-r* here is part of the stem, not the inflection.

the very beginning, but the border of 'nominal' is sometimes unclear: do the past participles of verbs count as nominal or verbal? Are numbers nominals, or a distinct class? The relevant examples of both these marginal classes are noted at the end of appendix H.6.[11]

12.2.2 Is Inflectional -r/s *Extrametrical?*

A special point of interest, and one touching on a fairly large number of potential examples, is the possibility that certain final consonants are extrametrical. As noted above, Craigie (1900: 345) felt that the final *-r* of the nominative singular could be ignored for the purposes of his law. However, in a review of the problem, Suzuki (2014: 325–327) does not address this possibility, and assumes that all consonants count as metrical, without exception. That is to say, Suzuki finds an exception to Craigie's law in a verse such as:

(205) vara sandr né *sǽr*
'there was neither sand nor sea' (*Vǫluspá* 3.3)

But if the inflectional *-r* is ignored, then *sǽ-* is indeed bimoraic, and not in violation of Craigie's law. Note the contrast with the first lift, which is not subject to the law: in *sandr*, the removal of the inflection still leaves the overheavy *sand-*.

The relevant verses are collected in appendix H.6 (especially group 'extrametrical?'): there are 80 type-B and type-E verses potentially ending in an overheavy nominal, but more than half of them – 49, to be precise – are like (205), counting instead as bimoraic if extrametricality is assumed. For the poems *Hymiskviða* and *Þrymskviða*, there are no exceptions at all to Craigie's law if such extrametricality is assumed.

These numbers form a striking contrast with the *first* lifts of types B and E. Suzuki (2014: 326, n. 12) has collected the relevant data, and he finds that these initial lifts are overwhelmingly overheavy, filled with nominals such as *sandr* in (205). In those contexts, Suzuki finds just two examples that he considers bimoraic, and 41 that he sees as overheavy. Since Suzuki does not consider the possibility of extrametrical consonants, I checked all of these examples, but found only three verses that I would reclassify as bimoraic in contrast to Suzuki's judgement.[12] That is, words such as *sonr* and *sǽr* are strongly avoided in first lifts, despite being superficially overheavy, but occur in large numbers in second lifts,

[11] The argument in these sections relies in part on comparisons with Suzuki (2014), who does not include *Hervararkviða* in his corpus. To make these comparisons more straightforward, I have not considered data from that poem in the current discussion.
[12] *Helgakviða Hjǫrvarðssonar* 38.5; *Oddrúnargrátr* 1.3, 8.1.

where bimoraism is preferred. This pattern seems very clear, and suggests that final inflectional *-r* and *-s* really should be considered extrametrical.

Strictly speaking, the limitation to *inflectional* final *-r/s* is hard to justify with certainty. There are words such as *her* 'army (ACC.SG)', which would be unacceptably monomoraic if the final *-r* were discounted, but this could be explained in purely phonological terms: *-r* and *-s* might be counted as moraic if this was needed to reach the bimoraic minimum, but otherwise would count as extrametrical.[13] This distinction could only be seen in words such as *sigr* 'victory', with a final *-r* that is part of the stem. Such words occur very rarely in contexts where their behaviour relative to Craigie's law might be tested: there is in fact only one relevant verse, *Helreið Brynhildar* 8.5, which ends in *sigr* itself. If the final *-r* (from **-z*) is taken as moraic, then this verse would violate Craigie's law, but if this non-inflectional *-r* were allowed to be extrametrical, then the word would be bimoraic, *sig⟨r⟩*, and the verse would conform. Since *sigr* (or a comparable word) never appears in the fourth position in *dróttkvætt*, I have assumed that the non-inflectional *-r* (*-ʀ*) is *not* extrametrical (that is, I retain Craigie's traditional framing), but with so little relevant data this point seems rather tentative.

12.2.3 Exceptions to Craigie's Law in Fornyrðislag

Suzuki (2014: 326–328) had, even without taking any note of the possible extrametricality just discussed, established that Craigie's law holds at least as a broad preference in *fornyrðislag*. If extrametricality is assumed,[14] then of the 220 relevant verses, 186 show a bimoraic final nominal. 137 are plainly so (see appendix H.6):

(206) bað hann Sifjar *ver*
'he asked Sif 's husband' (*Hymiskviða* 3.5)

A further 49 are like (205), and are bimoraic assuming the extrametricality described in §12.2.2.

As these numbers imply, there are – in contrast to *dróttkvætt* – a number of real exceptions that end in an overheavy nominal:

(207) megi brenna *brjóst*
'may (fire) incinerate the breast' (*Guðrúnarhvǫt* 20.5)

[13] It might also be that only *-ʀ* < **-z* was extametrical, but not *-r* from Germanic **-r*.
[14] I also assume, following Kuhn (1937: 56), that the apparently overheavy *fjǫlð* 'multitude' has generally replaced bimoraic *fjǫl*.

There are around 31 reasonably clear examples along these lines, with perhaps three more potential candidates.[15] That is, less than 15.5 per cent, and probably more like 14.3 per cent, of relevant verses violate Craigie's law.[16]

Clearly at least some poets considered Craigie's law more of a guideline than a rule, though this may have varied. Both Craigie and Alexander already noted that some *fornyrðislag* poems adhere to the law without exception: *Hymiskviða*, *Þrym-skviða*, *Fáfnismál*, *Brot af Sigurðarkviða*, all three *Guðrúnarkviður*, and *Baldrsdraumar*. Obviously in any one of these, the absence of violations might be a coincidence, particularly in the shorter poems, but taken together these represent a very substantial swathe of eddic *fornyrðislag* (some 1,541 verses) that adheres to Craigie's law perfectly. Only a very few poems show three or more clear violations: *Vǫlundarkviða*, both *Helgakviður Hundingsbana*, *Sigurðarkviða*, and *Helreið Brynhildar*. Together, these five poems account for 17 of the 31 clearer violations, in 1,862 verses of *fornyrðislag*. This leaves the remaining 14 violations spread out among 2,595 verses. I would again stress that the short length of many poems means that these trends cannot be taken too absolutely, but it is nonetheless striking that, for instance, the two *Helgakviður Hundingsbana* together account for over a third of the clear violations of Craigie's law, despite containing just 880 of the roughly 5,998 *fornyrðislag* verses (14.7 per cent) in the Poetic Edda.

Even among those poets most willing to violate Craigie's law, it remains a strong trend. *Helgakviða Hundingsbana I* has seven verses that violate the law – the most of any single poem – but 24 that adhere to it (ten through consonant extrametricality). Overheavy nominals are extremely common in Norse, and this avoidance of such elements in fourth-position lifts certainly reflects at the least a noteworthy prosodic preference. Whether as an absolute rule, as apparently for the *Hymiskviða* and *Þrymskviða* poets, or as a clear trend as in *Helgakviða Hundingsbana I*, the operation of Craigie's law in *fornyrðislag* needs explanation.

12.3 Craigie's Law and Non-Resolution

The starting point for any explanation of the metrical phenomena discussed in this chapter should be the importance of the fourth position of the verse: here, *fornyrðislag* shows both a virtual absence of resolution (§12.1) and a strong tendency to avoid overheavy nominals (§12.2). The first tendency is stronger than

[15] The scansion of *Vǫluspá* 19.7 is not obvious, and the final *grónn* might be taken as subordinated in stress. *Helgakviða Hundingsbana II* 51.1 and *Helreið Brynhildar* 13.5 are probably type A3-, but could be scanned as type B instead. These would bring the total to 34 examples. I include here as 'clear' some verses that could be easily emended, such as *Vǫlundarkviða* 1.5's *sǽvar strǫnd* 'shores of the sea', which could plausibly be a scribal alteration of the phrase *sǽvar stǫð*, of the same meaning, found at 17.10 and 20.8 (19.8).

[16] Or 13.9 per cent, if the *sigr* in *Helreið Brynhildar* 8.5 is taken as having an extrametrical final consonant.

the second, but both are clear, and neither applies to other positions in the half-line (including the final position of *SwS* verses).

The common metrical patterning of these two features may reflect something about the prosodic preferences of Norse. In the previous chapter, I suggested that resolution remained a living part of Norse phonology, but had become a much less routine process than it had been earlier, or was in Old English. The optimal foot was now monosyllabic, but the desire to avoid light feet was strong enough to warrant phonological resolution under some circumstances. Resolution had become limited to word-initial feet, so that resolution in the second elements of compounds (or in the second of two consecutive stressed syllables in a verse) was at best highly exceptional.

Craigie's law, similarly, points to bimoraic monosyllables as an optimal – or perhaps better, least costly – foot type. In the Norse lexicon, very many words would have exceeded this weight (even discounting inflectional *-r/s* as extrametrical), which might be interpreted as a widespread use of the overheavy licence. This overheavy licence was, apparently, less prosodically 'costly' than resolution, to judge by the greater frequency of overheavy monosyllables in the lexicon compared to resolved disyllables.

Metrically, it seems that the fourth position in a *fornyrðislag* verse was particularly constrained, and was biased against elements that were too prominent or complex prosodically. The exact nature of this constraint is a little hard to pin down. A classic explanation proposed by Kristján Árnason (1991: 139–140, 2009: 50–51) only works for *dróttkvætt* specifically: that the fourth position was limited in order to prevent it from overshadowing the strong syllable of the trochaic cadence that immediately followed. This will obviously not serve for *fornyrðislag*, where there is no further cadence. For this metre, Russom (1998: 103–105, 2002a: 314) has proposed that the entire second word-foot of each verse was strongly subordinated to the first, but this explanation too is insufficient: it does not explain why the fourth position should be singled out over the third. The limitations of Craigie's law also cannot be a direct consequence of subordination alone, since it seems to *not* apply to more strongly subordinated elements, such as the second part of *glóð-rautt* in (204); see §12.2.1.

Perhaps rather than subordination tout court, the constrained nature of the fourth position might follow from the potential *mismatch* of a strongly stressed nominal with a metrical position that would be ideally somewhat subordinated – though if so, this would have to lie in a kind of subordination specific to final lifts in types B and E.[17] Resolution, now a mark of initial primary stresses, is

[17] The exact nature of this metrical pressure would be framed very differently within the word-foot theory compared to the four-position theory. In the word-foot theory, the final position of type-B verses would be subordinated within a foot, as prototypically *Sws*. In type E, the position would be the head of a simple foot *S*, but the unusual 'reversed' nature of such verses would be a clear motivator

very strongly disfavoured in this position. In terms of syllable weight, words that already show a reduced or intermediate stress (however heavy) fit well into this constrained fourth position, and are not subject to any further restrictions: hence Craigie's law does not apply to verbs, function words, or subordinated nominals. Freestanding nominals, however, would be more problematic, being potentially much too salient for this metrical position: they are accordingly employed mainly when precisely bimoraic. In other words, the further complexity of the overheavy licence is generally avoided for elements as prominent as nominals. Since the overheavy licence was much more frequent and routine in Norse than resolution, there are more exceptions to this tendency than to the avoidance of resolution, but it remains a striking trend regardless.

I am reluctant to try and use the evidence of the fourth position to specify the prosodic details further. Without better evidence from direct phonological sources, these metrically based suggestions must remain approximate beyond a certain point. The really significant point, to my mind, is that resolution (of any element, nominal, verbal, or other) and the placement of overheavy nominals are both clearly avoided in this same 'constrained position', suggesting that both are in some common way noteworthy in terms of Norse phonology – and that resolution is to a very considerable degree the more noteworthy of the two.

This impression is to some extent reinforced by the evidence from *dróttkvætt*. Though both Craigie's law and non-resolution are strict in position four, position three is more revealing. Unlike *fornyrðislag*, most *dróttkvætt* poets avoid resolution in position three (and two, for that matter), but the less-strictly regulated overheavy nominals are allowed more freely in these positions. Examples in the initial elements of compounds can be seen in examples (199) and (200) – *bjarm-* and *svart-*, respectively – and overheavy monosyllables such as *sǫngr* 'song' (Þorbjǫrn hornklofi, *Glymdrápa* 7.7; Marold 2012: 87) and *skóg* 'forest' (Sigvatr Þórðarson, *Austrfararvísur* 3.2; Fulk 2012b: 587) also occur in the third position. This metre, too, constrains resolution much more tightly than it does overheavy nominals, though both are constrained to some degree.

12.4 Principles of Norse Prosody

I repeat the principles of Norse prosody developed in the previous chapter (186), expanded by the conclusions of this one:

(208) 1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. Final (inflectional?) *-ʀ* and *-s* are extremetrical.

to limit complexity in the matching of metrical and linguistic units. See further appendix E on how different theories explain these different 'types'.

4. *Overheavy licence*: Trimoraic feet are tolerated only in word-initial position, or to prevent overheavy single syllables from being unfooted.
5. Polysyllabic feet are only allowed word-initially.
6. Feet that are both overheavy and polysyllabic are only permitted when the foot aligns with the whole word.
7. Final feet are extrametrical for the purposes of stress assignment (excepting overheavy feet, which require a special licence to be footed).
8. The heads of (non-extrametrical) feet are stressed.
9. The leftmost foot carries the primary word stress (end-rule left).

Points 4 and 5 gain additional support from the constrains operating on the fourth position of *fornyrðislag* and *dróttkvætt*. Craigie's law also allows principle 3 to be added to the list.

Since these principles are mostly based on metrical phenomena in the corpus of surviving verse, they would be most readily applicable to the classical West Norse of the later Viking Age (roughly 900–1050) and probably the earlier manuscript period, though a precise chronological framing is hindered by the general difficulty of dating eddic poems.[18]

[18] It might be interesting to compare the strictness of Craigie's law with other dating criteria. It may be noteworthy, for instance, that Sapp (2022: 197), who does not make use of Craigie's law for *fornyrðislag* (2022: 53), finds evidence pointing 'unambiguously to an early date' (in the 9th century) for *Þrymskviða*: this may fit well with the exceptionless application of Craigie's law to this poem.

Chapter 13

Conclusion: Bimoraism in Medieval English and Norse

The data for prosody from medieval English and Norse is fully as messy and varied as anyone might expect. Disentangling phonological developments from purely morphological reworkings, building pictures of vowel deletions from the scanty records of runestones, finding the right generalisations across diverse and varied manuscripts, discerning phonological structure in verse forms – these philological and linguistic challenges can often be met, but there is always a sense in which theoretical phonological conclusions are partial and provisional.

Still, when taken together, the evidence of vowel reductions, morphophonemic alternations, and metrical resolution adds up to a fairly consistent conclusion: that bimoraic feet played a significant and enduring role from prehistory through into the later Middle Ages both in English and in North Germanic. In some instances, such as early Old English, this bimoraic foot must very specifically be the bimoraic trochee, a foot consisting of ideally two moras, which in the simplest cases come from one heavy syllable or from two light syllables. In other contexts, such as early Middle English, it is hard to conclusively rule out the possibility of some other kind of bimoraic foot, such as the extended Germanic foot (essentially a bimoraic trochee plus an optional extra weak syllable) – though since the bimoraic trochee is sometimes needed, and always sufficient, it seems safest to assume that this typologically well-supported foot type was the primary basis for all kinds of bimoraism in earlier Germanic.

This basic continuity of bimoraism is, however, only part of the story. Here at the end of this book, it seems worth taking a step back and attempting to provide a synthesis of the prosodic history of these languages from (at least) Proto-Germanic through the end of the Middle Ages.

13.1 Bimoraic Feet in Proto-Germanic

13.1.1 Minimal Words

There are three pieces of evidence for bimoraic trochees in Proto-Germanic. The first is that in the reconstructed language, as in all the older attested Germanic languages, there is a strict *minimal-word requirement*: every prosodic word must have at least two moras (Kuryłowicz 1949: 38; Russom 1998: 15–16; Fikkert, Dresher & Lahiri 2006: 128; Goering 2016b: 281–282). One interpretation of this is that every prosodic word must contain at least one foot, which is (minimally) bimoraic (McCarthy & Prince 1996: 6–7). Examples of prosodically minimal content words reconstructible for Proto-Germanic include **k^{w}aþ* 'said', **snau* 'snowed', and **skipa^{n}* 'ship', and if the final **-z* is extrametrical, also **kū⟨z⟩* 'cow', **wini⟨z⟩* 'friend', etc. The only words shorter than this that can be reconstructed are unstressed grammatical words such as **ni* 'not', **sa* 'that (MASC.NOM.SG)', and **bi* 'beside, around'. Such words were probably clitics rather than full prosodic words, and when they did occur with independent stress they were probably lengthened: compare frequent Gothic *ni* 'not' with lengthened *nei* [niː] (attested in Corinthians II 3:8 and Skeireins 1:5), or Old English *big* [biː] alongside the more usual short *be*.[1]

Garrett (1999) warns that this form of evidence is not strong, since many languages show minimal-word requirements that are slightly different from their minimal-foot requirements. One example is the Uto-Aztecan language Cahuilla (discussed in §4.5.1.2), where content words must end in at least a short vowel plus any single consonant (e.g. *net* 'ceremonial chieftain'), even when these consonants do not count as moraic for foot structure; only coda [ʔ] contributes a mora in this language (Garrett 1999: §2.1). That is, there are minimal words smaller than minimal feet, at least in some languages. It is also worth remembering the warning of Bermúdez-Otero (2018: 3) that a language may allow a minimal word of the shape LL, but this does not necessarily provide evidence for a resolved bimoraic trochee (§2.5).

In general, minimal-word requirements *may* stem rather from phonetic pressures to ensure that content words usually meet a certain minimum absolute length, which may not have much to do with feet in any given language (Garrett

[1] This is sometimes called 'Northwest Germanic lengthening' (Luick 1921: 119; Kuryłowicz 1949: 38, 1970: 8–9; Fulk 1995: 491), but this is a misleading term on multiple levels. This was evidently an enduring type of potential alternation continuing even into historical periods, not a single sound change; it was probably not limited to North and West Germanic, though Gothic orthography means that length alternations in a word such as *sa* would be invisble; and the lengthening was not general (Goering 2020a: 243–244). Words such as **ni* remained short most of the time in all older Germanic languages. It is also worth mentioning that the second-person pronoun **þū*, very widely cited as undergoing this supposed change, was probably long already in Proto-Germanic (Katz 1998: 23–24; Ringe 2017: 97).

1999: §4). Though none of Garrett's criticisms apply specifically to Germanic, where the assumed minimal-foot and minimal-word requirements align exactly – the generalisation that a minimal prosodic word must have at least one full foot seems plausible for these languages – it is probably best not to put undue weight on this sort of evidence as the starting point in any argument.[2]

13.1.2 Shortening of Overlong Syllables

Similar qualifiers and cautions also apply to the second possible source of evidence for the early bimoraic trochee: shortenings of overheavy syllables in pre-Proto-Germanic.[3] There are two different kinds of shortenings, which may not have occurred particularly close to each other in time. One is known as Osthoff's law,[4] and involves the shortening of a long vowel when followed by a sonorant consonant in the same syllable (Kroonen 2013: xxiv–xxvi; Ringe 2017: 94–96; Fulk 2018: 55). Classic examples of this shortening include:

(209) **wēn-tos*[5] > **wen-tos* > Proto-Germanic **windaz* 'wind'

(210) **(t)pḗr-snah₂*[6] > Proto-Germanic **fersnō* 'heel'

The other type of shortening is consonantal, specifically the simplification of geminate consonants to singletons after long vowels (Kroonen 2013: xl–xli; Ringe 2017: 106; Fulk 2018: 116):

(211) **h₁ēd-tós* > **ēssós* > Proto-Germanic **ēsaz* 'carrion'

(212) **ḱweit-nós* > **hweittós* > Proto-Germanic **hʷītaz* 'white'

Such changes reflect a general preference for bimoraic syllables, and similar developments recur throughout the history of many languages, include later Germanic. In English, words such as *enwintre* 'yearling' (from **ān-wintrī*) point to

[2] It is also of interest that stress-dependent alternations in vowel length may be discernible in the history of the spatial adverbs **þǎr* 'there' (Stiles 2004; Ringe & Taylor 2014: 13) and **hěr*/*hĭr* 'here' (Grønvik 1998: 92–93; Ringe & Taylor 2014: 36–37). Either the final **-r* counted as extrametrical or there was more at work than simple bimoraism or footing requirements.

[3] By this I mean the period between Proto-Indo-European and Proto-Germanic proper, using 'proto' to signal synchronic stages, not diachronic phases.

[4] After Osthoff (1879: 58, 1881: 1593–1595).

[5] The exact details of the earlier forms of this word are controversial (and I have not marked the position of the accent, since this is disputed); compare Kroonen (2013: xxxi, xli, 587) and Ringe (2017: 95–96). Per Hill (2005: 110–114), this word might never have developed a long vowel in Germanic. I am not fully persuaded by this argument, but if it is correct, this word would not provide an example of shortening.

[6] See Lubotsky (2006).

a perhaps relatively early shortening that was at least partly conditioned by syllable weight (Luick 1921: 186–188; Hogg 2011: 207–208),[7] and shortening in closed syllables became very widespread in later Old English (§8.1). Such shortenings do not provide detailed evidence for bimoraic trochees specifically, but especially in a system that retained contrastive vowel quantity, they do suggest that the bimoraic syllable remained optimal, and point to an aversion towards trimoraic syllables. However, as with minimal-word requirements, it seems very likely that general phonetic pressures towards regular syllable lengths (on a phonetic rather than phonological basis) could also be at work here.

13.1.3 Sievers' Law

The best source evidence for phonologised foot structure in Proto-Germanic is the third: Sievers' law. This is an alternation involving historical **j* and **ij* in Proto-Germanic suffixes. No Germanic language as attested retains it as an exceptionless living alternation, but its outcomes are apparent in all branches of the group. The best account of the law is that of Kiparsky (1998), who presents an explanation specifically for Gothic, but whose general principles are easily adapted to apply to Proto-Germanic.[8] On a general Germanic level, Sievers' law involves the variation between simple **-j-* and a longer variant **-ij-*. The details vary from language to language, but in general the reflexes of the two are kept distinct, as can be seen by a comparison of *j*-stem nominals. As table 13.1 shows, words with a base L or HL before the suffix tend to show reflexes of simple **-j-*, while those with bases of H or LL show reflexes of longer **-ij-*. The testimony of some forms on the table is particularly weak; these are given in square brackets and discussed below.[9]

[7] The change of *gōd-spell* to *god-spell*, with the short vowel attested by the Old High German adaptation as *got-spel* rather than **guotspel*, is sometimes cited as an example of this type of shortening (Luick 1921: 188; Ringe & Taylor 2014: 282–283). More likely, this reflects the reinterpretation of the word as 'god-message' rather than 'good-message': compare the adaptation into Norse as *guð-spjall* (Gunn 2017: 160–161).

[8] The literature on the law is very extensive. For a range of modern perspectives, many with ample further references, see Vennemann (1971: 106–110), Murray & Vennemann (1983: 518), Murray (1988, 1991, 1993: 10–14), Dresher & Lahiri (1991: 264–269), Riad (1992: 65–67), Suzuki (1995b), and Barrack (1998).

[9] Table 13.1 is meant to illustrate the normal developments of particular broad categories of words. The first row is easily illustrated by forms of **niþjaz* 'relative' (note that Old English *niððas* is only attested in the plural). In the second row, Gothic *fairgunjis* is neuter, while Norse *Fjǫrgynjar* is feminine (genitive singular), but shows an ending closely parallel to the masculine nominative plural featuring elsewhere in that column. Old English *fyrgen-* is only attested as the initial element of compounds, but there are plenty of nouns that have an equivalent stem-shape; I have chosen (Mercian) *wōēsten* 'desert, wasteland'. For heavy stems, **hirðijaz* means 'herder, protector', and is widely attested in Germanic. LL stems are harder to find exact cognate pairs for: *ragineis* means 'counsellor', *byrele* '(cup)bearer', and *hersir*, from **harisijaz*, 'chieftain'. In the final row, *laisāreis* is 'teacher' (on the long vowel, cf. the source of this suffix, Latin *-ārius*), *ēwisce* 'shame' (cf. Gothic *aiwiskja* 'shame (DAT.SG)'), and *innyfli* 'innards' (cf. Old English *in-ylfe*).

Base	Gothic	OE	Norse	Norse (pre-V)	PGmc
L	niþ<u>j</u>is	niðð-	niðr	*pl.* niðjar	*niþjaz
HL	[fairgunj<u>j</u>is]	wōēstenn<u>e</u>s	—	Fjǫrgynjar	*fergunjas
H	haird<u>ei</u>s	hird<u>e</u>	hirð<u>i</u>r	*pl.* hirðar	*hirðijaz
LL	ragin<u>ei</u>s	byrel<u>e</u>	[hersir]	[*pl.* hersar]	*raginijaz
HH	laisār<u>ei</u>s	ǣwisc<u>e</u>	innfli	innflum	*aiwiskjaⁿ

Table 13.1 Reflexes of Sievers' law in older Germanic.

Gothic, Old English, and the first Norse column mostly show the characteristic developments of Proto-Germanic *-*ja*- versus *-*ija*-: in Gothic, this is reflected by -*ji*- versus -*ei*-, in Old English by the presence of consonant gemination and no vocalic reflex versus no gemination and an -*e* suffix, and in Norse by nothing versus -*i*-. It is important to note that in the (relatively late) Norse sources, this distribution is no longer phonological, and there are words – chiefly proper names such as *Hymir*, the eponymous giant of *Hymiskviða* – that show the 'heavy' stem -*i*- even after light stems (Noreen 1970: 258), but the historical conditioning by weight is nonetheless apparent in most of the lexicon. The position before a retained vowel element in Norse (the *pre-V* column) is also diagnostic in most words: shorter *-*jV̄*- shows retention of the -*j*-, while longer *-*ijV̄*- does not (except after velars). A very similar pattern is also found, in all these languages, for *j*-stem adjectives and for class I weak verbs.

The essential distribution of forms should by now be very familiar. Just as with high-vowel deletion (chapter 4) and *ie*-reduction (chapter 6), one kind of form occurs after light stems, and another after heavy stems and, importantly, light disyllables. With Proto-Germanic **j*, forms such as **niþ-jaz* are prosodically unobjectionable without further adjustments, with the initial syllable forming a bimoraic foot on its own.[10] A form such as **hirðjaz*, however, would, if syllabified **hirð-jaz*, begin with an overheavy syllable, or else would be divided as **hir-ðjaz*, with an unacceptable syllable onset (Kiparsky 1998: 351). The solution – Sievers' law – is to insert an **i*, yielding **hir-ði-jaz* with a nicely bimoraic initial syllable.

That Sievers' law is about the weight of *feet* rather than syllables is shown by the application of the same process in words such as **raginijaz*. The evidence here is chiefly from East and West Germanic: Norse medial syncope (§10.3.2) means that this type no longer readily survives in that language, as LL-base words such as **harisijaz* (> *hersir*) became indistinguishable from plain heavy stems. Given that this syncope postdates the main operation of Sievers' law by a very long time, they probably do testify to the regular outcome for LL bases, but their collapse with

[10] Calling these 'light' stems is thus not strictly speaking accurate, though certain inflectional forms, especially of the verbs, did indeed probably have light initial syllables: e.g. **ha-zi-di* 'praises'.

the H bases introduces some uncertainty on this point. I have also not included any examples of LH bases. Such forms exist later in Old English (§4.5.1.2) and Gothic,[11] but I can find none that I would confidently reconstruct to Proto-Germanic. Most later examples of such bases in any word-class (not just *ja*-stems) are derived formations such as *cyning* 'king' or *færeld* 'journey', or univerbated compound words such as *woruld* 'world'. If LH words really do only enter the languages after Proto-Germanic proper, that might, perhaps, reflect a stricter avoidance of overheavy feet at that early stage.

Beyond the very robust evidence for Sievers' law applying after monosyllabic and LL stems, it seems to have also operated after non-initial feet. This is an important sign that the foot in question really was a bimoraic trochee, and not some other variant such as the Germanic foot. The evidence of HL stems in particular is important here, though there are some complications with the data. You may have noticed the blank cell in this row in table 13.1, where I could not find a word in Norse that examplified the outcome *-r* from **-jaz* after an HL stem. That is, I couldn't identify a masculine *ja*-stem of this shape in Norse. That doesn't mean that Norse entirely lacks evidence on this point, however. The genitive *Fjǫrgynjar* rather than **Fjǫrgynar* groups this word with light-stemmed feminine *jō*-stems such as *ben* 'wound', whose genitive is *benjar* – contrast these with a heavy feminine *jō*-stem such as *hildr*, genitive *hildar*. Note also that *hildr*, like other heavy *jō*-stems, has acquired an *-r* ending in the nominative, which is lacking in *Fjǫrgyn*. While this was difficult to include in tabular form, such evidence as Norse provides for HL stems aligns with the much more robust evidence of Old English.

Unfortunately the evidence of Gothic is not of much value for HL stems. The only potentially relevant forms in that language happen to all be genitive singulars of neuter *ja*-stems. This is purely an accident of attestation: there are potentially relevant feminine *jō*-stems such as *lauhmuni** 'lightning' and verbs such as *swōgatjan** 'sigh' and *glitmunjan** 'shine', but these happen to all be attested only in inflectional forms where Gothic does not reflect Sievers' law distinctions. It is worth emphasising that though apparently diagnostic forms such as **swōgateiþ* and **glitmuneis* have a history in the scholarly literature, these are all ghost-words, and are not found in the Gothic corpus (Kiparsky 1998: 353; Goering 2021c: 149–150).

The reason why the neuters are a problem is simple: there is a tendency, in this category specifically, to generalise the ending *-jis* at the expense of *-eis*, regardless of weight. This means that where masculine heavy *ja*-stems have consistent genitives such as *hairdeis* (identical to the nominative), neuter genitives may be either like

[11] Gothic *sipōneis* 'disciple'. The foot structure of this word is ambiguous, since there is no Gothic-internal evidence for whether it was footed *(si-pō)(-neis)* or, with a light initial foot, *(si)(-pō)(-neis)*. The former option is what an analogy with the footing of *worulde*, etc., in Old English would suggest, but Sievers' law would apply either way. This word is etymologically obscure, and unique to Gothic.

traustei̲s 'covenant' or like *reikji̲s* 'dominion'; some words are even attested with both variants (e.g. *andbahteis*, *andbahtjis* 'service in office'; see further Mossé 1942: 92; Kiparsky 2000; Braune 2004b: 94). Since this regularisation is morphologically limited, it doesn't really obscure the operation of Sievers' law in the language as a whole, but it does mean that a form such as *fairgunjis* is ambiguous. It does show the outcome one might expect given the Norse and, especially, Old English evidence, but in principle the ending *-jis* could have displaced **-eis* in this word, just as it did in *reikjis* and *andbahtjis*.

This leaves Old English (along with its close relatives such as Old Saxon) to provide the strongest evidence that HL stems behave in parallel to L stems. The presence of an old **j* is here, as in all West Germanic languages, signalled through consonant gemination: old sequences of **-Cj-* became **-CC(j)-*, a change which did not affect **-Cij-* (Goblirsch 2018: 41–56). In Old English, light *j*-stem nouns generally show this gemination, which is most consistently reflected intervocalically before case endings. Relevant examples of HL stems, given here in the dative, include: *ānet̲te* 'solitude', *bærnet̲te* 'arson', *brygen̲ne* 'burial', *byrþen̲ne* 'burden', *fæsten̲ne* 'fortress', *hæften̲ne* 'captivity', *hengen̲ne* 'hanging', *nyrwet̲te* 'narrowness', *rēwet̲te* 'rowing', and *þēowet̲te* 'slavery' (Dahl 1938: 74–81; Barrack 1998: 159–161).

Taken together with the much slighter evidence from Norse, it looks like Proto-Germanic HL stems behaved just like L stems. This implies a prosodic structure of sequential bimoraic trochees as the basis for Sievers' law. It is worth noting that Proto-Indo-European may have had some form of Sievers' law (Byrd 2010a, 2010b: 116–147; Barber 2013: 377–388), and if the Germanic process is a continuation of this, it might be that the bimoraic trochee should be seen as the basic prosodic unit as far back as the histories of English and Norse can be reconstructed.

13.1.4 The Bimoraic Trochee in Proto-Germanic

The evidence of Sievers' law in particular is most easily explained if Proto-Germanic made use of the bimoraic trochee. The foot formation rules would seem to be simply:

1. Form moraic trochees from left to right.
2. The heads of (non-extrametrical, if this was relevant) feet are stressed.
3. The leftmost foot carries the primary word stress (end-rule left).

I would not be surprised if the inflectional final **-z*, at least, were extrametrical, as it probably was in Early Runic (§10.2.2) and more clearly was (as *-ʀ* > *-r*) in later Norse (§12.2.2), but reconstructing the precise details of extrametricality for Proto-Germanic proper is difficult due to lack of evidence.

There seems to be a rather strong avoidance of overheavy feet, as evidenced by both Sievers' law and the shortenings of overheavy syllables. Proto-Germanic did,

however, contain some overheavy syllables. Some of these are monosyllables, such as **rīkz* 'ruler' or **kaust* 'you chose', where liberal application of extrametricality could get rid of the unwanted moras, but word-final extrametricality will not help in words such as **berhta-* 'bright', **wurhtē* 'made', **þāⁿhtē* 'thought',[12] **aihtiz* 'property', or **þurftiz* 'need'. Since these all involve **r* and/or **h* (i.e. [x]), perhaps these consonants could be considered as optionally extrametrical (non-moraic) even word-medially, though it is not clear to me how to test or investigate this possibility further.[13]

A final unanswered (and maybe unanswerable) question: how were LH sequences such as **gebō* 'gift', *gumô* 'man', or **kuningaz* 'king' (if this word existed that early) footed in Proto-Germanic (compare Dresher & Lahiri 1991, 257; Riad 1992, 100; Schulte 2004)? Was there a sufficiently strong overheavy licence already present that allowed the footing **(ge-bō)*, etc., even if this wasn't prosodically optimal? Or were light, 'degenerate' feet more acceptable, leading to **(ge)(-bō)* and the like?

13.2 Bimoraism and Early Vowel Loss: The Story Through c. 800

Comparing the developments discussed in chapters 4 and 10 suggests a broad parallelism between the earlier prosodic changes in both English and Norse. Specifically, both languages underwent extensive vowel losses, which significantly increased the number of heavy syllables. Words such as **gastiz* 'guest' and **druhtinai* 'war-leader (DAT.SG)' were reduced to Old English *gest*, *drihtne* and Norse *gestr*, *dróttni*, all with overheavy initial syllables. In Old English, this all took place prehistorically, but in the runic records of North Germanic, it may be possible to discern a point where overheavy syllables became more tolerated, and forms such as **mannz** (presumably *mænnz* or the like) 'men', from **manniz*, seem to be acceptable by around the year 700 at the very latest (§10.2.1).

In Old English, phonological and metrical data suggest that this increased acceptance of overheavy syllables was not unrestricted. The vowel deletions that produced the early Old English paradigm of *hēafud* 'head' were shaped in part by the desire to avoid overheavy feet: a nominative plural **(hæ͡u)(-βu-du)* was fine, but a dative plural **(hæ͡u)(-βu-dum)* was not, precisely because the final two syllables would together have had three moras. The medial syllable was instead unfooted, and eventually deleted, giving the historical *hēafdum*. But this form,

[12] The long vowel here is due to secondary, compensatory lengthening after the loss of the nasal in the earlier **þanhtē*.

[13] Any such extrametricality would not be a general rule for these consonants. Gothic *rahneiþ* 'reckons' is probably cognate, and certainly etymologically homophonic, with Norse *ráéna* 'plunder, rob', both from **rah-ni-jan-*, which shows the coda [x] making the first syllable heavy. Similarly Gothic *waurkeiþ* and Norse *yrkir*, both 'makes', point to a moraic word-internal **r*. Hence the conclusion that any extrametricality must be optional.

even as it was motivated by the avoidance of a non-initial overheavy foot, created a new overheavy initial syllable (§4.5.1). This suggests that in Old English, at least, a fairly specific *overheavy licence* had emerged, which allowed overheavy initial feet when necessary, but which did not extend to medial feet, where strict bimoraism continued to hold. This view is reinforced by the metrical patterning of *Beowulf* (chapter 5), which allowed the resolution of bimoraic words such as *wine* 'friend (NOM.SG)' with no restrictions, but blocked the resolution of overheavy LH sequences such as *cyning* 'king' when they occurred in the non-initial position of a word, or (as a result of metrical cohesion) followed a metrically stressed heavy syllable. Overheavy single final syllables were also apparently tolerated, and at least early on in Old English carried secondary stress – an unusual feature for final feet, which otherwise were seemingly extrametrical for the purposes of stress assignment.

The Norse evidence is much less fine-grained for this period, but given what is found in later periods, a similar conditional tolerance of overheavy syllables probably pertained there as well. Both the overheavy licence on initial syllables and the acceptance of apparently overheavy final, stressed syllables are attested to in later poetry, and there seems to be no reason these features would not already be present by the earlier Viking Age.

13.3 Feet and Syllables: Later Medieval Continuities and Transitions

The first really radical prosodic innovation in either English or Norse was the second round of vowel losses that affected North Germanic in the later Viking Age (§10.3). Like English, Norse had at first avoided syncope in light disyllables, which formed nice bimoraic trochees: *sunuʀ* 'son' is found into the 9th century. But sometime after 800, the unstressed syllables of such words were lost in Norse, resulting in the classical Norse *sonr*, etc. If the final *-r* remained extrametrical, then such words were not overheavy, but they now formed their bimoraic trochees in a rather different way, with both moras coming from the same syllable. These syncopes represented a significant step towards the alignment of the syllable and the foot, though they did not involve a full shift towards a syllabic trochee foot type.

Metrical evidence from West Norse suggests that surviving light-disyllabic sequences such as *synir* 'sons' continued to be treated as resolved in verse (chapter 11); evidence of vowel-balance alternations in Old Swedish and Norwegian suggest that the bimoraic trochee persisted generally across much of mainland Norse (§9.5, Riad 1992: ch. 4). But despite the peristence of resolution in its basic form, both metrically and phonologically, its behaviour in verse became significantly limited in several important ways. One is the lack of anything like Kaluza's law: when resolution is suspended, this is (in almost all cases) an automatic consequence of a preceding heavy, stressed syllable, and

affects LL and LH sequences equally. This suggests that while a foot of the shape (LL) remained possible, it was a less optimal formation that was limited to verse-initial position (or its metrical equivalent). The one main exception to the usual rules about resolution concerns words such as *konungum* 'kings (DAT.PL)', which resist resolution no matter the metrical context (§11.2). This contrasts with the resolution that can and does take place both in disyllables such as *konungr*, and the rare LL-initial words such as *svaraði* 'answered'. It seems that resolution is a less optimal process in Norse: it is tolerable when the result is a precisely bimoraic word-initial foot, *or* when it allows the whole word to fit into a single foot (even if this is overheavy). But when the result would be an overheavy foot at the start of a longer word, such as in a hypothetical ^{x}*(ko-nun)(-gum)*, resolution is not allowed.

Further evidence for the restricted nature of resolution in Norse comes from the 'constrained position': the fourth position of a half-line of *fornyrðislag* or *dróttkvætt* (§12.1) – a position which also sees a virtual ban on overheavy nominals (Craigie's law; §12.2). The evidence of Craigie's law also suggests that final inflectional *-r* was extrametrical, as it probably was in Early Runic (as **-z*), and may well have been in Proto-Germanic.

In English, the story during this same period is largely one of continuity. While the details of northern and eastern dialects are hard to recover, it seems that the bimoraic trochee persisted in the South and West past the year 1200, and in Kentish past 1300. This provided the prosodic context for the variable reduction of *ie* to *i* in many dialects (chapter 6), and is reflected in the metrical resolution attested in Laȝamon's *Brut* and the *Moral Ode* (chapter 7). Unstressed vowels also held on for a fairly long time. There were many reductions: already in prehistory, by the Ingvaeonic stage, certain unstressed vowels had merged (§4.3); unstressed vowel quantity was given up in the 8th and 9th centuries (Dahl 1938: 186–191, Fulk 1992: 386–389); and a full reduction to schwa was achieved even in the most conservative areas by the 13th century (Kitson 1997). Still, throughout all this, the metrical structure of a word such as *sunu*, later *sune*, was preserved, and it was only over the course of central and later Middle English that such syllables were finally lost entirely.

Schwa loss finally brought Middle English roughly to the point that Norse had reached some centuries earlier, and shortly after (or perhaps concurrently with) this change came a further prosodic innovation: open-syllable lengthening (chapter 8). This change above all moved English strongly in the direction of fully eliminating stressed light syllables, which would have meant achieving a full alignment of syllable weight and stress. Such a system would have been a variety of syllabic trochee, in which bimoraism was not necessarily irrelevant (a requirement for all stressed syllables to be precisely bimoraic was at this point being approached), but in which the foot was not structured around moraic groups. Weight would merely follow from stress.

	-VC	-VCC	-VCV	-VCCV
Icelandic	[maːn]	[manː]	[maː.nɪ]	[man.nɪ]
Norwegian	[hɑːt]	[hɑt]	[hɑː.tə]	[hɑt.tn̩]
Swedish	[lɑːm]	[lɑmː]	[lɛː.ka]	[lɛk.ka]

Table 13.2 Possible syllable-types in North Germanic languages.

Such a system did not develop in English – or at least not in the southern and western dialects that provide the best evidence for Middle English prosody. Against the general alignment of syllable structure and vowel quantity was the process of trisyllabic shortening, which created alternations such as *boody* 'body' and *bodies* 'bodies' (whence also *bodice*). This process was most likely very significantly reinforced by the influx of French loans such as *vanity*. The changing structure of the lexicon allowed the widespread generalisation of words such as *body*, *saddle*, and *water* in what would become standard varieties of English. This can, in many ways, be seen as a striking reversal of course, away from a straightforward trajectory towards a syllabic trochee, and back towards a bimoraic trochee. Since languages are not, of course, working towards set goals – they are not teleological – such back-and-forth shifts and apparent changes of course are not surprising.

North Germanic took a different course. In many varieties, open-syllable lengthening, together with closed-syllable shortening, did see a full shift towards a syllabic trochee foot, the abandonment of contrastive vowel length, and a simple system where stressed syllables tended to have uniform weight.[14] This is exemplified in table 13.2, whose data is taken from the handbooks referenced in note 14; the lengthening in *-VC* forms may generally suggest final-consonant extrametricality. In this kind of system, there is no place for the characteristic equivalence of ĹL = Ĥ that had characterised earlier Germanic prosody for so long.

13.4 Prosodic Change

I would like to end by going beyond the narrow evidence of prosody in English and Norse, and reflecting briefly on what the prosodic developments in this

[14] See Hreinn Benediktsson (2002a,b), Goblirsch (2018: 180–181), Kristján Árnason (2011: 186–191), Hayes (1995: 188–198), Kristoffersen (2000: 116–120), and Riad (1988, 2014: 159–160), along with their sources, for details of the complexities of modern North Germanic prosody. There are of course wrinkles (such as how to treat phonetic pre-aspiration in some 'geminates') and varying analytical traditions (see, for instance, the recent review of the situation in Norwegian by Payne et al. 2017: 133–137, 148–150), but these should not obscure the basic set of quantitative alternations that have developed widely across many varieties of North Germanic. On Danish, which has reintroduced some contrastive vowel length, but which still shows significant parallels with the other North Germanic languages, see Basbøll (2005: 79–82).

book *might* tell us about prosodic change more generally – or at least what these developments might look like in the light of assumptions that currently seem reasonable at this point in the history of phonological research. Diachronically, foot structure is presumably transmitted the same way any other element of a language is: by learners being exposed to the linguistic material around them, and (shaped by any biases in cognitive processing) extracting generalisations from what they hear. Variations in the material each learner hears – along with the effects of phonetic variation of various sources – introduce instability, allowing for the possibility of new generalisations. Contact between linguistic varieties can also produce new variants among speakers of any age. Once multiple linguistic forms exist in a speech community (or even a single speaker's habits), they can compete and interact in all the complicated ways that we should expect. The exact developments may run along certain expected lines, but there is no 'goal' (as Goblirsch 2018: 32, 69 puts it) to disparate prosodic changes taking place over long periods of time – only, at best, pertinacious prosodic frameworks that are successfully transmitted over time, and general influences on what pathways of change may be more or less likely from any given point.

When it comes to the bimoraic trochee, I have argued at length that it was remarkably persistent and robust in the history of earlier Germanic, through medieval English and Norse, before either giving way to a syllabic trochee, or having this change barely averted (or even undone) under the influence of language contact and borrowed words. This large-view telling, however, obscures the many changes that clearly took place even when the bimoraic trochee was maintained – a dynamic of *pertinacity*, or 'same pattern, different output realisation' (Dresher & Lahiri 2005: 75). Even when the foot type as such didn't change, and continued to be parsed from left to right, and stressed on the first foot, this does not mean there were not significant prosodic changes during these spans of time. Most of these changes were essentially ways to accommodate other linguistic developments, especially vowel losses. Even if Proto-Germanic dispreferred overheavy syllables and feet, this did not stop later speakers of Germanic languages from dropping large numbers of unstressed syllables, and in so doing adding very significantly to the count of overheavy feet in their languages. These reductions could sometimes be influenced by foot structure – compare the protection of high vowels within feet in Old English and earlier Old Norse alike – but some losses took place anyway, and were presumably driven by other factors. The variable tolerances of overheavy feet evident in Old English and Norse prosodies can be seen as foot-based reactions to non-foot-based linguistic changes.

Some of these changes presented greater challenges to the bimoraic trochee than others. The loss of unstressed vowels in words such as *sunuʀ* in Norse and open-syllable lengthening in Middle English can both be described within the moraic structure of the bimoraic trochee, but feet are not likely to have played a role in driving either change. The former most likely took place for the same reason

that vowel reductions and deletions take place anywhere (presumably ultimately connected with the phonetic reduction of unstressed syllables), while the phonetic basis of the latter is evident in how the first general lengthening in English only affected the phonetically longer non-high vowels:[15] some combination of the gradually reduced functional load of vowel quantity (reducing the phonological resistence to such a major upheaval), the phonetic length of lower vowels, contact with other linguistic varieties, and the ever-present role of random chance in language change led to the general lengthening of non-high vowels in (many) open syllables.

The foot-structure responses to these changes was never a given. In Norse, the presence of enough stressed light syllables, and perhaps the effects of cues towards foot structure that are no longer recoverable, prompted learners to continue to parse *konungr* as a single foot, even though the change of *sunuʀ* to *sunr* could have led them to take the syllable as the core prosodic unit and generalise a syllabic trochee. Later on, however, when open-syllable lengthening began to spread to North Germanic, learners tipped the other way: they failed to replicate the bimoraic trochee, and instead generalised a syllable-based system. In English, this change in foot type did not establish itself, but I see no reason why it could not have, especially if the influence of French loans had been somewhat smaller. Learners of southern English in, say, the 14th century would have been confronted with a very messy phonetic reality, and there was no guarantee that a new generation would resolve contradictory pressures (or reconstruct prosodic generalisations) in the same way that previous ones had.

That the bimoraic trochee persisted through these changes and permutations may suggest that it is a particularly easy type of prosodic structure for the human brain to latch on to. If Hayes (1995: 71–74) is right in identifying three and only three foot types possible in spoken human language, then the recurrance of the bimoraic trochee is very easily explained. It is not that these three feet are somehow hardwired into the our cognitive capacity, but that the things that *are* (arguably) hardwired in – the tendency to find syllables in speech, and to organise syllables hierarchically into prosodic groupings – lead to only a few possible (or at least likely) outcomes when confronted with the physiological and acoustic realities of spoken language. The basic phonetic fact that some syllables can be longer in duration than others is perhaps a sufficient basis for the recurring role of the mora in human languages, and any language that phonetically maintains a variety of syllable lengths not obviously derivative from stress is open to having such variation phonologised into moraic feet.

From this perspective, the history of the bimoraic trochee in Germanic takes on a slightly different appearance. The general status of most coda consonants

[15] When high vowels did lengthen, they also lowered.

as moraic put the onus of syllable weight distinctions largely on the vowels in Germanic: in contrast to a language such as Cahuilla where *-ka?-* is a heavy syllable but *-?iš-* is light, in older Germanic light syllables could only be open syllables with short vowels. The extensive maintenance of vowel length contrasts throughout the word in prehistoric Germanic, along with an inherited lexicon filled with many stressed syllables of varying lengths, would give learners ample resources to constantly recreate the bimoraic trochee as long as these linguistic features persisted. The periodic shocks of vowel reductions, often going hand-in-hand with morphosyntactic shifts, as well as other quantity readjustments, together increasingly reduced the evidential basis for continuing the bimoraic trochee, until it was either abandoned (as in North Germanic), or the lexicon was sufficiently changed in a way that reestablished the potential basis for the foot type (as in English). In every case – whether during the uneventful periods of little relevant change, or during the major transitions – learners were doing the best they could to extract a reasonably consistent prosodic system (a foot type and pattern of footing across the word, rules for stress, and any necessary tolerances or allowances) from the inevitably messy and phonetically inconsistent sounds they heard around them, and which they themselves were coming to produce.

Appendices

Appendix A

Phonological Principles

A.1 Early Old English

1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. Trimoraic feet are tolerated only in word-initial position (or to prevent overheavy single syllables from being unfooted).[1]
4. Final feet are extrametrical for the purposes of stress assignment (excepting overheavy feet, which require a special licence to be footed).
5. The heads of (non-extrametrical) feet are stressed.
6. The leftmost foot carries the primary word stress (end-rule left).

A.2 Early Western Middle English

1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. Final consonants may count as extrametrical. (?)
4. Final feet are extrametrical for the purposes of stress assignment.
5. The heads of non-extrametrical feet are stressed.
6. The leftmost foot carries the primary word stress (end-rule left).

A.3 Early Classical Old West Norse

1. Form moraic trochees from left to right.
2. Root syllables of lexical items must be footed.
3. Final inflectional(?) *-r* and *-s* are extremetrical.
4. Trimoraic feet are tolerated only in word-initial position, or to prevent overheavy single syllables from being unfooted.

[1] Alternatively, final consonants are counted as extrametrical as needed to allow a final overheavy syllable to be footed.

5. Polysyllabic feet are only allowed word-initially.
6. Feet that are both overheavy and polysyllabic are only permitted when the foot aligns with the whole word.
7. Final feet are extrametrical for the purposes of stress assignment (excepting overheavy feet, which require a special licence to be footed).
8. The heads of (non-extrametrical) feet are stressed.
9. The leftmost foot carries the primary word stress (end-rule left).

Appendix B

Glossary of Prosodic Terms

Alliteration The matching of initial sounds, often used in early Germanic metres to link together two verses into a line.

Anacrusis An extrametrical element at the start of a verse.

Apocope Loss of final elements, especially vowels. Normatively pronounced /əpɑkəpi/.

Bimoraic trochee A type of phonological foot that consists, in its ideal form, of two moras. These moras may fall in a single (heavy) syllable, or be supplied by two (light) syllables. The head falls on the leftmost mora. Also known as a moraic trochee.

Cadence A closing sequence to a verse that is strictly regulated in form, such as the final trochee of a *dróttkvætt* verse.

Caesura A metrical boundary within a poetic line, such as that falling between the two verses in a line of alliterative poetry.

Catalexis A catalectic verse is one which contains fewer constituative metrical units than is normal. Also known as hypometric verse.

Clitic In phonological use, a small, unstressed element that attaches prosodically to a more prominent host.

Coda In phonology, all consonants of a syllable that occur after the nucleus.

Coherence See **metrical coherence**. Not to be confused with cohesion.

Cohesion The phenomenon present in some verse forms where elements in the same metrical unit are treated as more closely bound than normal, leading to ordinary prosodic boundaries being ignored. A typical example is the potential for syllabification to occur across word boundaries within a metrical verse. Not to be confused with coherence.

Craigie's law A restriction in *dróttkvætt* and *fornyrðislag* that prohibits or discourages an overheavy nominal from occurring in the fourth position of a verse.

Decontraction The scansion of words that have undergone historical contraction, such as Norse *knjám* 'knees (DAT.PL)', with their pre-contraction syllabic shape (here, as *kn[éu]m*).

Degenerate Describes a phonological foot that is smaller than is optimal for its type, such as a bimoraic trochee with only one mora (a light foot), or an iamb with only one syllable.

Dip A metrical constituent consisting of one or more syllables of low prominence. Symbolised as *w* (which may represent either the dip as a whole, or each syllable within the dip, depending on context). Also known as a drop or thesis.

Direction of parsing The direction in which phonological feet are formed within a word, either left to right or right to left.

Drop See **dip**.

Dróttkvætt A Norse metre widely used in skaldic poetry. In structure, each verse resembles a restrictive half-line of *fornyrðislag* followed by a trochaic cadence.

Eddic poetry Poetry from the Codex Regius (GKS 2365 4to), known in modern times as the *Poetic Edda* (or *Elder Edda*), along with poetry of a similar style found in other sources. Contrasted with skaldic poetry. Genre, metre, anonymity, and complexity of kenning use are criteria used to distinguish eddic from skaldic verse, though the division is fundamentally arbitrary and conventional. Most eddic verse is in *fornyrðislag* or *ljóðaháttr*, with one poem in *málaháttr* (*Atlamál*), and a number of poems or sections in apparently less systematised metre, largely defying strict analysis.

End-rule The rule that determines which of multiple phonological feet (the leftmost or rightmost) in a word will be the head foot of a word, determining the position of the primary stress.

Expanded dip A dip with more than one syllable. Also known, especially in Middle English metrics, as a long dip.

Extrametricality In phonology, when a unit is ignored in prosodic parsing, such as word-final consonants that are ignored in determining syllable weight. In metre, when a unit does not count towards the metrical scheme of a verse.

Foot In phonology, a rhythmic unit used in linguistic structure formed between the syllable and the prosodic word. The most commonly recognised foot types are the bimoraic trochee, the syllabic trochee, and the iamb. Other foot types, such as the Germanic foot, have also been hypothesised. In metre, a rhythmic unit used in the composition of verse consisting of a fixed structure, based on linguistic constituents such as syllables, stresses, quantity, or word-shapes. Symbolised as *F*. In this book, *foot* is used in its linguistic sense unless specified otherwise.

Fornyrðislag A Norse metre widely used in eddic poetry, closely resembling the standard Old English verse form in metrical structure.

Germanic foot A proposed type of phonological foot consisting of a bimoraic trochee followed by an optional extra weak syllable.

Half-lift A metrical unit (a single syllable bearing some degree of stress, or the resolved equivalent) of lesser prominence than a full lift that does not count towards the alliterative framework of a line. Symbolised as *s*.

Half-line See **verse**.

Half-stanza See **helming**.

Head In foot structure, the mora or syllable on which prosodic features of the foot can manifest. For example, if a foot is assigned stress, the head syllable of the foot will be stressed.

Heavy Describes a prosodic unit containing two or more moras. In medieval English and Norse, a syllable ending in anything other than a short vowel or short diphthong is heavy. A heavy syllable is symbolised as H.

Helming A compositional unit in Norse metres consisting of two (long) lines. Also known as half-stanza.

Hiatus The occurrence of two vowels in distinct syllables immediately next to one another, without an intervening consonant, as in Norse *trúa* 'trust'.

Hypermetric verse A variant of Old English and Old Saxon metre, often alternating with the standard metrical form within a given poem. Each verse can be loosely regarded as supplementing a standard basic half-line form with an extra element.

Hypometric verse See catalexis.

Iamb A rhythmic unit consisting of two components, the second of which is stronger than the first. In phonology, a type of phonological foot that consists, in its ideal form, of two syllables, with the head falling on the rightmost syllable.

Initial The portion of a verse preceding the final element.

Kaluza's law A linguistic-metrical phenomenon, most clearly operative in *Beowulf*, that prevents the resolution of a light syllable followed by a heavy syllable when a heavy syllable bearing some stress immediately precedes it. I also refer to this as the sandwich rule.

Kviðuháttr A Norse metre found in some skaldic poetry, most famously in *Ynglingatal* and the poetry of Egill Skallagrímsson (*Sonatorrek*, *Arinbjarnarkviða*). Characterised by extremely short on-verses (of 'three positions') alternating with 'four-position' off-verses.

Lift A metrical unit (a single syllable bearing some degree of stress, or the resolved equivalent) of high prominence that can take part in the alliterative framework of a line. Symbolised as *S*. Also known as an arsis.

Light Describes a prosodic unit containing only one mora. In medieval English and Norse, a syllable ending in a short vowel or short diphthong is light. A light syllable is symbolised as L.

Ljóðaháttr A Norse metre widely used in eddic poetry. In a typical helming, a line consisting of an on- and off-verse linked by alliteration is followed by a full-verse. The full-verse is rhythmically a single large verse with internal alliteration, which also functions as a short line.

Long dip See **expanded dip**.

Metre The regulation of linguistic material, such as stress, weight, syllable count, or tonal pattern, within a poetic line.

Metrical coherence The expectation that the prosodic constituents of phonology and metre will, in any given language, generally be relatively congruent.

Metrical set A set of linguistic features used in the metrical system of a particular verse form. May refer either to a specific component of the metre, such as [ɣ], [j], and [j] forming an alliterative set in earlier Old English, or to the sum total of such features, which constitute the metrical set for the metre overall.

Mora A unit of measuring syllable weight. In medieval English and Norse, a short vowel or short diphthong contributes a single mora, a long vowel or long diphthong two moras, and each consonant in the coda one mora. A syllable with one mora is light (L), one with two or more is heavy (H). Syllables with three or more moras are overheavy. Symbolised as μ.

Nucleus In phonology, the prosodic peak of a syllable, prototypically a vowel.

Off-verse See **verse**.

Onset In phonology, all consonants of a syllable that come before the nucleus.

Onset requirement The preference, in syllabification, for each syllable to have a consonant in the onset.

On-verse See **verse**.

Overheavy Describes a prosodic unit containing three or more moras. Equivalent terms include superheavy and ultraheavy.

Overheavy licence A proposed phonological rule that allows word-initial feet to contain more than the optimal two moras of a bimoraic trochee.

Overheavy constraint A constraint against a foot or syllable containing more than two moras.

Pertinacity The persistance of a rule, pattern, or structure over time, despite changes to its manifestations or interactions.

Phonological word See **prosodic word**.

Poetry Language that is formally arranged into lines, medium-length units not present in the structure of ordinary speech or writing. The definition of a line can vary considerably from verse form to verse form. A poetic line may or may not show metre, depending on the verse tradition in question.

Principle of closure The tendency for metrical forms to be more strictly regulated and inflexible towards their ends when compared to their beginnings.

Prosodic word A prosodic constituent larger than the foot but smaller than the phonological phrase. Symbolised as ω. Also known as the phonological word or p-word.

Quantity See **weight**.

Resolution The grouping of a light syllable and a following syllable into a single metrical or phonological constituent.

Reversal In the word-foot theory, the occurrence of a heavy or long word-foot, such as *Ssw*, as the first constituent of a verse.

Rhyme In phonology, the portion of a syllable consisting of the nucleus and coda together.

Sandwich rule See **Kaluza's law**.

Sieversian metrics Any metrical theory or framework that accepts the basic arguments of the classic work of Eduard Sievers regarding resolution and his approximate assessments of which linguistic configurations are metrical and which are not.

***Stānhliðo* rule** A proposed rule in Old English metre prohibiting resolution from occurring in the second element of a verse-final compound.

Stray See **unfooted**.

Stress Relative prominence given to some syllables over others, often marked by somewhat greater relative volume, pitch, and duration, and frequently characterised by the ability to show a greater range of phonological contrasts.

Syllabic trochee A type of phonological foot that consists, in its ideal form, of two syllables, with the head falling on the leftmost syllable.

Syllabification The language-specific rules for determining where syllable boundaries fall. For medieval English and Norse, a single consonant between vowels is placed in the onset of the second syllable. Clusters of two consonants after a short vowel are split, one going into the coda of the first syllable and the other into the onset of the second. In other contexts, consonants are divided so that the second syllable begins with the least sonorous (most obstructive) consonant.

Syllable Very roughly, a basic prosodic unit arranged around a relative peak of sonority.

Syncope Loss of medial elements, especially vowels. Normatively pronounced /sɪŋkəpi/.

Terasawa's rule A restriction in Old English metre against using compounds of the shape *Sws*^{w}, such as ^{x}*hilde-sele*.

Trochee A rhythmic unit consisting of two components, the first of which is stronger than the second.

Unfooted Describes an element that is not incorporated into a linguistic foot. When discussing foot structure, stray is an equivalent term.

Verse The basic rhythmic unit of alliterative poetry, also known as a half-line. In the most common metres, each line consists of two verses paired by alliteration. The first verse is known as the on-verse, the second as the off-verse.

Weight A dimension of linguistic patterning that measures the relative lengths of syllables and feet, measured in moras. Also known as quantity.

Appendix C

Notational Conventions

C.1 Notation of Metrical Units

Position	Goering	Sievers	Terasawa	Hutcheson	Russom
Lift	S	ـَـ	/	P	S
Resolved lift	S^{w}	ـَـ×	/	px	S
Light lift	Š	ـَ	/	p	S
Half-lift	s	ـَـ	\	S	s
Light half-lift	š	ـَ	\	s	s
Dip	w	×	×	x	x

Table C.1 Comparison of metrical notations.

Table C.1, adapted from Goering (2020b: 141, n. 5), shows the system of metrical notation I use ('Goering', slightly adapted from Stockwell 1996; see §3.1.2), in comparison to other important systems used in the scholarly literature. 'Sievers' is based on Sievers (1893), and is widely used, though sometimes difficult to reproduce typographically. 'Terasawa' is a more convenient adaptation of this system, also in fairly widespread use – including by Terasawa (2011) in his standard introduction to Old English metre. A rather different scheme of notation is used by Hutcheson (1995), also used by Suzuki (2004, 2014) for specifically linguistic markups. Russom (1987, 1998, 2017) uses a fairly similar system to Stockwell's, though differing in some details. Not included in the chart is the notation of metrical foot boundaries, usually done either with | (which I use) or /, when this is not employed for a lift. This is not an exhaustive overview of notational schemes.

C.2 Further Comments on Notation

I generally try to avoid abbreviations and acronyms, which often serve no purpose except to make technical work even harder to read than it has to be. There are a

few types of linguistic and metrical notation, however, that really are essential, and which would be extremely cumbersome to do without. The linguistic symbols I use are listed in the table of abbreviations (page xiv), but there are a couple of points that should be mentioned more explicitly.

Firstly, I use the asterisk in two distinct ways. An asterisk before a form indicates that it is entirely reconstructed – this is the normal use of this symbol in historical linguistics, and should not be confused with the tradition of using an asterisk to mark an ungrammatical form.[1] An asterisk afterwards marks a form that is not attested, but where the lexeme is found and its inflection can be securely extrapolated. For example, Proto-Germanic **wulfai* 'wolf (DAT.SG)' is a full reconstruction, while Gothic *wulfa** indicates an unattested dative of an attested noun (*wulfs*) belonging to a well-understood noun class. For a form that is incorrect in some way (a reconstruction I believe to be wrong, or a form that a theory predicts should occur but that does not), I use ˣ.

Arrows can also be a source of confusion. I use two kinds: > and < indicate phonological change, and → and ← indicate morphological change. This much of a distinction is, I think, very useful to encode, but I do not dare go further down the road of trying to represent elaborate distinctions and types of changes or derivations in my notation. Some may feel that even this has gone too far.

Otherwise, in terms of transcription, for English I generally follow attested manuscript forms, marked up where needed with vowel length symbols (chiefly the macron to show length) and the interpunct · (to mark unstressed prefixes). For classical Norse (but not runic inscriptions) I normalise heavily, except when the original spelling is at issue, as I explain in note 6 in chapter 3. For Proto-Germanic, I use a system well within the normal spectrum of traditional orthographies (compare Kroonen 2013; Ringe 2017; Stiles 2017; and Fulk 2018, though I follow none of them in every detail): **h* = [x],[2] **b* = [β] and [b] contextually, **n* represents nasalisation of a preceding vowel, **þ* = [θ], length is indicated by a macron, etc. Outside of Proto-Germanic, especially for the prehistoric Old English forms cited in chapter 4, I use the International Phonetic Alphabet in reconstructions,[3] except in continuing to mark vowel length with a macron. Obviously phonetic notations are often rather approximate and sometimes extremely uncertain, for attested languages as much as reconstructions.

[1] I extend this use of the asterisk to mark proposed emendations in texts, regarding them as reconstructed forms relative to that specific corpus.

[2] Perhaps with an allophone [h] in word-initial position, though see the objections of Ringe (2017: 114), followed by Fulk (2018: 122).

[3] If anyone is not familiar with this, the full chart of symbols, along with an explanation, rationale, and many examples of use, may be found in the *Handbook of the International Phonetic Association* (1999), with further information and updates online at https://www.internationalphoneticassociation.org/. The relevant Wikipedia entry is also reliable and useful: https://en.wikipedia.org/wiki/International_Phonetic_Alphabet.

I also cite a very small number of Proto-Indo-European or early post-Proto-Indo-European examples. For introductory overviews of the notational systems of Indo-European and their phonological significance see Clackson (2007: 33–61) and Fortson (2010: 53–68), for more technical discussion Mayrhofer (1986) and Byrd (2018), and on some of the more important controversies Kümmel (2012). I should note that I apply laryngeal colouring, writing (for example) **ah₂* rather than **eh₂*. I also notate glides using the same symbols as for Germanic and the International Phonetic Alphabet, using **w* and **j* rather than the more usual **u̯* and **i̯* (or **y*, which has a peculiar currency among some Indo-Europeanists). Following standard convention, acutes in such forms mark the position of the word accent.

Appendix D

Metrical Types

D.1 The Alphanumeric Soup

The following presentation of metrical types is adapted from the system developed by Sievers (1885a,b,c, 1887, 1893), slightly systematised to reflect a more modern perspective. On the principles that generate the five basic types, see appendix E.1; these primary types are notated with capital letters. Subtypes where a weak position has been filled by a half-lift are indicated by an additional lower-case letter: *a* and/or *b*, depending on whether it is the first or second dip that is so replaced. The occurrence of a weak syllable instead of a lift is indicated here by the numeral 3 (I have tidied up Sievers' usage on this point somewhat), and an asterisk marks the addition of a fifth, weak metrical position. In Norse *fornyrðislag*, short (catalectic, hypometric) verses sometimes occur, marked here by a following – (minus) to indicate a missing final weak position: where *SwSw* is type A, *SwS* is type A- (this notation is adapted from Suzuki 2014: 75).[1] No notice is taken of anacrusis in this section; it can be notated by adding + before the type. All illustrative examples are from *Beowulf*, except for the Norse hypometric verses.

Most types allow resolution or suspension according to the principles discussed in chapters 5 and 11, but Sievers rather inconsistently sometimes encoded resolution into his typology, and sometimes not. In the following list, I remove his distinction between types D1–3, encoding various patterns of (non-) resolution, and use the general label Da for the contour *SSsw*. Db matches Sievers' D4. The simplification of Sievers' four D subtypes down to a simple Da/Db binary has a long history, going back at least to Tolkien (1983b: 62; originally published 1940). Some who use the label Da would not make the distinction I do between plain D, ending in two unstressed syllables, and Da, ending in *-sw*.

Otherwise, I place the variants C2 and A2k, in italics, to show that they are on a very different order than other subtypes (essentially just being minor variants of

[1] Sievers (1885a: 63, 1893: 68) originally included such verses under a type F, but this covered all three-position verses (aside from A3).

types C and A2a). Subtype C3 is a special case. Sievers included two quite different patterns under this label, one a trivial variant of type C with suspended resolution in the second lift, the other a much more distinct pattern having only one stress. I include only the latter type under this label, and include a note explaining Sievers' usage.

Like nearly all metrical researchers these days, I would strongly emphasise that these types are not really metrical entities in themselves, but are epiphenomena, generated by more fundamental metrical principles (see chapter 3). A few potential subtypes that could be generated are not found: e.g. Eb ^{x}*SwsS* and Bb ^{x}*w(…)SsS*. Various reasons have been proposed for why such verses do not occur, but the details remain a matter of theoretical debate (see appendix E). On the symbols *S*, *w*, etc., see §3.1.2 and appendix C.1.

Other systems for classifying and labelling types are also in use. For Old English, Bliss (1962) elaborated a very complicated scheme that in some places introduces useful distinctions, but is often simply over-detailed, while obscuring some aspects of the metre (for critique, see Pascual 2016).[2] This system is adapted by Hofmann (1991a,b) for Old Saxon. Hutcheson (1995) has an alternative modification of Sievers' labels, which is superior to Bliss's and can be useful for metrical research, but remains vulnerable to some of the same criticisms. Suzuki (2004, 2014) adapts Sievers' system slightly for Old Saxon and Old Norse. For Russom's recent renumbering, see note 28 in appendix E.2.

D.2 List of Types and Subtypes

A : Sw(…)Sw – wealle be·worhton (3161a)

A2a : SsSw – drync-fæt dēore (2254a)
A2k : *SsS̆w – wīd-cūþ werum (1256a)*
A2b : Sw(…)Ss – wyrm ofer weall-clif (3132a)
A2ab : SsSs – gūð-rinc gold-wlanc (1881a)
Aa* : SswSw – geolo-rand tō gūðe (438a)[3]
Aab* : SswSs – gamol-feax and gūð-rōf (608a)
A3 : ww(…)Sw – nealles him on hēape (2596a)
A3b : ww(…)Ss – mē þone wæl-rǣs (2101a)

[2] Take, for example, his types d1 and 1D1, which might seem at first glance to capture the distinctions highlighted by types C3 and plain D in the list below: *w(…)Sww* and *SSww*. However, Bliss counts as *w* medial heavy syllables, so that he takes words such as *ōþerne* 'other (MASC.ACC.SG)' as *Sww* rather than *Ssw* (as such words clearly must be, since they very much do not behave in parallel to genuinely *Sww* words such as *ĕorlscipe*; see §4.4.1.1). That is, Bliss introduces a useful notational distinction into his typology (however oddly labelled), but then sorts the verses into these types in a way that obscures the relationship between linguistic and metrical structures.

[3] Sievers simply labels this A*, and does not distinguish it from Aab*.

A- : Sw(…)S – mínir bróðr (*Guðrúnarkviða II* 3.2)
A3- : ww(…)S – þá er vit í hǫll (*Guðrúnarkviða I* 26.1)

B : w(…)Sw(w)S – þū eart ende-lāf (2813a)[4]

C : w(…)SSw – þæt hē dæg-hwīla (2726a)[5]

C2 : w(…)S^{w}sw – ic wæs syfen-wintre (2428a)
C3 : w(…)Sww – ofer·hīgian (2766a)[6]
C- : wSS – en Konr ungr (*Rígsþula* 43.1/41.1)

D : SSww – feorh ealgian (2668a)

Da : SSsw – wīs wēl-þungen (1927a)
Db : SSws – sec sārig-ferð (2863a)
D* : SwSww – Wealhðēo maþ^{e}lode (1215a)
Da* : SwSsw – þīoden þrīst-hȳdig (2810a)
Db* : SwSws – ǣnig yrfe-weard (2731a)
D- : SSw – tolf hundruð (*Helgakviða Hundingsbana I* 25.1)

E : Ssw(w)S – brūn-fāgne helm (2615a)

[4] Sievers uses the label 'B2' for type-B verses ending in *-SwwS*.
[5] A further Norse variant *wSSs* might be labelled Cb (see notes 19 and 22 in appendix E).
[6] Sievers' label C3 rather imprecisely covers both w(…)Sẅw and w(…)Sš̈w; see appendix E.1, including note 7 for references.

Appendix E

Metrical Theories

In §§3.1.6–3.1.7, I allude to the presence of two major theories of early Germanic alliterative metre. Both build on the descriptive foundation of Sievers (1885b,c, 1887, 1893), both are most fully elaborated with respect to Old English, and both are generative theories of the metre: that is, they work by outlining a set of fundamental units and principles (including constraints), the interactions of which are meant to generate the range of attested verse shapes (without overgenerating by predicting verse shapes that don't occur). These are by no means the only theories of Germanic verse that have been proposed, but they are the only ones in the literature that currently seem to have a reasonable level of theoretical adequacy, explaining what occurs and does not occur with a good deal of precision.

It does not seem fair to completely omit any outline of these theories from this book, so this appendix provides a very brief technical introduction to both. This should be adequate to let the Old English and Norse *fornyrðislag* data cited in this book be evaluated in terms of their potential fundamental metrical structures, and I provide further references so that anyone who is interested can easily follow up on the details.[1] I concentrate on the underlying metrical principles that generate half-line rhythms, and make no attempt to give the rules for alliteration.[2] I also do not mention resolution except in passing, as this is treated in detail in chapters 5 and 11, and in any case this is an area where the theories show no major disagreements.

In E.1, I lay out the basics of the four-position theory in its classic modern form, while also noting, in E.1.1, how Yakovlev's revisions (which I largely regard

[1] La3amon's *Brut* is a special and problematic case, and I outline the state of metrical work on that poem in §7.2. The *Moral Ode* employs the wholly unrelated septenarius, which works on very different – and to modern readers probably much more familiar – principles (§7.3).

[2] These are considerably more complex than a simple statement of which sounds alliterate with which, and the familiar skeleton of single and double alliteration. Issues such as the placement of weak syllables (including anacrusis), the positions of word boundaries, and the use of poetic compounds all influence what elements must alliterate and where these are placed. See especially Krackow (1903), Bliss (1962), Duncan (1985: ch. 2 and 3, 1994), and Russom (1987: ch. 7), and on unusual patterns of alliteration in Old English, Griffith (2018).

as improvements) affect the theory. E.2 outlines the word-foot approach. I mostly attempt to present the basics of each theory, with a few comments on particularly notable strengths and weaknesses; for more evaluation, see Goering (2016b: ch. 1, 2020b).

I will not delve fully into the workings of hypermetric lines under the different theories. Such lines are, in both frameworks, regarded as taking some basic pattern (either a verse type or a compound word-foot; the most common pattern is *SwSw* or *Swsw*) and, in the most typical form, prefacing it with an initial *Sw(…)* in the on-verse, or *ww(…)* in the off-verse (Sievers 1887: 458–475). Various permutations and quirks are possible, and even preferred in some poems: the most common variations include the use of the lighter onset *ww(…)* in the on-verse, or, conversely, the heavier *Sw(…)* in the off-verse. The old theory that hypermetrics are somehow 'blended' from overlapping verse patterns – endorsed by both Sievers (1893: 139–144)[3] and Bliss (1962: 88–97) – has nothing to recommend it, and finds no support in modern metrical work. Unsurprisingly so, since under no current metrical theory do the 'types' have any underlying reality which could allow them to be manipulated in such a way. For a judicious review of hypermetric metre that largely takes a positional approach, though with a sympathy for the word-foot theory, see Hartman (2020: esp. 9–10, 16–27, 56–60, 167–170).

E.1 The Four-position Theory

Sievers originally invoked several principles for the construction of half-lines, including elements such as feet that no longer play any role in modern positional work. One of these principles was the idea that every verse should have four *metrical positions*. This idea was picked up on and elaborated with considerable rigour by Cable (1974, 1991), with important input also coming from Fulk (1992) and Suzuki (1996).[4] In this classic form, the core rhythmic principles are:

1. Each verse should have four metrical positions.
2. A metrical position is prototypically a single syllable.
3. A metrical position filled by (partly) stressed linguistic material is *strong*.
   a) A strong position is always a single syllable or resolved equivalent.
4. A metrical position filled by unstressed linguistic material is a *dip*.
   a) Adjacent unstressed syllables will count as a single dip unless verse-final.[5]

[3] Repudiating his earlier and much more preferable view expressed in Sievers (1887).
[4] It is worth noting that while Bliss (1962) was very strongly in Sievers' general tradition, he was not much concerned with the fundamentals of metre, and did not engage in any serious way with the four-position principle.
[5] The principles for grouping multiple unstressed syllables into dips may be more constrained: arguably, only a dip in positions 1 or 2 of a verse may be genuinely expanded, and 1 to a greater extent than 2. Position 3 cannot have more than two weak syllables, and some would hold that the second

5. A standard verse has two fully strong positions, called *lifts*, which participate in the alliterative scheme of the line.
   a) The other two positions are either dips or, when filled by additional strong positions, *half-lifts*.
6. Stress clashes are avoided as much as possible (this is vague; see below).

These principles straightforwardly generate the five basic types and the majority of subtypes. The five types fall out logically from the possible combinations of two lifts and two other positions (shown here with *w*, except where replacement by *s* is both possible and necessary):

A SwSw
B wSwS
C wSSw
D SSww
E ˣSwwS → SswS
X ˣwwSS[6]

Type D, with two final weak positions, is tolerated because verse-final weak syllables do not merge into a single dip.[7] The pattern *SwwS* on its own is not a normal pattern, since this would reduce to a three-position pattern ˣ*SwS*,[8] but replacing the first weak position with a half-lift allows for a valid verse type (E). This use of a half-lift is not possible with *wwSS*, however, since half-stresses can linguistically only follow primary stresses in older Germanic. Since there is thus no possibility to salvage this as ˣ*swSS* or the like, and plain *wwSS* would reduce to the three-position ˣ*wSS*, this configuration is ruled out.

Stress-clash avoidance, principle 6, is an essential but not fully worked-out aspect of the modern four-position theory. Quite a few possible options for using *s* instead of *w* (by principle 5a) do not seem to actually occur, or are extremely rare: e.g. ˣ*SwsS*, ˣ*wSsS*, and ˣ*wSSs* (see note 19 below). The first of these can be ruled out by a blanket restriction against a rising *wsS* contour (Cable 1991: 148–151), and the sequence

of these can only be an extrametrical syllable inserted via the prefix licence (see below, and further Duncan 1985: 14–30, 42–43, 1993: 501–503; Cable 1991: 12–16). More informally, for Old English one might say that positions can be expanded by a number of syllables correlating with their position in the verse: position 1 by up to four extra syllables (more than this is highly exceptional, and largely – though not quite completely – confined to *Genesis B*, translated from Old Saxon), position 2 by up to three, position 3 by just one (and this is almost always a light proclitic), and position 4 not at all. Old Saxon is more tolerant of expanded dips, while *fornyrðislag* is much less so.

[6] A pattern *ww(…)Ss* does occur, type A3b, but this is generally analysed as having only a single lift, with the *s* position being a half-lift; compare the more common plain type A3, *ww(…)Sw*, on which see the discussion below.

[7] This principle is known as the *rule of the coda* (Cable 1991: 19; Fulk 1992: ch. 7, esp. 201; Goering 2020b: 145–146, n. 15).

[8] Such a pattern does occur in *fornyrðislag* (§11.1.2), but from a positional perspective must be considered hypometric (catalectic), with a suppressed final position (Sievers 1893: 68; Suzuki 2014: 185–201).

SSs can be fairly seen as problematic in showing adjacent primary stresses, neither of which can be easily subordinated.[9] But why should ˣ*wSsS* ('Bb', as it were) not be a normal metrical variant, given that similar sequences are found in *SsSw* (type A2a) and *SsSs* (A2ab)? That is, why shouldn't a verse such as ˣ*syððan felehrōr fōr* 'after the very vigorous one died', be possible?[10] This aspect of the theory needs further work.

There are further specifics involved for each individual metrical tradition. Old English, for instance, may be said to have a *prefix licence* that allows certain weak elements to be optionally ignored when reckoning metrical positions (accounting for, among other things, anacrusis),[11] while Norse *fornyrðislag* is more tolerant of hypometric verses.

There is disagreement among positional theorists about how to account for verses either with a fifth metrical position not due to anacrusis (that is, types D* and A*), or those with just one strong position (types A3 and what I call C3 in appendix D). For type D* – especially Da*, *SwSsw* – one explanation is that a stress clash in the sequence *SSs-* of type Da creates a natural pause or space between the first two lifts, sometimes notated as *S!Ss-*, and that this pause can be replaced by a weak syllable, which doesn't count as an extra metrical position (Cable 1991: 143; compare Suzuki 1992, 1996: 23–35, 103–107, 110–112). Another approach is to see such verses as anomalous within the synchronic system, but accept them as historical relics of earlier rhythms.[12] The five-position A* types, whose shapes and distributions are extremely restricted, are also not straightforward to explain.

For type A3, there are two main families of explanations. One is to suggest that verses that appear to have the pattern *wwSw* are really *SwSw*, but with a weaker, non-alliterating initial stress (Sievers 1885b: 283; Cable 1974: 24). There is, however, a very large body of research that shows that the assumption of stress on the initial elements of such verses would be ad hoc, and strikingly at odds with all other assumptions about word and phrasal stresses and the relationship of these

[9] Following observations going back to Kaluza (1909: 43–46) and Pope (1966: 41, 65–79), Cable (1991: 143) sees type-C verses as 'really' being *wSsw*, with the second lift prototypically demoted and subordinated to the first. It is open to interpretation whether this is better framed as a truly metrical rule, replacing a position *S* with *s*, or a linguistic tendency that the metrical frame *wSSw* will often be filled with material showing such subordination.

[10] This verse was constructed with reference to *Beowulf* 19a and 2201b, and should be syntactically and formulaically unobjectionable.

[11] This term comes from Yakovlev (2008: 59–60), but the relevant insights go back to Kaluza (1894a: 38–39) and Duncan (1985: 14–30, 42–43, 1993: 501–503); compare Donoghue (1987a), and the clear summary and synthesis by Cable (1991: 12–16). This licence can be used to account for both anacrusis and the second syllable that sometimes occurs in the late dips of types B and E.

[12] Neither approach is wholly convincing. The stress clash theory runs into problems when explaining type Db*, *SwSws*, or verses where the extra beat is filled by more than one syllable (*SwwSsw*). The historical relic explanation is vague on what earlier metrical system would have produced such verses, and has a hard time explaining why this pattern remained common and productive for so many centuries, with clearly innovative Christian formulas of this type coming into being (Goering 2016b: 50–62). It may be worth noting that the common assertion that type D* is strictly limited to the on-verse is not accurate (see note 31 below).

to the metrical system (Neuner 1920: 33–48; Bliss 1962: 61–62; Stanley 1974: 142; Hutcheson 1995: 124–125; Suzuki 1996: 47–59). The other view is to accept the reality of the contour *wwSw*, and come up with a reason for how a metrical position might have gone missing: Suzuki (1996: 47–59) looks to the 'suppression' of an initial lift, which is replaced by an extra-long dip to compensate, while Minkova & Stockwell (1997: 68) and Minkova (2003: 40) consider the possibility of using a harp to musically supply the missing metrical element. Suzuki's approach strikes me as the most plausible of the various options, and is a reasonably adequate way of accounting for type A3 within a four-position framework. It is worth noting that type-A3 verses tend to have longer initial dips than do types B and C: they never have fewer than two syllables, and usually more.[13]

For type C3, little metrical attention has been given to their problematic status. This is partly because of faulty assumptions regarding the lengths of medial vowels (§4.4.1.1), which have made it less obvious that verses with the rhythm *wwSw̆w* are real and need to be explained. The obvious point to make is that such verses are unproblematic in terms of position counts (the final two weak syllables would not collapse into a single metrical position, being verse-final), and it is only the principle that each verse should ideally have two lifts that is violated. The two-lift principle is, arguably, not very important rhythmically, as seen in the major revision proposed by Yakovlev (2008), discussed immediately below.[14] For my part, I do not think that it is tenable to maintain the old dictum that the Germanic half-line is based around a two-stress pattern, though it is possible to salvage the idea by reframing this as a norm rather than a strict requirement.

E.1.1 Yakovlev's Revision

Almost all the basic four-position principles of Cable (1974, 1991) and others are accepted by Yakovlev (2008: ch. 1), but he makes the very valid observation that certainly in most (and perhaps in all) instances, the difference between a full lift and a half-lift is irrelevant. He thus makes no *metrical* distinction between them, and works with strong positions and weak positions as the only options – in the process doing away with the two-lift requirement. This simplifies the metrical principles a bit (for his precise formulation, see Yakovlev 2008: 74):

1. Each verse should have four metrical positions.
2. A metrical position is prototypically a single syllable.

[13] The initial dips of A3 verses closely resemble the light onsets of classical hypermetric half-lines in the off-verse, which a positional approach might well also take as two adjacent weak positions, equivalent to the *Sw* prelude typical of the hypermetric on-verse (Hartman 2020: 19).

[14] It is not helpful in this case to invoke the distinction between metrical ictus and linguistic stress: if such syllables form lifts, the mismatch between full metrical ictus and the entire lack of linguistic stress would be unusual and striking, and is not to be waived away.

3. A metrical position filled by (partly) stressed linguistic material is *strong*.[15]
   a) A strong position is always a single syllable or resolved equivalent.
4. A metrical position filled by unstressed linguistic material is a *dip*.
   a) Adjacent unstressed syllables will count as a single dip unless verse-final.

These principles generate, not five but ten possible patterns (with no subtypes reflected on a metrical level). Six more logical combinations of *S* and *w* are ruled out by the inability of two non-final dips to be adjacent to each other:[16]

1. wSww
2. SwSw
3. wSwS
4. wSSw
5. SSww
6. SSSw
7. wSSS
8. SwSS
9. SSwS
10. SSSS
11. ^{x}wwww
12. ^{x}Swww
13. ^{x}wwSw[17]
14. ^{x}wwwS
15. ^{x}SwwS
16. ^{x}wwSS[18]

[15] Yakovlev (2008: esp. 81–82) downplays the importance of stress by calling his system a 'morphological metre'. This point of terminology is clearly mainly meant to contrast with other versions of the four-position approach as being 'accentual', but the term is not apt. Yakovlev's system is not really based on linguistic morphology in any meaningful way, but on (word-level) stress as determined in the normal way linguistically. That he considers only the distinction of (any) stress versus non-stress in no way changes the fact that stress is what matters in determining the 'strength' of a syllable and its mapping onto metrical positions. Yakovlev's desire to repudiate the two-lift requirement – a desire I sympathise with – seems to have led him to use the misnomer 'morphological' in describing his own theory. His theory is not 'accentual' insofar as it does not *count* accents or stresses, but neither is it 'morphological'. It is, at its heart, positional, in the sense that positions are what it counts. The misnomer 'morphological metre' has, unfortunately, been seized upon in some subsequent literature – by both Yakovlev's admirers and his critics – to make his revision seem conceptually more radical than it is. His is an *important* contribution, and a beautiful example of metrical reasoning and argumentation, but it is not the theoretical sea change it is too often made out to be. I plan to make this point more fully in an article under preparation at the time of this writing.

[16] Yakovlev (2008: 74–75) himself only lists eight types, since he has not allowed for verse-final *ww*. See Goering (2020b: 145–148) for more detailed discussion of this and related points.

[17] This does of course occur, as the problematic type A3 discussed above, but this is no more or less of a problem for Yakovlev's version of the theory than any other.

[18] This pattern occurs as type A3b, which involves the same issues as plain type A3.

Yakovlev's types cross-cut Sievers', e.g. in the traditional types A2a and Da:

(28) dryncfæt dēore
SsSw = SSSw
'precious drinking cup' (*Beowulf* 2254a)

(213) wīs wēlþungen
SSsw = SSSw
'wise, refined' (*Beowulf* 1927a)

The first of these is type A2a under the traditional classification, and the second Da (D1 in Sievers' original system), but if no distinction is made between primary and secondary stresses (or strong and half-strong metrical positions), then they would have the same broad skeleton, *SSSw*. Yakovlev (2008: 75) is, quite rightly, at pains to emphasise that since types are epiphenomenal anyway, this kind of difference is not very important, and that his approach really is a rather small (but important) refinement of the traditional four-position approach.

To be really satisfactory, Yakovlev's framework would, like the classic four-position approach, probably also have to allow considerable scope for stress-clash avoidance, for the same reasons discussed above. Neidorf & Pascual (2020: 247–249) seem to find it problematic that these constraints are not baked into the metrical framework as limitations on *s* positions, though it is not clear why such limits should have to be explained with reference to (metrical) ictus rather than (linguistic) stress – as already noted, the stress-clash rules for the classic system are themselves not fully satisfactory and apparently need to operate at least partly on a level that is not strictly metrical. Linguistic structure and poetic euphony would appear more important than restrictions on specific kinds of metrical positions.[19] Yakovlev himself does not discuss this issue directly.

[19] Neidorf & Pascual (2020: 248–249) also object that since Kaluza's law supposedly depends on secondary stress, this must be a metrically relevant level. The premise here is, however, mistaken (§5.2.1; this explains why verses such as ˣ*frōd cyning þrīo wicg* do not occur, since this would have the illicit five-position rhythm *SS̆wSS*), and it is indeed to the credit of Yakovlev (2008: 76, n. 49) that he realised that Kaluza's law has nothing to do with 'secondary stress'. That said, some of the more limited criticisms of Neidorf & Pascual (2020) are sound. They rightly object to Yakovlev's scansion of *glædman Hrōðgār* (*Beowulf* 367b) as SSSS instead of SSSw, though they are mistaken in saying that this faulty scansion means that the type *SSSS* is unattested (Neidorf & Pascual 2020: 247): it is regularly found in the traditional type A2ab (see appendix D). It is merely Yakovlev's specific example that is ill-chosen. A more interesting case is the pattern *wSSS*, which Yakovlev (2008: 75) tries to exemplify with *syððan Hygelāc læg* (*Beowulf* 2201b). Neidorf & Pascual (2020: 247–248) are clearly correct that this should be scanned *wSwS*, and that *wSSS* (in contrast to *SSSS*) is a pattern whose metrical reality is hard to demonstrate, at least for Old English. The only apparent example of a type 'Cb' is *ðā-ði geolu god-ueb* (*Leiden Riddle* 10a, and its later version in *Riddle* 35), and Hutcheson (1995: 33, n. 120) calls this verse 'unmetrical'. The type does occur more clearly in Norse *fornyrðislag* – see *Guðrúnarkviða II* 2.5, 2.7 in the example scansions in E.3 – though it is uncommon and restricted to the on-verse (Suzuki 2014: 92). Whether the rarity of this configuration is a serious objection to Yakovlev's theory is another

E.2 The Word-foot Theory

The main alternative approach to the four-position theory with a claim to good explanatory power is the *word-foot* theory proposed for Old English by Russom (1987), and developed chiefly by him in a long series of articles and books – the most important of these are Russom (1998, 2009b) for Norse, Russom (2017) for Old and Middle English, and Russom (2022) returning to Old English to refine and reframe elements of the system (including restating a number of principles as negative constraints, or violable prohibitions).[20] Bredehoft (2005) gives a very readable and clear description of the theory, though he introduces some problematic modifications as well, which I will not consider in this overview.

The word-foot theory is more complex than the four-position approach. It essentially rests on the notion that each verse is prototypically made of exactly two words. Deviations from this are common, and occur in two main ways: replacing one word with a phrase that has the same stress contour; or adding in light, extrametrical words. Both licences are motivated by the needs of narrative and descriptive poetry to allow a wider range of vocabulary and constructions than a completely strict two-word verse would permit. Limits on the rhythmic shapes of the verse come largely from avoiding whole verses that could seem like single words or word-contours, and (conversely) avoiding word-foot shapes that would be too easily mistaken for entire verses. These 'overlap avoidance' principles are supplemented by a few further restrictions on the use of more complex word-shapes.

In more technical terms, adapted especially from Russom (1987: 150–153) with reference to Russom (2022), here are the basic principles of the word-foot approach, stated loosely enough to cover both Norse *fornyrðislag* and Old English standard verse. These principles are all metrical norms, which can mostly be violated, but at the cost of increased *metrical complexity* (Russom 2022: 38–40). The more complex the verse, the rarer and more restricted it will be, and excessively complex verses are disallowed entirely. The specific word-foot principles fall into three groups: those limiting the range and formation of word-feet, those limiting the combination of word-feet into verses, and those governing the addition of extrametrical elements into verses:

matter, since this merely returns us to the question of just how stress-clash avoidance rules work, and on what level. Non-existent metrical patterns can always be accounted for in two ways: genuine metrical restrictions, or restrictions falling out of linguistic structure (including the interaction of linguistic structure and metre). This matter could use further discussion, particularly since criticisms of Yakovlev on this point may well end up applying to all forms of the four-position theory.

[20] For Russom's many further articles on more focused points or questions, see the bibliographies of these works.

1. *Word-foot* patterns correspond to standard word patterns of the spoken language.
   a) A *word* may be a stressed simplex, a stressed compound, or an unstressed element (unstressed prefixes count do *not* count as part of the 'word' they are attached to).[21]
   b) The normative word-shape is *Sw*.
      i. A word-foot shorter than *Sw* is *short*.
      ii. A word-foot longer than *Sw* is *long*.
      iii. A word-foot with fewer stresses than *Sw* is *light*.
      iv. A word-foot with more stresses than *Sw* is *heavy*.
   c) A word-foot is most simply realised by a single word, but may be a phrase of a similar stress contour (some mismatch of *S* and *s* is permitted).[22]

2. A verse consists of two word-feet.
   a) A verse typically adheres to phrasal constituency (enjambment on the level of the verse is avoided).[23]
   b) A word-foot pattern may not overlap with a verse pattern (a compound *Swsw* cannot be a word-foot, since this would overlap in contour with a two-foot verse *Sw*|*Sw*).
   c) A normative verse is made of two normative feet: *Sw*|*Sw*.
      i. If one foot is short, the other will be long.
      ii. Two long feet may not be paired; a long foot will usually be paired with a short foot, but may be paired with the normative *Sw* (this gives the patterns *Sww*|*Sw*, *Sw*|*Sww*, *Sw*|*Ssw*, *Sw*|*Sws*).
   d) A long or heavy foot preferentially occurs as the second foot of a verse; if one occurs as a first foot, the verse is *reversed*, and is considered considerably complex metrically (the rarer heavy and long feet *Sws* and *Swws* may not be reversed at all).
   e) A word-foot boundary must coincide with a *minimal* prosodic-word boundary (allowing, e.g., a compound *Sw-sw* to scan as two word-feet, *Sw*|*Sw*).
   f) On-verses tolerate greater metrical complexity than off-verses.[24]

[21] That is, word-feet seemed to be largely based on prosodic words (§2.6, Goering 2020b: 150–152, n. 23).
[22] Verses with the pattern *w(…)SSs* discussed in note 19 above may represent the limits of mismatch, if they are really to be scanned as *Ssw* (Russom 1998: 94–95). The alternative is to allow the unusual foot shape *SSs* by at least some (mostly Norse) poets.
[23] Enjambment on the level of the line is common, however, especially in Old English.
[24] Strictly speaking, this is simply an expression of the general principle of closure (§3.4.2).

3. Extrametrical words may be optionally added before a word-foot.
   a) They must be unstressed.
   b) Due to excessive metrical complexity, they may not (in most verse forms) be added to the start of reversed verses, or verses filled entirely by compounds.
   c) They may be added next to light feet to increase the length of an unstressed sequence and so emphasise that some of those syllables are metrical.
   d) Extrametrical words are otherwise typically a single weak syllable (prototypically a proclitic), to avoid being mistaken for light word-feet.

A very great deal of work is done by principle 2b, on overlap avoidance. This both limits the possible range of word-feet (excluding, e.g., *Swsw* and *Sssw*, despite the presence of compound words such as *fēþe-cempa* 'war-band fighter' and *sǣ-līþende* 'seafarers'), and the minimal size of the verse: a verse of the shape *S*|*Sw* would too closely resemble a two-word realisation of the word-foot *Ssw*, and so is usually prohibited.

More generally, the exact selection of word-feet is further determined by the available word-shapes in the language, and as well as by arbitrary metrical convention. In Old English hypermetric verse, for instance, compound-based foot patterns are more prominent, and so *Swsw* and *Swwsw* do count as word-feet, being merely components in even longer half-lines. In Norse *fornyrðislag*, the word-foot *Sws* is much rarer and considered more complex, and so that metre is more tolerant of verses of the pattern *Sw*|*S* (§11.1.2). Similarly the absence of *Sws* feet in that metre licenses the existence of *Sww*|*S* verses (Russom 1998: 31–37). In other Norse metres, most notably *ljóðaháttr*, poets seem to work with a wider array of compound-based word-feet than *fornyrðislag* permits.

Shape	Examples	Notes
w	*in* 'in'	light, short
ww	*under* 'under'	light
S	*þrym* 'power'	short
Sw	*ellen* 'valour'	normative
Ss	*rīdend* 'riders', *wĕall-clif* 'wall-cliff'	heavy
Sww	*ĕorlscipe* 'heroism'	long
Ssw	*byrnende* 'burning', *wēl-þungen* 'refined'	heavy, long
Sws	*ende-lāf* 'last remnant'	heavy, long, complex
Sws	*sibbe-ge·driht* 'troop of friends'	heavy, long, very complex

Table E.1 Word-feet in Old English standard verse.

For standard (not hypermetric) Old English verse, Russom (1987: 13, 2022: 41) identifies nine word-foot patterns. I give these in table E.1, classified by length and weight.[25] Russom (1998: 19) also finds nine feet in *fornyrðislag*, though the inventory is slightly different: he argues that *www* feet are acceptable in Norse,[26] and that the *Swws* foot has been lost as a consequence of changing word-shapes in the language more generally.[27]

For Old English, these nine feet can be paired with one another to give a total of 25 possible combinations, limited by the principles under 2 (Russom 1987: 20–22, 2022: 47–51). This is more than Sievers' basic five types, but these combinations are really comparable to Sievers' subtypes: where the four-position approach would consider *Sw*|*Sw*, *Sw*|*Ss*, *Ss*|*Sw*, and *Ss*|*Ss* to be 'suptypes' of type A, they represent four distinct word-foot pairings in Russom's system. A word-foot analysis also increases the number of 'types' slightly by treating feet such as *Sww* differently from *Sw*, so that *Sww*|*Sw* and *Sww*|*Ss* represent two more distinct combinations of word-feet (similarly, *ww* is distinguished from *w*, and *Swws* from *Sws*).[28] Taken together, Russom's number of variants is probably not unduly high, when one compares the 17 non-hypometric types and subtypes I found necessary to give labels to in appendix D,[29] or the 27 enumerated by Sievers (1893: 33–35).[30]

Extrametrical elements are used to explain various features of the system: not only obvious features such as many (not all) 'expanded dips' or anacrusis, but also the types Aa* and Aab*, which are understood to have the structures *Ss*|*(w) Sw* and *Ss*|*(w)Ss*, respectively. This explains why the extra 'fifth-position' syllable in the middle is always particularly light and weak, a single syllable, and (most importantly) never part of a larger word. These factors minimise any potential confusion with the unmetrical pattern ^{x}*Ssw*|*Sw*. Such verses are also strictly limited to the on-verse.

Under the word-foot theory, the A3 types *ww*|*Sw* and *ww*|*Ss* are unusually light, compared to the normative *Sw*|*Sw* pattern, and so are confined to the on-verse (entirely so in Old English, largely so in Norse). Given their overall lightness,

[25] The examples could, of course, be generally substituted by ones showing resolution: *wine* 'friend' for *þrym*, *fremedon* 'performed' for *ellen*, etc. When resolution is not permitted, a suspended *Šw* sequence would be metrically *Sw*, as is the case with *werum* in *Beowulf* 1256a (82).

[26] I am not persuaded by this, since such feet are based only on combinations of light words and clitics (Russom 1998: 17, 19), which do not necessarily project metrical word-feet (hence the absence of word-feet such as ^{x}*wS* in Old English, which would be possible if clitic-combinations such as *ge·sīþ* 'companion' served as the basis of word-feet).

[27] This foot may have been retained as a metrical archaism in *ljóðaháttr*; see Goering (2016b: 244–248).

[28] Russom (2022: 47–51) does introduce a Sievers-style letter/number labelling system, presumably for ease of reference. Under this new labelling, *Sw*|*Sw* is A1, *Sw*|*Ss* A2, *Ss*|*Sw* A3, *Ss*|*Ss* A4, *Sww*|*Sw* A5, and *Sww*|*Ss* A6. In general, the letter type matches Sievers' classification, but the numbering scheme is distinct and only coincides here and there.

[29] The extra eight types in Russom's system come entirely from distinguishing *ww* versus *w* as all or part of a word-foot.

[30] Though five of those (B3, E2, and the three C* subtypes) should be dismissed for probably not really existing, giving 22 actual subtypes.

their initial word-feet are usually phrasal or (most often) padded out with further extrametrical words, to ensure that they aren't mistaken for extrametrical elements (anacrusis). Otherwise, such types involve no particular problems of metrical complexity in either the word-foot combination principles or the risk of overlap with a word-foot.

D* verses – which encompass the word-foot patterns *Sw*|*Sww*, *Sw*|*Ssw*, *Sw*|*Sws*, and *Sw*|*Swws* – are slightly heavier than the norm, and so involve a degree of metrical complexity. Like A3, they prefer the on-verse, though this rule is not strict even in Old English.[31] Such combinations of word-feet are not, however, easily reversed (principle 2d), and the patterns ˣ*Ssw*|*Sw*, ˣ*Sws*|*Sw*, and ˣ*Swws*|*Sw* do not occur. Only *Sww*|*Sw*, with a simplex initial word-foot of normal weight, is allowed to show both reversal and the pairing of a long foot with a normal (not short) foot (2(c)ii). The only compound foot-types that are allowed to reverse at all are *Ss* and *Ssw* (this is why type-'E2' verses of the shape ˣ*Sws*|*S* do not occur),[32] and when they do occur initially, the length of the two word-feet must be balanced. In concrete terms, this means that the normal-length *Ss* can be followed only by the normal-length feet *Sw* and *Ss*, while the long *Ssw* can be followed only by the short *S* – this is the source of type E, *Ssw*|*S*.

A few other features are worth highlighting for anyone trying to get a handle on the system. (1) By principle 1a – which is probably a reflection of something about the linguistic structure of prefixes rather than a strictly metrical rule – there are no rising word feet of the shape ˣ*wS*, etc. This is crucial to bear in mind when considering the application of principle 2b (the overlap restriction), and the scansion of Sievers' types B and C in general: the latter will always be scanned with both (partial) stresses in the same foot: e.g. *w*|*Sws* or *w*|*Ssw*, never ˣ*wS*|*wS* or ˣ*wS*|*Sw*. (2) 'Expanded dips' sometimes cross-cut the traditional Sieversian view. In type E, a pattern *Ssw*|*(w)S* really would involve the addition of an extrametrical weak syllable before the final word-foot, but in a type 'B2' such as *ww*|*Swws*, all the

[31] In *Beowulf* 1840b, 2020b, and 2032b, the so-called analogical non-parasiting proposed by Bliss (1962: 57) and endorsed by Fulk (1992: 88–90) is indefensible (if such a principle existed, it would apply in other types; the only secure examples of a process along these lines occur in the first elements of compounds). The rarity of off-verse D* verses may well be partly due to an avoidance of more complex patterns towards the end of the line, but alliterative requirements are explanation enough in most cases: most D* verses end in a poetic compound or phrasal equivalent, and such elements must alliterate (Krackow 1903). This means that most – not all – D* verses have double alliteration, which is only possible in the on-verse. Compare the restriction of most A2b verses (ending in *Ss*, likewise usually a poetic compound or phrasal equivalent) to the on-verse (Bliss 1962: 47–48; Hutcheson 1995: 189–192; Russom 1987: 92–97).

[32] Although Russom's original system treats *Ssw* and *Ss* as based on compound words, it is noteworthy that both also occur as normal, simplex word-shapes: *Ssw* is common in words such as *byrnende* 'burning', and *Ss* has at least some currency in words such as *Hrunting* and *rīdend* with non-demoted final stress (§4.5.2). I find it tempting to link this to the greater flexibility in reversing these two word-feet, in contrast to the compound-only word-feet *Sws* and *Swws*. That is, long simplex patterns can reverse most easily, long and heavy simplex patterns only when the verse is balanced, and heavy compound patterns not at all.

syllables are from word-feet, with no extrametrical additions (though any further syllables in the first dip would indeed be extrametrical). There is much common ground with the four-position theory on extra weak syllables, but these points of difference are also important.[33] (3) The interaction of syntax and metre means that verse-final light feet are impossible. In a verse such as *Scedelandum in* 'in Scania' (*Beowulf* 19b), the postpositional *in* is automatically stressed, making this verse *S*^{w}*sw*|*S*, not ^{x}*S*^{w}*sw*|*w*. This fact alone (the impossibility of final *w* or *ww*) rules out some 18 of the 81 logical combinations of word-feet in Old English metre.

Descriptively, the word-foot theory is very robust. Its principles can account very precisely for what verses do and do not occur, and explain the relative frequencies of verses that do occur very nicely.[34] For instance, the word-foot theory (correctly) predicts that verses such as ^{x}*syððan felahrōr fōr* shouldn't occur, because these would require a word-foot of the shape ^{x}*SsS*, which is not licensed by word shapes regularly occurring in the language. It is also flexible: able, with slight adjustments to the conventions about what word-foot shapes are permitted and occasionally with specific further rules,[35] to account for Old English standard and hypermetric verse, Old Saxon verse (also with a hypermetric variant), and the full range of Norse metres – including areas that have proven highly problematic for position-counting approaches, such as *ljóðaháttr* and the supposedly 'irregular' verse forms found in poems such as *Atlakviða* (Goering 2020b: 148–149, n. 21). This comes at the cost of being somewhat more theoretically complex, as the various principles (not necessarily complicated in themselves) interact with one another. On the whole, I believe this to be the better model: the word-foot theory seems to me just elaborate and flexible enough to explain the full range of

[33] Support for the reality of this distinction may perhaps be found in the stronger preference for the late dip of type E to show the weakest kinds of proclitic elements – typical of anacrusis – against the very slightly greater flexibility seen in type B (Duncan 1985: 24–27, 51, n. 29). Only two (4.1 per cent) type-E verses with an expanded dip in *Beowulf* (343b, 2882b) derive the extra syllable from a more prominent weak element such as a preposition or pronoun, while among type 'B2' verses, there some 25 (12.7 per cent) examples such as *gǣð ā wyrd swa hīo scel* 'the course of events goes ever as it must' (*Beowulf* 455b; alliteration on *w*). My count differs slightly from Duncan's, since I set aside 501b (Pascual 2021), 932b, 949b (Fulk 1992: 214–215), and 1830b (Trautmann 1904: 102) as probably to be emended, and ignore 1763a due to possible elision. How important this statistical difference is will depend on one's general views of metrical theory. It is worth noting that a (non-absolute) preference for lighter elements within *Sws* feet is expected in the word-foot theory (Russom 1996).

[34] The only potential exception I am aware of are those types of verses that Donoghue (1987a) explains as showing 'anacrusis' between the two lifts of a type-C off-verse, a position inside a word-foot and so not open to an extrametrical syllable under the word-foot theory. It is indeed true that in a verse such as *swā wæter be·būgeð* 'as water encloses' (*Beowulf* 93b, *Andreas* 333b), the medial *be* would be a more classic candidate for extrametricality than the stronger particle *swā*. There are not many verses with this pattern, and in some of them the first syllable is as good a candidate for anacrusis, so how problematic this is is unclear – but such verses are worth mentioning as one of the very few categories where the word-foot theory has a little more trouble explaining something than the four-position approach does.

[35] E.g. the rule to avoid ending a line of *ljóðaháttr* with a trochaic *Sw* word-foot, or to require every full-verse in that metre to contain one compound word-foot (Goering 2016b: ch. 4) – a rule also found in Old English hypermetric verse.

Germanic metrical forms without being overcomplex, and it is more descriptively sufficient than any variant of the positional approach.

E.3 Sample Scansions

To illustrate the varying metrical approaches, I provide several short examples of Old English and Norse *fornyrðislag* verse, marked up in a word-foot framework (I do indicate resolution for clarity, though this is strictly speaking not part of the metrical representation), followed after a : by Yakovlev's strong-weak positional notation, and with the standard verse type it falls under in parentheses. I occasionally give alternative scansions or labellings where there is some cause for doubt. The choice of selections, amounting to 46 lines of Old English and 54 lines of Norse, is aimed at trying to illustrate much of the range of normal metrical practice, and showing in context some of the metrical patterns and phenomena that I discuss in the main body of the book. Not every single type and subtype happens to be attested in these passages. Plain translations are provided after each selection.[36]

E.3.1 Cædmon's Hymn *(Moore Bede version)*

Nū scylun hergean hefaen-rīcaes uard,
(w)ww|Sw : wwSw (A3) S^{w}sw|S : SSwS (E)

metudæs maectī, end his mōd-gi·danc,
S^{w}w|Sw : SwSw (A) ww|Sws : wSwS (B)

uerc uuld^{u}r-fadur, suē hē uundrā gi·huaes,
S|Ssw : SSSw (Da) ww|Swws : wSwS (B)

ēcī dryctin, ōr ā·stelidæ.
Sw|Sw : SwSw (A) Sw|S^{w}w : SwSw (A)

[36] Emendations are indicated by italics. *Cædmon's Hymn* follows the Moore Bede text except for the change of MS *scepen* to *sceppend*: an obvious correction well supported by other manuscripts (Krapp & Dobbie 1953: VI.105). The *Beowulf* text follows Fulk, Bjork & Niles (2008), to which I refer for discussions of standard emendations, except in the following points: 5b *of·tāh* for MS *ofteah* (Bammesberger 2006: 19–20), 6a *Eorle* for MS *eorl* (Drout & Goering 2020), 10a *þær* for MS *þara* (Pope 1988: 108–110), 1534b *do-an* for MS *don* (assumed by the editors, but I have explicitly spelled out the decontracted vowels for clarity), and 1537a *feaxe* for MS *eaxle* (Stanley 1976; Bammesberger 2001). The excerpts from *Vǫluspá* and *Guðrúnarkviða II* follow Jónas Kristjánsson & Vésteinn Ólason (2014a,b), except for the following: *Guðrúnarkviða II* 2.6 *hvǫtum* for MS *hvossō* (Gering 1869: 58–59; this change is *metri causa*, to avoid an otherwise highly unusual anacrusis), 4.1 *af* for MS *at* (von See et al. 2009: 634–636), and 4.8 *und* for MS *of* (von See et al. 2009: 638). The selection from *Hervararkviða* is from Jón Helgason (1924), normalised but unemended. Vowels written in superscript represent scribal forms that should be metrically ignored, usually epenthetic vowels in Old English, and clitics written as separate words in Norse. Sometimes the status of a vowel is uncertain, as in *Guðrúnarkviða II* 5.1. Punctuation is in all cases my own. For the purposes of exemplification, I treat *Sigurðr* as if its initial syllable were consistently heavy (**Sigwǫrðʀ*), an assumption that makes for a more consistent scansion in this particular poem. On the word-foot scansion of type 'Cb', see note 22 above.

Hē āērist scōp aeldā barnum
w|Sws : wSwS (B) Sw|Sw : SwSw (A)

heben til hrōfē, hāleg sceppend.
S^{w}w|Sw : SwSw (A) Sw|Sw : SwSw (A)

Thā middun-geard mon-cynnæs uard,
w|Sws : wSwS (B) Ssw|S : SSwS (E)

ēcī dryctin, æfter tīadæ,
Sw|Sw : SwSw (A) Sw|Sw : SwSw (A)

fīrum foldu, frēa all-mectig.
Sw|Sw : SwSw (A) S|Ssw : SSSw (Da)

'Now we must praise the guardian of the sky kingdom, the power of the measurer, and his inner intention, the works of the glorious father, as he, the eternal leader, established the beginning of each marvel. He, the holy maker, first made the sky as a roof for the children of people. Then thereafter the guardian of humankind – the eternal leader, the omnipotent lord – made the ecumene, the earth, for mortals.'

E.3.2 Beowulf, *lines 1–11*

Hwæt wē Gār-Dena in geār-dagum
ww|Ssw : wSSw (C) w|Ssw : wSSw (C)

þēod-cyninga þrym ge·frūnon,
S|Ssw : SSSw (Da) Sw|Sw : SwSw (A)

hū ðā æþelingas ellen fremedon.
ww|S^{w}sw : wSSw (C) Sw|S^{w}w : SwSw (A)

Oft Scyld Scēfing sceaþena þrēatum
w|Ssw : wSSw (C) S^{w}w|Sw : SwSw (A)

monegum mægþum meodo-setla of·tā̆h,
S^{w}w|Sw : SwSw (A) S^{w}sw|(w)S : SSwS (E)

egsode Eorl*e*. Syððan ærest wearð
S^{w}ww|Sw : SwSw (A) ww|Sws : wSwS (B)

fēasceaft funden, hē þæs frōfre ge·bād.
Ss|Sw : SSSw (A2a) ww|Swws : wSwS (B)

Wēox under wolcnum, weorð-myndum þāh,
Sww|Sw : SwSw (A) Ssw|S : SSwS (E)

oð-þæt him æghwylc þ*ǣr* ymb-sittendra
ww|(w)Sws : wSwS (B) S|Ssw : SSSw (Da)

ofer hron-rāde hȳran scolde,
ww|Ssw : wSSw (C) Sw|Sw : SwSw (A)

gomban gyldan. Þæt wæs gōd cyning.
Sw|Sw : SwSw (A) ww|Ssw : wSSw (C)

'We have indeed heard about the power of the Spear-Danes, the kings of the people, in ancient days, how those princes carried out valour. With forces of warriors, Scyld Scefing frequently denied mead-benches to many peoples; he terrified the Heruli. After he had first been found destitute, he experienced consolation for that. He grew beneath the clouds, prospered honourably until all the neighbours there across the whales' riding had to obey him, give him tribute. That was a good king.'

E.3.3 Beowulf, *lines 1531–1544*

Wearp ðā wunde*n*-mǣ*l* wrǣttum ge·bunden
Sw|Sws : S(w)SwS (Db*) Sw|(w)Sw : SwSw (A)

yrre ōretta, þæt hit on eorðan læg,
Sw|Ssw : S(w)SSw (Da*) ww|(w)Sws : wSwS (B)

stīð and stȳl-ecg. Strenge ge·truwode,
Sw|Ss : SwSS (A2b) Sw|(w)S^{w}w : SwSw (A)

mund-gripe mægenes: swā sceal man do-*a*n,
Ss^{w}|S^{w}w : SSSw (A2a) ww|Ssw : wSSw (C)

1535 þonne hē æt gūðe ge·gān þenceð
ww|(ww)Sw : wwSw (A3) w|Ssw : wSSw (C)

longsumne lof, nā ymb his līf cearað.
Ssw|S : SSwS (E) ww|(w)Ssw : wSSw (C)

Ge·fēng þā be *feax*e —nalas for fǣhðe mearn—
(w)Sw|(w)Sw : (w)SwSw (+A) ww|(w)Sws : wSwS (B)

Gūð-Gēata lēod Grendles mōdor.
Ssw|S : SSwS (E) Sw|Sw : SwSw (A)

Brægd þā beadwe heard, þā hē ge·bolgen wæs,
Sw|Sws : S(w)SwS (Db*) ww|(w)Sws : wSwS (B)

1540 feorh-ge·nīðlan, þæt hēo on flet ge·bēah.
Sw|Sw : SwSw (A) ww|(w)Sws : wSwS (B)

Hēo him eft hraþe *a*ndlēan for·geald
ww|Ssw : wSSw (C) Ssw|S : SSwS (E)

grimman grāpum, and him tō·gēanes fēng.
Sw|Sw : SwSw (A) ww|(w)Sws : wSwS (B)

Ofer·wearp þā wērig-mōd, wigena strengest,
(ww)Sw|Sws : (w)S(w)SwS (Db*) S^{w}w|Sw : SwSw (A)

fēþe-cempa, þæt hē on fylle wearð.
Sw|Sw : SwSw (A) ww|(w)Sws : wSwS (B)

'Then the furious warrior threw the patterned blade, bound with ornaments, so that it lay on the ground, strong and steel-bladed. He trusted in his strength, a hand-grip of power: thus should a person do, when he intends to achieve enduring fame in battle; he doesn't worry about his life. Then the prince of the Battle-Geats grabbed Grendel's mother by the hair. He didn't trouble about that act of violence. Then the one hard in battle, when he was swollen with rage, spun the deadly foe so that she fell back onto the floor. She quickly paid him back with fierce grappling, and grabbed at him. Then the strongest of warriors, the fighter from the war-band, weary in spirit, was tossed over so that he fell down.'

E.3.4 Beowulf, *lines 2977–2988*

	Lēt se hearda	Higelāces þegn
	ww|Sw : wwSw (A3)	S^{w}sw|S : SSwS (E)
	brād*n*e mēce	—þā his brōðor læg—
	Sw|Sw : SwSw (A)	ww|Sws : wSwS (B)
	eald-sweord eotonisc,	entiscne helm
	Ss|S^{w}w : SSSw (A2a)	Ssw|S : SSwS (E)
2980	brecan ofer bord-weal.	Đā ge·bēah cyning,
	S^{w}ww|Ss : SwSS (A2b)	w|(w)Ssw : wSSw (C)
	folces hyrde:	wæs in feorh dropen.
	Sw|Sw : SwSw (A)	ww|Ssw : wSSw (C)
	Đā wǣron monige	þe his mǣg wriðon,
	(w)ww|S^{w}w : wwSw (A3)	ww|Ssw : wSSw (C)
	ricone ā·rǣrdon,	ðā him ge·rȳmed wearð
	S^{w}w|(w)Sw : SwSw (A)	ww|(w)Sws : wSwS (B)
	þæt hīe wæl-stōwe	wealdan mōston.
	ww|Ssw : wSSw (C)	Sw|Sw (A)
2985	Þenden rēafode	rinc ōðerne,
	ww|Sww : wSww (C3)	S|Ssw : SSSw (Da)
	nam on Ongenðīo	īren-byrnan,
	ww|Sws : wSwS (B)	Sw|Sw : SwSw (A)
	heard swyrd hilted,	and his helm somod.
	Ss|Sw : SSSw (A2a)	ww|Ssw : wSSw (C)
	Hāres hyrste	Higelāce bær.
	Sw|Sw : SwSw (A)	S^{w}sw|S : SSwS (E)

'When his brother was fallen, the stern retainer of Hygelac let his broad blade, his old, giantish sword, break the giantish helmet above the wall of shields.

Then the king, the shepherd of the people, fell back: he was fatally hit. Then there were many who bound up their relatives, quickly lifted them up, when it was granted to them that they could control the field of battle. Meanwhile one warrior plundered the other, he took from Ongenðio the mail-shirt of iron, the hard, hilted sword, and his helmet, all together. He carried the gear of the grey-haired man to Hygelac.'

E.3.5 Vǫluspá, *stanzas 1–4*

1 Hljóðs bið ᵉk allar *helgar* kindir,
Sw|Sw : SwSw (A) Sw|Sw : SwSw (A)

meiri ok minni, mǫgu Heimdalar.
Sw|(w)Sw : SwSw (A) Sʷ|Ssw : SSSw (Da)

Vildu at ᵉk, Val-fǫðr, vel fram telja
Sw|(w)Ss : SwSS (A2b) Ss|Sw : SSSw (A2a)

forn spjǫll fira, þau ᵉr fremst um·man?
Ss|Sw : SSSw (A2a) w|Sws : wSwS (B)

2 Ek man jǫtna ár um·borna,
ww|Sw : wwSw (A3) Sw|Sw : SwSw (A)

þá ᵉr forðum mik fødda hǫfðu;
w|Sws : wSwS (B) Sw|Sw : SwSw (A)

níu man ᵉk heima, níu íviðjur,
Sʷw|Sw : SwSw (A) Sʷ|Ssw : SSSw (Da)

mjǫt-við mæran fyr mold neðan.
Ss|Sw : SSSw (A2a) w|Ssw : wSSw (C)

3 Ár var alda, þar ᵉr Ymir byggði.
Sw|Sw : SwSw (A) w|Sʷsw : wSSw (C)

Vara sandr né sær, né svalar unnir.
ww|Sws : wSwS (B) w|Sʷsw : wSSw (C)

Jǫrð fannsk æva, né upp-himinn:
Sw|Sw : SwSw (A) w|Ssw : wSSw (C)

gap var ginnunga, en gras hvergi,
Sw|Ssw : S(w)SSw (Da*) w|Ssw : wSSw (C)

4 áðr Burs synir bjǫðum um·yppðu,
w|Ssw : wSSw (C) Sʷw|Sw : SwSw (A)

þeir er Mið-garð mæran skópu.
ww|Ss : wwSS (A3b) Sw|Sw : SwSw (A)

Sól skein sunnan á salar steina:
Sw|Sw : SwSw (A) w|S^{w}sw : wSSw (C)

þá var grund gróin grønum lauki.
ww|Ssw : wSSw (C) Sw|Sw : SwSw (A)

‘(1) I ask the holy descendents, the greater and lesser children of Heimdal, for attention. Do you, father of slaughter, desire that I recite well the ancient stories of peoples, the ones I remember first? (2) I remember giants born early on, the ones who had first raised me. I remember nine realms, nine hostile women,[37] the famous tree of fate before the earth below. (3) It was early in time when Ymir lived. There was neither sand nor sea, nor cold waves. Earth did not exist at all, nor the sky above: the void was empty, and grass was nowhere, (4) before the sons of Bur raised up the earth, the ones who made the famous ecumene. The sun shone from the south on the stones of the hall: then the ground was grown over with the green leek.’

E.3.6 Guðrúnarkviða II, *stanzas 1–7*

1 Mær var ᵉk meyja —móðir mik føddi—
Sw|Sw : SwSw (A) Sw|(w)Sw : SwSw (A)

bjǫrt í búri. Unna ᵉk vel bróðrum,
Sw|Sw : SwSw (A) ww|(w)Sw : wwSw (A3)

unz mik Gjúki gulli reifði—
ww|Sw : wwSw (A3) Sw|Sw : SwSw (A)

gulli reifði, gaf Sigurði.
Sw|Sw : SwSw (A) S|Ssw : SSSw (Da)

2 Svá var Sigurðr of sonum Gjúka
ww|Sw : wwSw (A3) w|S^{w}sw : wSSw (C)

sem væri grønn laukr ór grasi vaxinn,
(w)ww|Ss : wwSS (A3b) w|S^{w}sw : wSSw (C)

eða hjǫrtr há-beinn um hvǫtum dýrum,
ww|Sss or ww|Ssw: wSSS (Cb) w|S^{w}sw : wSSw (C [or +A])

eða gull glóð-rautt af grá silfri—
ww|Sss *or* ww|Ssw : wSSS (Cb) w|Ssw : wSSw (C)

3 unz mér fyr·munðu mínir bróðr
ww|(w)Sw : wwSw (A3) Sw|S : SwS (A-)

at ᵉk ætta ver ǫllum fremra.
w|Sws : wSwS (B) Sw|Sw : SwSw (A)

[37] Or ‘nine women of the woods’, though this etymology of *íviðjur* seems more doubtful to me.

Sofa þeir né máttut né of sakar dǿma,
$S^{w}w|(w)Sw : SwSw$ (A) ww|$S^{w}sw : wSSw$ (C)

áðr þeir Sigurð svelta létu.
ww|Ss : wwSS (A3b) Sw|Sw : SwSw (A)

4 Grani rann a*f* þingi. Gnýr var at heyra,
$S^{w}w|(w)Sw : SwSw$ (A) Sw|(w)Sw : SwSw (A)

en þá Sigurðr sjalfr eigi kom.
ww|Ss : wwSS (A3b) S|Sws (*or* Ssw|S) : SSwS (Db [*or* E])

Ǫll váru sǫðul-dýr sveita stokkin,
(w)ww|$S^{w}s$: wwSS (A3b) Sw|Sw : SwSw (A)

ok of·vanið vási *und* vegǫndum.
w|(w)$S^{w}sw$: wSSw (C) w|S̆sw : wSSw (C)

5 Gekk ek grátandi við Grana róða,
Sw|Ssw : S(w)SSw (Da* [*or* Da?]) w|$S^{w}sw$: wSSw (C)

úrug-hlýra, jó frá ᵉk spjalla.
Sw|Sw : SwSw (A) Sw|Sw : SwSw (A)

Hnipnaði Grani þá, drap í gras hǫfði.
Sww|$S^{w}w$: SwSw (A) ww|Ssw : wSSw (C)

Jó*r* þat vissi: eigendr né lifðut.
Sw|Sw : SwSw (A) Sw|(w)Sw : SwSw (A [*or* Aa*?])

6 Lengi hvarfað*ak*, lengi hugir deildusk,
ww|Sww : wSww (C3) ww|$S^{w}sw$: wSSw (C)

áðr ek of·frægak folk-vǫrð at gram.
ww|(w)Sw : wwSw (A3) Ssw|S : SSwS (E)

7 Hnipnaði Gunnarr. Sagði mér Hǫgni
Sww|Sw : SwSw (A) ww|(w)Sw : wwSw (A3)

frá Sigurðar sárum dauða:
w|Ssw : wSSw (C) Sw|Sw : SwSw (A)

"Liggr of·hǫggvinn fyr handan ver
ww|Sw : wwSw (A3) w|Sws : wSwS (B)

Gothorms bani, of·gefinn ulfum."
Ss|Sw : SsSw (A2a) w|$S^{w}sw$: wSSw (C)

'(1) I was a girl among girls, shining in the settlement. My mother raised me. I loved my brothers well, until Gjúki endowed me with gold – endowed me with gold, gave me to Sigurd. (2) Compared to the sons of Gjúki, Sigurd was like the green leek grown up from the grass, or the tall-legged stag among fierce beasts, or gold, shining redly, among grey silver – (3) to the point that my brothers resented me, that I had a husband beyond others. They couldn't sleep, nor handle matters,

until they caused Sigurd to die. (4) Grani ran from the meeting place. A tumult could be heard, but Sigurd himself did not come then. The saddled horses were all sprayed with sweat, even accustomed (as they were) to hard work underneath killers. (5) Wet-cheeked, I went weeping to speak with Grani, I asked the horse for news. Grani sagged then, dropped his head into the grass. The horse knew that: his owners [*sic*] didn't live. (6) For a long time I wandered about, for a long time my thoughts were in disarray, before I asked the guardian of the people about the prince. (7) Gunnarr sagged. Hǫgni told me about Sigurd's cruel death: "The slayer of Gothorm lies struck down on the other side of the sea(?), given to wolves."'

E.3.7 Hervararkviða, *stanzas 1–3*

1 Hitt hefʳr mǽr ung í Munarvági
ww|Ss : wwSS (A3b) w|S^{w}sw : wSSw (C)

við sólar setr segg at hjǫrðu.
w|Sws : wSwS (B) Sw|Sw : SwSw (A)

"Hverr ᵉr einn saman í ey kominn?
w|Ssw : wSSw (C) w|Ssw : wSSw (C)

Gakktu greiðliga gistingar til!"
Sw|Sww : S(w)Sww (D*) Ssw|S : SSwS (E)

2 "Munkat ek ganga gistingar til,
ww|(w)Sw : wwSw (A3) Ssw|S : SSwS (E)

þvíat ek engi kann eyjar-skeggja.
ww|(w)Sws : wSwS (B) Sw|Sw : SwSw (A)

Segðu hraðliga, áðr heðan líðir,
ww|Sww : wSww (C3) w|S^{w}sw : wSSw (C)

hvar-ro Hjǫrvarði haugar kendir?"
ww|Ssw : wSSw (C) Sw|Sw : SwSw (A)

3 "Spyrjattu at því! Spakr ertu eigi,
Sww|(w)S : SwS (A-) Sww|Sw : SwSw (A)

vinr víkinga; þú ert van-farinn.
S|Ssw : SSSw (Da) ww|Ssw : wSSw (C)

Fǫrum fráliga sem okkr fǿtr toga!
S^{w}|Sww : SSww (D) ww|Ssw : wSSw (C)

Allt er úti ámátt firum."
Sw|Sw : SwSw (A) Ss|Sw : SSSw (A2a)

(1) 'At the sun's setting the young girl had found a man with a herd in Munarvágr. (The herdsman said,) "Who has come to the island alone? Quickly go to a lodging

place!" (2) (Hervǫr replied,) "I won't go to a lodging place, since I don't know any bearded men of the island. Tell me quickly, before you go from here, where are the mounds named after Hjǫrvarð?" (3) (The herdsman said,) "Don't ask about that! You aren't wise, friend of raiders; you've gone off course. Let's go as quickly as our feet will move! Everything out here is awful for mortals.'"

Appendix F

Kaluza's Law in *Beowulf*

This appendix contains the data for Kaluza's law in *Beowulf*, the basis for the discussion in chapter 5. I divide the verses into the following groups:

F.1. Verses showing resolution after a heavy syllable.
F.2. Verses showing suspension of resolution in a verse-final compound (§5.6).
F.3. Verses potentially show suspension of resolution in a verse-final compound, but which are less secure since they could be open to scansion as type A2b (§5.6.2).
F.4. All other verses showing suspension of resolution after a heavy syllable.
F.5. Verses showing unconditioned suspension of resolution.
F.6. Verses where linguistic uncertainties preclude clearer categorisation.

Verses are sorted by the weight of the relevant sequence: LL, LH, or the uncertain LX?. Problematic verses are included at the end, sometimes with an emended alternative.[1] In group 6, verses are sorted by the type of linguistic variation: use of *Dena* or *Denigea* in a metrical context where both variants are attested (namely type A2a; see Goering 2019: 124–125); and vowel epenthesis that changed H to LL. I have used square brackets to highlight editorial changes of potential metrical relevance, and superscripting to mark material written in the manuscript, but that should potentially be ignored in scansion for one reason or another.

[1] For group 5, see the references in §5.4, notes 5 and 6.

F.1 Resolved Sequences

LL

76a	folcstede frætwan	A2a
136a	morðbeala māre	A2a
156a	feorhbealo feorran	A2a
193a	nȳdwracu nīþgrim	A2a
208a	sundwudu sōhte	A2a
215a	gūðsearo geatolīc	A2a
222a	brimclifu blīcan	A2a
226a	sǣwudu sǣldon	A2a
232a	fyrdsearu fūslīc^{u}	A2a
328a	gūðsearo gumena	A2a
430a	frēowine folca	A2a
467a	hordburh hæleþa	A2a
468b	unlifigende	Da
485a	drihtsele drēorfāh	A2a
487a	heall heorudrēore	Da
501a	on·band beadurūne	Da
522a	freoðoburh fægere	A2a
622a	sincfato sealde	A2a
640a	gilpcwide Gēates	A2a
715a	goldsele gumena	A2a
737a	mǣg Higelāces	Da
744a	unlyfigendes	Da
753a	mundgripe māran	A2a
758b	mǣg Higelāces	Da
767a	dryhtsele dynede	A2a
784a	atelīc egesa	A2a
813b	mǣg Hygelāces	Da
819a	gūðhrēð gyfeþe	A2a
914a	mǣg Higelāces	Da
994a	gestsele gyredon	A2a
1047a	hordweard hæleþa	A2a
1079a	morþ^{o}rbealo māga	A2a
1116a	bānfatu bærnan	A2a
1121a	bengeato burston	A2a
1147a	sweordbealo slīðen	A2a
1171a	goldwine gumena	A2a
1177a	bēahsele beorhta	A2a
1198a	hordmāð^{u}m hæleþa	A2a
1205a	wælrēaf werede	A2a
1239a	bencþelu beredon	A2a
1243a	bordwudu beorhtan	A2a
1246a	þrecwudu þrymlīc	A2a
1267a	heorowearh hetelīc	A2a
1284a	wīgryre wīfes	A2a
1308b	unlyfigendne	Da
1317b	healwudu dynede	A2a
1369b	holtwudu sēce	A2a
1389a	unlifgendum	Da
1463a	folcstede fāra	A2a
1476a	goldwine gumena	A2a
1485a	ge·sēon sunu Hrǣdles	Da
1516a	fǣrgripe flōdes	A2a
1530b	mǣg Hȳlāces	Da
1558a	ealdsweord eotenisc	A2a
1602a	goldwine gumena	A2a
1607a	wīgbil wanian	A2a
1619a	wīghryre wrāðra	A2a
1676a	ald^{o}rbealu eorlum	A2a
1722a	lēodbealo longsum	A2a
1738a	ecghete ēoweð	A2a
1802a	blīðheort bodode	A2a
1847a	hild heorugrimme	Da
1852a	hordweard hæleþa	A2a
1906b	sundwudu þunede	A2a
1940a	cwealmbealu cȳðan	A2a
2043a	gārcwealm gumena	A2a
2046a	wīgbealu weccean	A2a

2072a	hondrǣs hæleþa	A2a
2077a	feorhbealu fǣgum	A2a
2096b	hē on·weg losade	C
2120a	wīghete Wedra	A2a
2154a	gūðsweord geatolīc	A2a
2239a	weard winegeōmor	Da
2250a	feorhbealo frēcne	A2a
2265a	burhstede bēateð	A2a
2313a	beorht hofu bærnan	A2a
2320a	dryhtsele dyrnne	A2a
2357a	frēawine folca	A2a
2408a	hæft hygegiōmor	Da
2419a	goldwine Gēata	A2a
2424a	feorh æþelinges	Da
2429a	frēawine folca	A2a
2456a	wīnsele wēstne	A2a
2537a	feorhbealu frēcne	A2a
2583b	hrēðsigora ne gealp	E
2584a	goldwine Gēata	A2a
2607a	wīcstede weligne	A2a
2616a	ealdsweord etonisc	A2a
2618a	fyrdsearo fūslīc	A2a
2650a	glēdegesa grim	E
2661b	wīgheafolan bær	E
2708a	sibæðelingas	Da
2742a	morð°rbealo māga	A2a
2780b	līgegesan wæg	E
2796b	þe ic hēr ón starie	C
2908b	unlifigendum	Da
2958b	segn Higelāces	Da
2979a	ealdsweord eotonisc	A2a
3006a	folcrēd fremede	A2a
3041a	grimlīc gryrefāh	A2a
	Total: 100	

LH

330a	æscholt ufan grǣg	A2ab?
1778a	mōdceare micle	A2a
3149a	mōdceare mǣndon	A2a
	Total: 3	

LX?

1122a	lāðbite līces	A2a
	lāðbitĕ lī[g]es	A2a
1534a	mundgripe mægenes	A2a
2950a	frōd felageōmor	D

F.2 Suspension in a *Stānhliðo* Context

LH

31a	lēof landfruma	Da
37a	of feorwegum	C
54a	lēof lēodcyning	Da
68a	þæt healreced	C
73a	būton folcscare	C
99a	swā ðā drihtguman	C
117a	æfter bēorþege	C
126b	mid ærdæge	C
160a	deorc dēaþscua	Da
174a	wið fǣrgryrum	C
175b	æt hærgtrafum	C
177a	þæt him gāstbona	C
180a	in mōdsefan	C
187a	æfter dēaðdæge	C
189a	swā ðā mǣlceare	C
198b	hēt him ȳðlidan	C
199b	cwæð hē gūðcyning	C
249b	nis þæt seldguma	C
285a	on hēahstede	C
288a	scearp scyldwiga	Da

317a	mid ārstafum	C	936a	wēa wīdscofen	Da
322a	heard hondlocen	Da	945a	þæt hyre ealdmetod	C
349a	wæs his mōdsefa	C	971a	tō līfwraþe	C
367a	ðīnra gegncwida	C	993b	þe þæt wīnreced	C
373a	wæs his ealdfæder	C	1007a	þǣr his līchoma	C
382a	for ārstafum	C	1012a	ymb hyra sincgyfan	C
385a	for his mōdþræce	C	1033b	þonne scyldfreca	C
388b	þæt hīe sint wilcuman	C	1062a	on ðyssum windagum	C
394b	hider wilcuman	Da	1070a	in Frēswæle	C
458a	and for ārstafum	C	1073b	æt þām lindplegan	C
460b	tō handbonan	C	1102a	ðeah hīe hira bēaggyfan	C
476b	is mīn fletwerod	C	1138b	hē tō gyrnwræce	C
479a	þone dolscaðan	C	1146a	swylce ferhðfrecan	C
551a	heard hondlocen	Da	1213a	æfter gūðsceare	C
554a	fāh fēondscaða	Da	1258a	æfter gūðceare	C
617b	æt þǣre bēorþege	C	1262a	tō ecgbanan	C
640b	ēode goldhroden	C	1311b	samod ærdæge	Da
664a	wolde wīgfruma	C	1317a	mid his handscale	C
692a	eft eardlufan	Da	1320a	æfter nēodlaðum	C
704a	þā þæt hornreced	C	1325a	mīn rūnwita	C
707a	se s[c]ynscaða	C	1325b	and mīn rǣdbora	C
710b	under misthleoþum	C	1330b	tō handbanan	C
714b	tō-þæs-þe hē wīnreced	C	1342a	sē-þe æfter sincgyfan	C
737b	hū se mānscaða	C	1351b	ōðer earmsceapen	C
738a	under fǣrgripum	C	1353a	þone on geārdagum	C
742a	bāt bānlocan	Da	1368a	þēah-þe hǣðstapa	C
766a	þæt se hearmscaþa	C	1388b	þæt bið drihtguman	C
786b	godes andsacan	Da	1403a	æfter waldswaþum	C
792a	þone cwealmcuman	C	1421a	on þām holmclife	C
793a	nē his līfdagas	C	1427a	swylce on næshleoðum	C
801b	þone synscaðan	C	1433a	of flānbogan	C
812a	þæt him se līchoma	C	1445a	sēo-ðe bāncofan	C
840a	geond wīdwegas	C	1451b	swā hine fyrndagum	C
866a	ðǣr him foldwegas	C	1480a	wes þū mundbora	C
868a	guma gilphlæden	Da	1554a	ge·wēold wīgsigor	Da
885a	æfter dēaðdæge	C	1622a	of·lēt līfdagas	Da

1635a	from þǣm holmclife	C	2130a	þāra-þe lēodfruman	C
1641a	frome fyrdhwate	Da	2144a	swā se ðēodkyning	C
1682b	godes andsaca	Da	2148a	ðā ic ðē, beorncyning	C
1695a	þurh rūnstafas	C	2176a	æfter bēahðege	C
1704a	geond wīdwegas	C	2226a	secg synbysig	Da
1712a	on tō dēaðcwalum	C	2233a	swā hȳ on geārdagum	C
1744a	sē-þe of flānbogan	C	2261a	æfter wīgfruman	C
1754a	þæt se līchoma	C	2271a	eald ūhtsceaða	Da
1768a	þæt ðec, dryhtguma	C	2273a	nacod nīðdraca	Da
1813a	and þā sīðfrome	C	2278a	swā se ðēodsceaða	C
1823a	þīnre mōdlufan	C	2311a	on hyra sincgifan	C
1841a	þē þā wordcwydas	C	2315a	lāð lyftfloga	Da
1845a	wīs wordcwida	Da	2318a	hū se gūðsceaða	C
1853b	mē þīn mōdsefa	C	2321a	hæfde landwara	C
1862a	sceal hringnaca	C	2333a	hæfde līgdraca	C
1894a	cwað þæt wilcuman	C	2335b	him ðæs gūðkyning	C
1895a	scaþan scīrhame	Da	2341b	sceolde [lǣn]daga	C
1907a	nō þǣr wegflotan	C	2344a	þēah-ðe hordwelan	C
1928a	under burhlocan	C	2346a	þæt hē þone wīdflogan	C
1948a	gyfen goldhroden	Da	2366a	fram þām hildfrecan	C
1954a	hīold hēahlufan	Da	2368a	earm ānhaga	Da
1963b	mid his hondscole	C	2391a	sē ðæs lēodhryres	C
1981a	geond þæt [heal]reced	C	2407a	sē ðæs orleges	C
1992b	ic ðæs mōdceare	C	2414a	gearo gūðfreca	Da
2012a	syððan hē mōdsefan	C	2437b	of hornbogan	C
2018b	oft hīo bēahwriðan	C	2455a	ge·syhð sorhcearig	Da
2025a	geong goldhroden	Da	2465a	on ðām feorhbonan	C
2039b	tō ðām lindplegan	C	2476a	frome fyrdhwate	Da
2042a	eald æscwiga	Da	2479a	þæt mǣgwine	C
2065b	and him wīflufan	C	2502a	tō handbonan	C
2079b	tō mūðbonan	C	2514b	gif mec se mānsceaða	C
2090a	dīor dǣdfruma	Da	2517a	hwate helmberend	Da
2093b	hū i[c ð]ām lēodsceaðan	C	2528a	þæt ic wið þone gūðflogan	C
2112a	gomel gūðwiga	Da	2561a	ðā wæs hringbogan	C
2118a	gearo gyrnwræce	Da	2563a	gōd gūðcyning	Da

2579a	þonne his ðīodcyning	C
2622b	swā his ǣrfæder	C
2639a	to ðyssum sīðfate	C
2642a	hwate helmberend	Da
2651b	þæt mīnne līchaman	C
2652a	mid mīnne goldgyfan	C
2677b	þā gēn gūðcyning	C
2688a	þā wæs þēodsceaða	C
2712a	þe him se eorðdraca	C
2718a	hū ðā stānbogan	C
2733b	næs se folccyning	C
2735a	þe mec gūðwinum	C
2747b	þæt ic ǣrwelan	C
2753a	æfter wordcwydum	C
2798a	ǣr swyltdæge	C
2827a	wyrm wōhbogen	Da
2830a	þæt se wīdfloga	C
2835a	for ðæs hildfruman	C
2846a	þæt ðā hildlatan	C
2873a	nealles folccyning	C
2877a	ic him līfwraðe	C
2893b	þǣr þæt eorlweorod	C
2896b	and eftcymes	C
2900a	nū is wilgeofa	C
2918a	þæt se byrnwiga	C
2942b	somod ǣrdæge	Da
2963a	þæt se þēodcyning	C
2970a	syððan ðēodcyning	C
3008a	þæt wē þēodcyning	C
3010a	on ādfære	C
3036b	þæt se gūðcyning	C
3040b	wæs se lēgdraca	C
3046a	hæfde eorðscrafa	C
3100a	þenden hē burhwelan	C
3152a	song sorgcearig	Da
3159b	on tȳndagum	C
3177a	of līchaman	C
	Total: 199	

LL

77b	þæt hit wearð ealgearo	C
84a	þæt se ecghete	C
230a	sē-þe holmclifu	C
486a	eal bencþelu	C
771b	þæt se wīnsele	C
820b	under fenhleoðu	C
1192b	and frēondlaþu	C
1230b	þēod ealgearo	Da
1253a	siþðan goldsele	C
1409a	stēap stānhliðo	Da
1810a	cwæð hē þone gūðwine	C
2241b	beorh eallgearo	Da
2340a	þæt him holtwudu	C
2410a	tō-þæs-ðe hē eorðsele	C
2438a	his frēawine	C
2540a	under stāncleofu	C
2840a	oððe hringsele	C
2884a	nū sceal sincþego	C
2884b	and swyrdgifu	C
2946a	wæs sīo swātswaðu	C
3112b	þæt hīe bǣlwudu	C
	Total: 21	

LX?

380b	on his mundgripe	C
443a	in þǣm gūðsele	C
482a	þæt hīe in bēorsele	C
492a	on bēorsele	C
647a	tō þǣm hēahsele	C
695a	in þǣm wīnsele	C
965a	þæt he for mundgripe	C
976a	in nīdgripe	C
1082b	on þǣm með^{e}lstede	C

1094a	on bēorsele	C
1326b	ðonne wē on orlege	C
1513a	þæt he [in] nīðsele	C
1515a	nē him for hrōfsele	C
1639a	tō þǣm goldsele	C
1938a	æfter mundgripe	C
2010a	tō ðām hringsele	C
2030a	æfter lēodhryre	C
2083a	of ðām goldsele	C
2139a	in ðām [gūð]sele	C
2515a	of eorðsele	C
2635a	in bīorsele	C
2786a	in ðām wongstede	C
3053a	þæt ðām hringsele	C
3097a	in bǣlstede	C
	Total: 24	

Problematic

851a	in fenfreoðo	C
2921b	milts úngyfeðe	Da
	milts ungýfeðe	A
3074a	næshe goldhwæte	C

F.3 Possible Suspension in a *Stānhliðo* Context

LH

103a	mære mearcstapa	D*
263a	æþele ordfruma	D*
275a	dēogol dǣdhata	D*
606a	sunne sweglwered	D*
614a	grētte goldhroden	D*
818a	burston bānlocan	D*
839a	fērdon folctogan	D*
966a	licgean līfbysig	D*
1162a	wīn of wund^{e}rfatum	D*
1212a	wyrsan wīgfrecan	D*
1231a	druncne dryhtguman	D*
1298a	rīce randwiga	D*
1339a	mihtig mānscaða	D*
1348a	micle mearcstapan	D*
1426a	sellice sǣdracan	D*
1440a	wund^{o}rlīc wǣgbora	D*
1468a	sēlran sweordfrecan	D*
1568a	fǣgne flǣschoman	D*
1678a	hārum hildfruman	D*
1793a	rōfne randwigan	D*
1969a	geongne gūðcyning	D*
2123a	frōdan fyrnwitan	D*
2462a	wongas on wīcstede	D*
2205a	hearde hild^{e}frecan	D*
2496a	wyrsan wīgfrecan	D*
2545a	sto[n]dan stānbogan	D*
2591a	ā·lǣtan lǣndagas	D*
2603a	lēoflīc lindwiga	D*
2649a	helpan hildfruman	D*
2674a	geongum gārwigan	D*
2689a	frēcne fȳrdraca	D*
2719a	ēce eorðreced	D*
2760a	ealdes ūhtflogan	D*
2811a	geongum gārwigan	D*
2825a	egeslīc eorðdraca	D*
2847a	tȳdre trēowlogan	D*
3055a	sigora sōðcyning	D*
	Total: 37	

LL

450a	mearcað mōrhopu	D*
596a	atole ecgþræce	D*
764a	flēon on fenhopu	D*
986a	hæþ^{e}nes handsporu	D*
1358a	warigeað wulfhleoþu	D*

2047a	meaht þū, mīn wine	D* (C?)
	Total: 6	

LX?

2800a	frōde feorhlege	D*

F.4 Other Suspension After a Heavy Syllable

LH

2a	þēodcyninga	Da
11b	þæt wæs gōd cyning	C
15a	þ[e] hīe ǣr drugon	C
20a	swā sceal [geong g]uma	C
23b	þonne wīg cume	C
35b	on bearm scipes	C
44b	þon þā́ dydon	C
48b	lēton holm beran	C
64b	herespēd gyfen	A2k
67a	magodriht micel	A2k
69a	medoærn micel	A2k
78b	scōp him Heort naman	C
90a	swutol sang scopes	A2k/ Da
120a	wonsceaft wera	A2k
124b	tō hām faran	C
136b	and nō mearn fore	C
146b	wæs sēo hwīl micel	C
170a	þæt wæs wræc micel	C
178b	swylc wæs þēaw hyra	C
190b	ne mihte snotᵉr hæleð	C
197a	on þā́m dæge	C
212a	on stefn stigon	C
214a	on bearm nacan	C
215b	guman ú̇t scufon	Da
223b	þā wæs sund liden	C
224b	þanon úp hraðe	C
225b	on wang stigon	C
242a	þe on land Dena	C
252a	frumcyn witan	A2k
252b	ǣr gē fýr heonan	C
253b	on land Dena	C
281b	bōt éft cuman	Da
284a	þrēanȳd þolað	A2k
284b	þenden þā́r wunað	C
288b	ge·scād witan	C
290b	þæt þis is hold weorod	C
291b	ge·wītaþ fórð beran	C
296b	oþ ðæt éft byreð	C
303b	eoforlīc scionon	A2k
319a	wið wrāð werod	C
331b	þā ðǣr wlonc hæleð	C
372b	cnihtwesende	Da
376a	hider hḗr cumen	Da
399b	ymb hine rinc manig	C
400b	sume þā́r bidon	C
406a	searonet seowed	A2k
424a	for·grand gramum	C
437a	þæt ic sweord bere	C
439b	and ymb feorh sacan	C
441b	sē-þe hine dēað nimeð	C
444b	swā hē óft dyde	C
447b	gif mec dēað nimeð	C
452b	gif mec hild nime	C
453b	þæt mīne brēost wereð	C
463b	Sūðdena folc	E
507b	ymb sund flite	C
509b	on dēop wæter	C
535b	cnihtwesende	Da
539a	hæfdon swurd nacod	C
573b	wyrd óft nereð	Da
589b	þēah þīn wit duge	C

594b	swā þū self talast	C	948b	heald fórð tela	C
599b	ac hē lust wigeð	C	953b	þū þē self hafast	C
619b	sigerōf kyning	A2k	954b	þæt þīn [dōm] lyfað	C
623b	bēaghroden cwēn	E	956b	swā hē nū gýt dyde	C
629a	wælrēow wiga	A2k	966b	būtan his līc swice	C
643a	þrȳðword sprecen	A2k	973a	fēasceaft guma	A2k
671a	þā hē him óf dyde	C	974a	nō þȳ leng leofað	C
676b	ǣr hē on bed stige	C	975b	ac hyne sār hafað	C
680b	þēah ic eal mæge	C	979a	hū him scīr metod	C
683b	ac wit on niht sculon	C	994b	goldfāg scinon	A2k
689b	and hine ýmb monig	C	996b	þāra-þe on swýlc starað	C
698b	þæt hīe fēond heora	C	1004b	sāwlberendra	Da
740a	ac hē ge·fēng hraðe	C	1009b	Healfdenes sunu	E
748b	hē on·fēng hraþe	C	1010a	wolde self cyning	C
763b	and on·weg þanon	C	1015a	medoful manig	A2k
776a	medubenc monig	A2k	1024a	be·foran beorn beran	C
783b	Norðdenum stōd	E	1034a	on·gēan gramum	C
786a	gryrelēoð galan	A2k	1039b	hēahcyninges	Da
790a	on þǽm dæge	C	1065b	gid óft wrecen	Da
798b	þā hīe ge·win drugon	C	1074b	hīe on ge·byrd hruron	C
806a	on ðǽm dæge	C	1112b	æþeling manig	A2k
817a	syndolh sweotol	A2k	1124b	wæs hira blǣd scacen	C
831b	þe hīe ǽr drugon	C	1144b	on bearm dyde	C
835b	þǽr wæs eal geador	C	1151b	ðā wæs heal roden	C
838b	gūðrinc monig	A2k	1152b	swilce Fin slægen	C
844b	on·weg þanon	C	1153b	and sēo cwēn numen	C
854a	swylce geong manig	C	1155b	eorðcyninges	Da
863b	ac þæt wæs gōd cyning	C	1174b	þū nú́ hafast	C
865a	on ge·flit faran	C	1179b	þonne ðū fórð scyle	C
873a	and on spēd wrecan	C	1192a	him wæs ful boren	C
908b	snotor ceorl monig	A2k	1210b	feorh cyninges	Da
918b	ēode scealc monig	C	1211b	and se bēah somod	C
920b	swylce self cyning	C	1218b	and ge·þēoh tela	C
939b	nū scealc hafað	C	1225b	ic þē an tela	C
944b	gyf hēo gȳt lyfað	C	1233a	druncon wīn weras	C
947a	secg bet[e]sta	Da	1238b	swā hīe oft ǽr dydon	C

1246b	wæs þēaw hyra	C
1256a	wīdcūþ werum	A2k
1278b	sunu [d]ēo[ð] wrecan	A2k
1287b	andweard scireð	A2k
1288b	heardecg togen	A2k
1289b	sīdrand manig	A2k
1292b	wolde ū́t þanon	C
1306b	þā wæs frōd cyning	C
1310b	Bēowulf fetod	A2k
1328b	swy[lc] scolde eorl wesan	C
1331b	ic ne wā́t hwæder	C
1339b	wolde hyre mǣg wrecan	C
1340a	gē féor hafað	C
1343b	nū sēo hand ligeð	C
1361b	nis þæt féor heonon	C
1366b	nō þæs frōd leofað	C
1367b	þæt þone grund wite	C
1370b	ǣr hē feorh seleð	C
1374b	þonne wind styreþ	C
1381b	swā ic ǣ́r dyde	C
1382b	gyf þū on·weg cymest	C
1385a	þæt hē his frēond wrece	C
1392b	nō hē on helm losaþ	C
1395b	ge·þyld hafa	C
1430b	hīe on·weg hruron	C
1432a	gūðhorn galan	A2k
1439b	and on næs togen	C
1457b	Hrunting nama	A2k
1458a	þæt wæs ān foran	C
1481b	gif mec hild nime	C
1485b	þonne hē on þæt sinc starað	C
1491b	oþðe mec dēað nimeð	C
1495b	ðā wæs hwīl dæges	C
1510b	sǣdēor monig	A2k
1536b	nā ymb his līf cearað	C
1541a	hēo him éft hraþe	C
1546b	wolde hire bearn wrecan	C
1575b	næs sēo ecg fracod	C
1592b	on holm wliton	C
1600a	ðā cōm nōn dæges	C
1601b	ge·wāt him hām þonon	C
1610b	sē ge·weald hafað	C
1611b	þæt is sōð metod	C
1614b	and þā hilt somod	C
1647b	on flet boren	C
1668b	ic þæt hilt þanan	C
1672a	sorhlēas swefan	A2k
1676b	swā þū ǣ́r dydest	C
1678b	on hand gyfen	C
1681a	wund°rsmiþa ge·weorc	E
1682a	gromheort guma	A2k
1688b	on ðǣm wæs ōr writen	C
1731b	hlēoburh wera	A2k
1735b	nō hine wiht dweleð	C
1738b	ac him eal worold	C
1741b	þonne se weard swefeð	C
1745b	under helm drepen	C
1749b	nallas on gylp seleð	C
1759a	secg bet[e]sta	Da
1801a	oþ-þæt hrefn blaca	C
1805b	wolde féor þanon	C
1807b	Hrunting beran	A2k
1808b	heht his sweord niman	C
1814b	ēode weorð Denum	C
1820b	wǣron hé́r tela	C
1824b	ðonne ic gȳt dyde	C
1834b	gārholt bere	A2k
1846b	þæt-ðe gār nymeð	C
1849b	and þū þīn feorh hafast	C
1858b	þe hīe ǣ́r drugon	C

1869b	snūd^{e} éft cuman	Da	2256b	feormynd swefað	A2k
1871b	ðegn bet[e]stan	Da	2263b	nē gōd hafoc	C
1885b	þæt wæs ān cyning	C	2265b	bealocwealm hafað	A2k
1891b	swā hē ǽr dyde	C	2306b	þā wæs dæg sceacen	C
1896b	sǣgēap naca	A2k	2314b	nō ðǽr āht cwices	C
1903b	ge·wāt him ón naca	C	2334b	eorðweard ðone	A2k
1920a	hēt þā úp beran	C	2343b	and se wyrm somod	C
1921b	næs him féor þanon	C	2348b	for wiht dyde	C
1923b	þǽr æt hām wunað	C	2382b	sǣcyninga	Da
1925b	bregorōf cyning	A2k	2390b	þæt wæs gōd cyning	C
1930a	nē tō gnēað gifa	C	2408b	sceolde hēan ðonon	C
1935a	þæt hire án dæges	C	2417b	nīðheard cyning	A2k
1964b	sǣwong tredan	A2k	2446b	þonne hē gyd wrece	C
1966b	hī sīð drugon	C	2453b	þonne se ān hafað	C
1989b	ofer sealt wæter	C	2457b	rīdend swefað	A2k
2007b	ūhthlem þone	A2k	2460b	sorhlēoð gæleð	A2k
2027b	and þæt rǣd talað	C	2473a	ofer wīd wæter	C
2031b	þēah sēo brȳd duge	C	2499b	þenden þis sweord þolað	C
2043b	him bið grim sefa	C	2503b	Frēscyninga	Da
2058b	oð-ðæt sǣl cymeð	C	2506b	ne wæs ecg bona	C
2060b	blōdfāg swefeð	A2k	2518b	nolde ic sweord beran	C
2062b	con him land geare	C	2530b	hwæðer sēl mæge	C
2069b	ic sceal fórð sprecan	C	2536b	oððe gūð nimeð	C
2099b	and hē hēan þonan	C	2545b	strēam út þanon	Da
2110b	rūmheort cyning	A2k	2551b	word út faran	Da
2117b	þā wæs éft hraðe	C	2588a	grundwong þone	A2k
2126b	nē on bę̄l hladan	C	2598b	ac hȳ on holt bugon	C
2152a	hēt ðā ín beran	C	2613b	Wēohstā[n] bana	A2k
2158b	Hiorogār cyning	A2k	2646b	nū is se dæg cumen	C
2174b	þrīo wicg somod	A2k	2656b	ic wāt geare	C
2180b	næs him hrēoh sefa	C	2663b	lǣst eall tela	A2k
2191a	heaðorōf cyning	A2k	2694b	þēodcyninges	Da
2196b	him wæs bām samod	C	2702b	þā gēn sylf cyning	C
2208b	hē ge·hēold tela	C	2708b	swylc sceolde secg wesan	C
2209b	wæs ðā frōd cyning	C	2727b	ðā wæs eall sceacen	C
2252b	nāh hwā sweord wege	C	2737b	hēold mín tela	C

2742b	þonne mín sceaceð	C	3028a	swā se secg hwata	C
2745b	nū se wyrm ligeð	C	3070b	þā ðæt þǽr dydon	C
2749b	þæt ic ðȳ sēft mæge	C	3073b	sē ðone wong strude	C
2754b	hringnet beran	A2k	3077a	oft sceal eorl monig	C
2762b	þǽr wæs helm monig	C	3081b	goldweard þone	A2k
2775a	him on bearm hladon	C	3106b	þonne wē ū́t cymen	C
2779b	mundbora wæs	E	3114b	nū sceal glēd fretan	C
2795a	wuldᵒrcyninge	Da	3126b	hwā þæt hord strude	C
2801b	ne mæg ic hēr leng wesan	C	3131b	dracan ēc scufun	Da
2818b	ǽr hē bǽl cure	C	3132b	lēton wēg niman	C
2858a	wolde dōm godes	C	3134b	on wǽn hladen	C
2864b	sē-ðe wyle sōð specan	C	3135b	æþeling boren	A2k
2903a	him on efn ligeð	C	3163a	hī on beorg dydon	C
2906b	Wīglāf siteð	A2k	3167b	þǽr hit nū gēn lifað	C
2912b	fyll cyninges	Da	3169a	þā ymbe hlǽw riodan	C
2913b	wæs sīo wrōht scepen	C	3172a	wordgyd wrecan	A2k
2945b	on lāst faran	C	3172b	and ymb w[er] sprecan	C
2947a	wælrǽs weora	A2k	3176b	þonne hē fórð scile	C
2956b	bēah éft þonan	A2k		Total: 329	
2957b	þā wæs ǽht boden	C			
2959a	freoðowong þone	A2k	**LL**		
2962b	on bid wrecen	C	1109b	wæs on bǽl gearu	C
2968b	ac for·geald hraðe	C	1250b	wæs sēo þēod tilu	C
2969b	wælhlem þone	A2k	2150b	ic lȳt hafo	C
2972b	ondslyht giofan	A2k	2523b	for-ðon ic mē ón hafu	C
2976b	þēah-ðe him wund hrine	C	3000b	ðæs-ðe ic [wēn] hafo	C
2980b	ðā ge·bēah cyning	C	3105b	sīe sīo bǽr gearo	C
2981b	wæs in feorh dropen	C		Total: 6	
2982b	þe his mæg wriðon	C			
2987b	and his helm somod	C	**LX?**		
3000a	wælnīð wera	A2k	530a	hwæt þū worn fela	C
3007b	nū is ofᵒst betost	C	869a	sē-ðe eal fela	C
3014b	þā sceall brond fretan	C	883a	hæfdon eal fela	C
3015b	nalles eorl wegan	C	1265b	þanon wōc fela	C
3019b	elland tredan	A2k	1525b	ðolodᵉ ǽr fela	A2k
3021b	for-ðon sceall gār wesan	C	1783b	unc sceal worn fela	C

1837b	hē mæg þǽr fela	C
2349b	for-ðon hē ǽr fela	C
2738b	nē mē swōr fela	C
3029b	hē ne lēag fela	C
	Total: 10	

Problematic

489b	and on·sǣl meoto	C
	and on sǣl[um] meot[a]	B
1187a	umb^{o}rwesendum ǣr	E
	umb^{o}rwesendum	Da
1914b	hȳðweard geara	A2k
	hȳðweard gear[w]a	A2a

F.5 Suspension Elsewhere

LH

2430a	Hrēðel cyning	C

Problematic

262a	wæs mīn fæder	A3
	wæs mīn fæd[d]er	A3
459a	ge·slōh þīn fæder	A3
	ge·slōh þīn fæd[d]er	A3
779a	þæt hit ā mid ge·méte	A3
	þæt hit á mid ge·mete	B
845a	nīða ofer·cumen	A
	nīða ofer·[w]u[nn]en	A
881a	ēam his nefan	A
	ēa[hā]m his nefan	E
954a	dǣdum ge·fremed	A
	dǣdum ge·f[ēr]ed	A
1514a	þǣr him nǣnig wæter	A3
	þǣr him nǣnig wæt^{e}r[a]	A3
1728a	hwīlum hē on lufan	A3
	hwīlum hē [lǣteð]	A3
	hwīlum hē on lu[stum]	A3
1828b	hwīlum dydon	A
	hwīlum dēdon	A
2048a	þone þīn fæder	A3
	þone þīn fæd[d]er	A3

F.6 Resolution Uncertain

***Dena* in A2a/A2k**

657a	ðrȳþærn Dena	A2k
1670a	dēaðcwealm Denigea	A2a
2035a	dryhtbearn Dena	A2k

Vowel Epenthesis: H/LL

286a	weard maþ^{e}lode	D
341a	wlanc Wed^{e}ra lēod	Db
423a	wræc Wed^{e}ra nīð	Db
1946a	þæt hīo lēodbeal^{e}wa	C
2705a	for·wrāt Wedra helm	Db
2758a	gold glit^{i}nian	D
3056b	hord op^{e}nian	D

Appendix G

Evidence for Resolution in La3amon's *Brut*

This appendix presents the verses scanned for §7.2. As explained there, I went through the first 8,000 lines of the Caligula text as edited by Brook & Leslie (1963), noting every line that ended in anything other than HX. For the HX ending, which is extremely common, I took every example in the first 100 lines of each these eight chiliads (lines 1–100, 1001–1100, 2001–2100, etc.). I pruned this corpus of lines that featured points I considered too metrically uncertain to scan confidently. The remaining corpus is divided into sections based on the shape of the final word (ignoring weak prefixes):

G.1. Verses ending in H words (single monosyllables).
G.2. Verses ending in LX words.
G.3. Verses ending in HX words.
G.4. Verses ending in LXX words.
G.5. Verses ending in HXX words.

I have not systematically considered verses ending in longer words. Within each group, verses are sorted by their *initial*: the arrangement of lifts and dips preceding (but not including) the final word. Note that *ww* stands for a long dip, with *at least* two weak syllables (potentially more), while *(w)* indicates at most a single weak syllable. *Multiple S-* refers to a verse with more than one lift before the final word (i.e. with three or more lifts in total).

G.1 Verses Ending in H

(w)Sww-

12 Iaphet ȝ Cham
18 þe fulluht broute hider in
41 alðeodisc wif
45 mid erm[ð]en at·wond
212 mid monscipe on·feng
361 ȝ cuðliche wið heom spec
363 þe Brutus me heuede on i·don
550 þa Brutus hafde mid him
583 þe Scucke hit on·feng
811 þe Brutus him hefde i·don
1204 an heorte hire wes þa bet
1480 hu leof æm ich þe
1562 ȝ leofliche hine gret
1713 ac wurse ich habbe vnder·fon
1875 [w]anne com on west
2147 ȝ Cornwale on his hond
2988 and heolden on heore hond
3090 and ȝeornen his grið
3353 þe king hine i·nom
3756 and Nennius þene sceld
37610 tiðend þat him wes sær
4049 i·ȝiuen ȝ under·fon
4136 ȝ mænen to him mi sar
4244 his bod ic wulle a·fon
4614 Claudius þat wes swa strong
4669 riht touward þere sæ
5035 Bruttes þe hit bi·wan
5175 ȝ fæire wes under·fon
5190 þat Fu[l]genes dude þus
5382 þeos word him þuhte god
5439 ne cniht neore he swa sterc
5511 ȝ Costantin hæhte þat child
5529 mid wisdome heold þis lond
5591 Octauus nom to his hond
5643 þe king wes of þan ærd
5880 þan stude he beoð for·don
5929 al Caradokes lond
5992 þreo dæies ȝ þreo niht
6041 for seoluer [ȝ] for gold
6050 of folke swiðe vnstrong
6066 bi·techen þe a þire hond
6106 wes Maximien dæd
6133 fræineden whær weoren þe king
6389 at Totteneis heo comen a lond
6438 ȝ Costanz hæhte þat child
6488 ȝ fastliche hit wið·soc
6564 to Vortigerne þer he rad
6586 þe ældest wes of heom
6590 whæt Vortiger hæfde i·don
6691 of ufele he wes wel war
6749 for Vortiger heom wes swa leof
6770 swiken he þohte þet
6795 and Vortiger nom anan
6825 hælpen me þat to don
6840 mid sweorde leggeð heom on
6887 and axede hu heo weoren i·don
6994 bliðe wes he þa þer
7017 herede þane king
7193 to walden under heore hond
7390 al Cristindom he make[de] fain
7453 Cristindom ich wulle a·uon
7455 bliþe þurh alle þing
7480 þa ampulle heo ut droh
7675 i·siȝen weoren to heom
7702 a·wræht ut of mire hond
7729 ȝ sorhful þurh alle þing
7759 þe westriht him læi
7834 wunder ane fæir
7845 selcuð me þuhte þas

7867 Vortigerne þe king
7937 King hald me forward
7943 þat water ȝe findeð anan
7950 King hald me foreward
7967 dun i þere dich
7968 nan ladluker fiht
Total: 75

wwS(w)-

15 þa he to bisne nom
29 alcne æðele mon
35 þat hire þe selre beo
36 þe wes on leoden preost
47 nefede he bern no ma
48 to þare sæ him droh
65 þe on þan londe wes
67 swo hit wolde Godd
84 for heo wes his deore bearn
89 fuhten þa heȝe men
115 þe wile þe he on liue wes
142 þat wes a selcuð bearn
162 þe he of i·cumen wes
218 vn·i·rimed folc
240 al swa þe wriht þe seið
247 habbeð heo such werc i·don
249 for he wes leoden king
252 al þes londes folc
258 al swa hit soð wæs
261 þat him best was
272 flowen haȝe men
273 þe nes noht feor from heom
283 swa heom læðest wes
307 ⁊ him þa beth i·lomp
311 þarinne weren his laðe feond
328 ⁊ swar muchelne oað
336 þe weren his sele men
348 bote þu min lare do
353 ⁊ beon mine leofe freond
372 þer he vnder rise lið
403 for heo beð vre fulle fan
412 þene king i·feng
417 al þat him bi·foren wes
437 hit is þe bet mid us
440 ȝe beo[ð] mine riche men
451 ȝeue us haihe scrud
472 ⁊ his gode hors
474 þe on his londe beoð
481 þe is best of us
484 for we beoð i·fead wi[ð] heom
488 swa us wrse bið
491 þat bið ure i·mone deað
493 heo wlleð wonien us
495 nis þar nan swa laih
528 þe mon þe i·bunden bið
539 ȝif þou libben wlt
578 me heold heo for hehne godd
597 heo wes him on heorten leof
602 þurh þine wihtful craft
611 ⁊ seo[ð]ðen he adun læi
613 þar he on slepe læi
617 þer he on slepe lai
619 þaron þu scalt wrþan sæl
641 ⁊ eeuer heo drowen west ⁊ norð
682 hit wes þa beth mid heom
688 ⁊ he heuede muchele ban
708 þar þa ferde læi
712 þe sculde þas ernde don
713 ⁊ draf þer þa wilde deor
720 þerfore ȝe sculen liggen stif
750 al swa hit s[oð] i·warð
761 ær ich ou sende sutel word
764 þer him i·wised wes

772 ⁊ þina stepa main
778 þah he hefde brunie on
824 þat he on ænne hul bi·com
847 þa þer on uest wes
850 swa bið þa wilde bær
957 þat him þe rug for·berst
1002 ⁊ þis folc bi·heold
1005 ⁊ þa wilde deor
1022 þat was an heh king
1072 þat wes an leodisc king
1135 saie me læðe mon
1222 alle hire sibbe freond
1257 þaih he bere ræd gold
1314 for heom wes heora drihten wroð
1326 wes al þis leodisc folc
1395 hefde al his wil to don
1411 nan swa seolcuð þing
1417 he wes a swiðe bisi mon
1419 þat he wið þene Wurse spæc
1470 þat þat vuel wes
1473 whulchere beo mi beste freond
1478 þer he on æðelen seat
1490 þat waes þe olde king
1497 min alre beste þein
1525 swa þu velden ært
1527 þe mon þe lutel ah
1580 hær bi mine writ rith
1600 þat wes þa bisie king
1730 þe mon þe litul ah
1767 bute ich beo þe raðer ded
1911 for hit wes widen cuð
1939 he welde þat riche hær
2057 þat was þe duȝende mon
2099 þat was þe duȝenede mon
2106 swa he hæhte slæn heom
2189 þet þu þer bi·ȝeten miht
2309 ne wha her lauerd is
2422 þat he swa i·scend wes
2477 and þer he þa sæ nom
2507 þa þe a ðas weoreld i·bær
2528 ⁊ þinne rede sceld
2545 þe weren kinges bearn
2600 ȝif heo nalden ȝernen grið
2806 þe ȝit witen ful wel
3059 and mine kene men
3136 ⁊ he hæfde a god wif
3156 þerforen wes þere quene wa
3161 þat he wes an horse bald
3245 þat wes þat fiht i·don
3291 þe him wolde ȝette beon
3402 al bi þere Humbre forð
3418 he wes þisse londes king
3466 alle heo weoren dæde her
3469 þe i·wærð þisse leodes king
3476 þes wes a swiðe hende mon
3568 wes þisses londes king
3572 þat heo mihten halden lond
3633 þerfore is min herte sær
3638 nulle ich heom noht fehten wið
3644 nele ic þe noht fehten wið
3745 þat þet sweord in bat
3749 uppen þene helm swa
3814 lette ænne drope blod
3834 alswa heo sculden to heore herre don
3844 þe ær weoren his fulle fon
3949 swa him alre laðest beo
3971 wulde þe ȝet wunnien þar
3989 hit wes cuð forðriht
4005 þat he is þus i·faren awæi
4034 i·maked an wunlic fur

4038 þat hit to þe mete com
4045 þe wes ȝeond al þeos kinges lond
4065 ꝯ mid þan stæue to·draf
4178 ꝯ alle ure goden mid him
4184 ꝯ alle ure goden mid him
4227 ꝯ nule me ȝeuen na grið
4230 þat ich wulle bi·cumen þin mon
4287 furðer þene his speres ord
4350 nes þer neouþer win ne must
4422 ꝯ let hine speken þe wið
4481 þe wes þisse londes king
4538 ꝯ al heo hit funden soð
4643 for he wes swa æht mon
4644 þat he weore his aȝen cniht
4871 þat he wes i·cume þus
4908 þeonne beo ich wið mine sune i·ued
4949 ꝯ he mihte uuel don
4981 ꝯ bihalues fleon
5062 þa he þis i·heren gon
5292 for heo weoren aðele men
5308 Ær ih wulle dæd beon
5363 þe hæfde on his chinne bærd
5408 hu he hauede þene nome i·caht
5466 ȝef he him wolden ȝifuen grið
5624 swiðe muchel folc þer
5680 þa com him uuel on
5898 ꝯ i·wrað þeos kinges freond
5913 þær wes Caradoc dæd
5923 ænne swiðe wisne mon
6123 þurh þene milde Godd
6198 ane swiðe deope dich
6253 þa wes her a strong ræd
6344 vnder him wes moni hæh dring
6347 ofte þe wurðe Godd fæin
6370 þat auere beo æi tale on
6467 alse he wolde holden run
6507 wið þene munec þa þær
6508 for nu is þi fader dæd
6554 Næi ac heo him radeð god
6555 for nu is his fader dæd
6565 whi dest þu swa muchel vnriht
6568 ne do þu him nan vnriht
6611 þat forð on his wæi ne scoc
6612 þat he an his wæi ne rad
6636 þer bi·foren wes dæd
6638 ꝯ he to þan kinge bæh
6654 for ne con ich nenne godne ræd
6668 ich wulle beon i·cleoped king
6715 for alle heo sculden æten þer
6721 þat he hæfde i·þoht ær
6738 toniht ich wulle faren awæi
6938 þat is an weoli godd
6951 for þi þat heo heom helpen mæi
6968 al hit scal i·wurðe þus
7056 ich hit wulle mid luue a·fon
7062 ȝif þu þis ȝettest me
7123 þat he to burh com
7152 Þe oðer sæið ‘Drinc hail’
7153 he hine drinkeð up
7166 heo was him an heorte leof
7195 þeruore heo hafden þe lasse ræd
7196 ꝯ ladde swiðe Cristin lif
7216 ꝯ ich æm i·uæid for þe
7231 ꝯ after þine freonden ma
7288 ꝯ after his i·ueren ma
7361 þer he sculden wurðen dæd
7425 ꝯ setten hit al a Godes hond
7479 after þes kinges dom
7487 þat heo heuede i·don þer·in
7622 ꝯ wolden þene king for·don

7637 ȝ seoððe to ane ste[de] droh
7646 ȝ wolde þene king for·do
7658 ase hit i·demed was
7705 ich þe cuðe god þing
7710 þa þe helpen scal
7822 stod a mines fader hond
7859 þat wes a selcuð mon
7899 and mine witie men
7903 hu þe i·wurðe scal
7953 þe oðer a suð half
Total: 213

wwSww-

10 þe from Drihtene com
34 þa hine to monne i·ber
37 þe he to bisne i·nom
44 þe was feondliche stor
52 ȝeon þare wintrede sæ
61 ȝ he hine mid monscipe bi·won
62 ȝ he griðliche spac
75 al his drihliche lond
79 þat wes of Tuskanne duc
80 ȝ hire monscipe bed
82 þat was widene cuð
88 þat wes feondliche strong
117 þe heo tolden for godd
134 þe on þan londe was duc
136 þe wes lauerd ȝ dux
171 seo[ð]ðen his cun hider com
177 þat is monscipe steor
178 þe him lokeden on
232 þat ich am duc ofer heom
242 heo wlleð þe freonscipe don
244 ȝ he hit wrodliche bi·heold
300 þe mihte riden oþer gan
325 þe wes wnderliche deop
381 alswa Brutus him hefde i·taiht
429 come his drihtliche folc
448 ȝ beon þere leodene king
450 ȝ þa maðmes of his lond
461 þat us is selest to don
502 we sculen leden mid us
586 þe weren his wiseste men
588 he was an hirede hæh
590 ȝ þa twelfe mid him
662 al hit stod an his hond
664 bi·neoðe þon gurdle hit þuncheð fisc
665 ne beo þa dai na swa long
687 se[ð]ðen Atenor was dea[d]
696 ȝ habben dale mid þe
730 ȝ he feondliche droh
751 Þu ert þe hexste of us
797 ȝ he ohtliche feaht
813 þa weren drihtliche men
856 on alche halue hit wes stor
896 ȝ al þat folc eode an lond
958 ȝ him grimliche heaf
988 seoððen Gurmund com in þis lond
1033 i·gon from honde to hond
1063 seoððen Humber hine bi·swac
1090 ȝ hu Humber hine bi·swac
1095 for al þat lond on him stod
1116 ȝ he heo leofliche bi·heold
1123 þe in Cornwaile wes dux
1128 þe wes in Cornwaile dux
1148 ic leide dead a þene grund
1171 for hit wes his leodene read
1176 þe he wel trowede on
1206 ȝ al folk hit wes leof
1232 þe wes þisse leodene king

1242 ⁊ i·ahnede hire al þis lond
1255 for al Brutenne wes on hire hond
1259 seoððen Locrin wes dead
1276 þat come heore drihtliche folc
1281 þat hit stod on his awene hond
1288 ⁊ him ec þa wrse i·lomp
1407 vppe leome ⁊ vppe lif
1412 a þon castle þer he set
1444 þe i Lundene stod
1451 he heold þis drihliche lond
1459 þurh þere leodene uæl
1461 bi his drihliche quen
1466 swa his aʒene lif
1474 of mine drihlichen lon[d]
1483 heore fædere þon king
1485 for min i·læfe is al on him
1487 þeou ært leouere þene mi lif
1504 forðe min ahʒene lif
1516 were him lef were him lað
1537 hit wes vuel þat he spac
1550 ⁊ næure wors þenne þa
1555 in hire bure heo a·bed
1575 hit wes widen i·cuð
1593 al þis ilka ich wulle don
1594 ⁊ þu seolf wurð al hi·sund
1604 al hiis seoluer and is gold
1617 al his drihliche leand
1645 wole dotie nou nan
1650 heo hit bluðeliche vnder·foð
1683 ⁊ mi drihliche lond
1686 he wes feire þer vnder·fon
1687 mid al his hirede he wes þer
1690 þat we mine fader habbet vnde[r]·fon
1696 for he nauyt no doð
1699 and al his drihliche folc
1721 bi al heuenliche main
1724 and neuere wurs þanne þa
1747 mid ane alpie swein
1748 ne i·cnwo hine no mon
1760 he is þi fader alse hit is riht
1764 hit wes god þet heo spæc
1787 þenne cuðe he anan
1822 þe is þe heʒest ouer us
1843 þer þu were leodene king
1884 þat hire sculuen heo was lað
1885 ⁊ bi·nom seoluen þat lif
1889 al þis drihtliche lond
1891 ale þe twa ʒere on heore heond
1898 þa vnselie mon
1907 þe wes feondliche stor
1945 her com hider taken a[n]an
1948 þat heo freten þet corn ⁊ þat græs
1954 he wes sone her deæd
2117 þe mid sorwe at·wand
2166 for al þis folc is swiðe wrað
2172 and he wiht þe othliche fæht
2197 þe þe bismar haue[ð] i·don
2338 for þu eart mihti ouer me
2369 and mid his folke he fleh
2458 al mi drihliche lond
2472 ⁊ he heo leouede alse his lif
2525 þær he hauede ha[m]es i·wald
2577 þe wes feondliche stor
2598 into castle he a·beh
2648 al þis Romanisce lond
2657 and of ferrene lond
2670 þe [i]s oure god of þisse lond
2689 for þu ært leodene king
2708 hit wes god þat he spec

2747 þer þe hulles weore mest
2749 ꝛ his broðer mid him
2989 seoððen Brennes wes deæd
2996 ich wullen seggen þe for wan
3094 and þu art læuerd oue[r] us
3097 and al mi drihtliche folc
3131 þe while þe i·laste his lif
3139 heo wes a boken wel i·taht
3168 ane chiuese him i·chæs
3175 i þan stude he hine wolde slæn
3177 i þon stude he hine sloh
3187 he nom to his a3ere hond
3254 welle æðel wes þere a mon
3449 he wes Porexus cun
3574 and he him Lundene 3æf
3584 æiðer seluer ꝛ gold
3592 and halde þat worlde in his hond
3612 ꝛ wi[ð] þon folke he spec þus
3615 and mid þæne kæisere spæc
3616 of alche gode hit is strong
3617 þer beoð duhtie men
3631 heore folc heo letten for·don
3649 for þes tidinde him wes læð
3653 þu ært swa wis and swa war
3660 and [w]e wunieð þeron
3678 and he hit wraðliche bi·heold
3747 for þa þe keisere wes swa hæh
3752 ah his brond he up a·hæf
3761 þa nefde he noht on his hond
3764 þa wes þe eorl swiðe bald
3768 weore hit flæs weore hit ban
3770 a þet com þe þestere niht
3794 i·warð særi þurh alle þing
3798 buten Nennius i·warð dæ[d]
3800 ꝛ lette hine mid golde bi·gon
3806 swiðe brad ꝛ swiðe long
3848 he wes wis and swiðe i·war
3888 ꝛ al þat þer bi·houede to
3898 to his a3ere hond
3918 on his hurte him wæs sær
3933 wes god cnih[t] þurh alle þing
3964 of his lure wes þer war
3980 of his hærme wæs wær
3994 ꝛ þus 3eddede þa
4047 seoððen þeos weoruld wes a·stald
4050 ꝛ þa sonne wes swiðe briht
4059 þet wes hærm a þen ilke dæi
4063 swiðe vuele a þane chin
4073 bute enne luttelne sceld
4076 enne stelene brond
4091 for þan slæhte þe [he] hafde i·don
4095 noþer slæ ne na a·ho
4105 in þon stude he beð for·don
4115 al þine wille he wule don
4120 3if þu his sæhtnesse wult vnder·fon
4122 oðer slæn oðer a·hon
4146 beoten hit læssingge beo
4147 þurh minne tirfulne godd
4166 hit wule þe suggen minne gult
4197 swiðe vfele i þene chin
4199 þat þe dunt him þuhte sar
4200 ꝛ mid muðe hit sweor
4204 ꝛ næuere wurs þene þa
4216 oðer slan oðer an·hon
4218 he me walden slæn oðer an·hon
4219 ꝛ walde sæhtnen him wið
4234 þurh mine tirfulne god
4240 þur[h] alle leodene að
4264 þine dædliche i·uan

4278 he wes wis and swiðe i·war
4290 þe ma3en nimen þene king
4324 þer com Iulius teon
4328 neuer wurse þene þa
4383 ⁊ wið þene cnihte he spec þus
4390 him wes wunderliche læð
4419 inne þine fehte he nam flem
4427 of þissere specche he wes wær
4438 for ich eam his mæi and his mon
4440 ⁊ let hine sæhtnie þe wið
4447 þene al his seoluer þæne al his gold
4451 þat he wel cudde þær
4453 al þine wille ic wulle don
4454 for þu me hulpe þa me wes neod
4476 þe wes his deoreste mon
4524 þurh þene halie gost
4565 ⁊ alle his broðeres mid him
4578 he hit heom leofliche 3eaf
4609 he makede stænene wal
4629 þe i·slæ3en wes þer·riht
4646 þat al his burne wes bi·swæt
4676 þat his i·fon weoren dæd
4706 ⁊ to his cnihtes seide þus
4721 ⁊ wið þan cnihten he spec þus
4803 to his a3ere hond
4846 he wolden fehten heom wið
4900 þe wes þi cudliche freond
4905 wið þine sune þu beost i·uæid
4943 a þisse londe he hulde frið
4944 alre godene mast
4950 ⁊ dude he uuel ⁊ næuere god
4991 oðer slan oðer hon
5030 þat wes his leodene hærm
5038 þat cuðe Luces þe king
5080 oðer bi hondes oðer bi fot
5109 wunede Luces þe king
5119 ⁊ i þisse londe nas na ræd
5127 ⁊ lette awæi þat vn·i·riht
5129 uppe leome ⁊ uppe lif
5132 hæfde hehliche grið
5135 ⁊ 3irden his hiredes grið
5141 ⁊ sette hit in his a3ere hond
5158 stod an his a3ere heond
5161 þe wæs wunderliche deop
5171 þe him æuere þuhte god
5235 he wes swike ful·i·wis
5246 a þire a3ere hond
5293 þat heo nalden swiken heore king
5333 þe wes i Cornwale duc
5346 ⁊ his wepnen he i·grap
5354 into Lundenne flæh
5358 þe wes cniht swiðe god
5388 þe wes Scottene king
5410 þe wes cniht swiðe god
5435 at þan hefde he bi·nom
5436 he dude his marken him on
5444 bi·tahte þan maidene an hond
5454 neuere to Rome a3en
5500 sette in Custances hond
5502 bute Coel i·warð dæd
5520 þat weore of heorten swa hærd
5552 þe his cun hæfde i·scænd
5596 þe stod an his a3ere hond
5603 3ef he mihte Octauus slæn
5618 i·won to his a3ere hond
5648 muchel æhte ⁊ lond
5668 ⁊ mid spere hine stong
5670 and muchel folc he þer of·sloh
5688 ⁊ bæd heom ræden him ræd

5704 ⁊ alle his cnihtes mid him
5726 for þeos speche him wes lað
5730 for heo i·se3en þat hit wes neod
5741 here mid mire a3ere hond
5747 in al þan londe nas na grið
5775 makede lust ⁊ þus spæc
5793 for þe cure him wes læð
5796 for þisse worde swi[ð]e fæin
5798 al swa Mauric hit bad
5848 þe wes lauerd i þa lond
5868 i þire a3ere hond
5892 i·set Brutten an hond
5906 swa þe king hæfde i·seid
5909 ⁊ sette hit on his a3ere hond
5911 swa he dude Liuieine æc
5915 buten þe Mavric i·wærð dæd
5931 þa nomen þa Frence ænne ræd
5943 þe wes þe hæhste i þis ærd
5946 of þan maidenen of þis ærd
5983 ⁊ þisne wunderliche ræm
5994 heo weoren kene ful i·wis
6005 while ma while nan
6022 heore seoluer ⁊ heore gold
6039 hæfuede on hire his wille i·don
6063 þus he cleopede him on
6099 ⁊ alle his i·ueren mid him
6122 þat heo walden bi·sechen þene king
6154 al swa bald alse an eorl
6161 i·set a cheorlene hond
6206 to þan hustinge anan
6207 moni þein moni cheorl
6209 ær þe dæi weoren a·gan
6228 þeruore inne Rome 3e beoð lað
6242 ah heo beoð ful deore a·boht
6247 stod on heore a3ere hond
6286 a þere Bruttene hond
6315 ⁊ of gode spæc swi[ð]e wel
6319 þa wes þa heolie mon
6326 þat hæ us hælpen þurh alle þing
6334 ⁊ his clærkes mid him
6346 ⁊ bæd hine bi·ðenche uppen Godd
6351 muchel ufel heo doh us
6383 ouer al Brutlondes ærd
6447 þe toward Gode wes ful god
6460 ⁊ spec wið Cadal þinne cniht
6464 ⁊ eode forð ut mid him
6482 al þis leodisce folc
6498 þe into Winchæstre lai
6513 heo wulleð makien hine king
6515 of al Brutlondes ærd
6522 ouer al Brutlondes ærd
6530 ich wulle don i þire hond
6557 of þan munstere vt lað
6562 ⁊ æfter Uortiger rad
6569 he wes 3æp ⁊ swiðe i·war
6570 ⁊ þe abbed he nom
6588 þe wes 3æp [⁊] swuðe i·war
6593 he wes of 3æpscipe war
6624 sette i Vortigeres hond
6626 of muclen vfele he wes wær
6660 na swa brad næ swa long
6663 ouer al Brutlondes ærd
6666 mine castles ⁊ mi lon[d]
6669 he wes of vfele swi[ðe] i·wær
6673 he sette an his a3ere hond
6680 al þis kinewurðe lond
6708 swa heore a3ene lif
6727 and he is 3ung ⁊ þæh strong
6756 forðriht faren we him to

6773 þe haueð i·witen al þis ærd
6781 to þere dure he wes ful wæt
6796 ȝ to hustinge hehte heom
6809 ȝ i·luued hine swa mi lif
6851 he wes heore cun ȝ heore freond
6857 he wes ræh he wes bald
6870 þene king of þis lond
6873 setten an heore a3ere hond
6874 al þat verden æfter wæi
6899 of elchen vuele he wes war
6920 of alc an vfele he wes war
6934 cniht swa muchel ne swa strong
6939 of alle þinge he is whar
6940 þat [i]s þe hæhste ouer us
6956 of ælchen vfel he wæs wær
6966 muchel seoluer ȝ gold
6996 of heore cume wes ful war
7051 oðer ane kineliche burh
7063 of ælchen vuele he wes war
7091 þe wes wunder ane strong
7095 swiðe s[m]al ȝ swiðe long
7097 he wes wunder ane long
7136 þe wes wunder ane god
7141 For þine kime ich æm uæin
7158 of alche[n] uuele he wes war
7161 ȝ lette don oðer þer·in
7169 þe in ælche gomene is ful ræh
7172 þat þe Cristine king
7174 æfne alse his a3ene lif
7184 he hire 3ef Londen ȝ Kent
7190 þa hafde Hengest hit an his hond
7211 þu ært me leof þurh alle þing
7229 of ælchen uuele he wes war
7244 oðer seoluer oðer gold
7271 we wulleð makien muchel fæht
7283 of ælc an uuele he wes wær
7311 wes swiðe kene þurh alle þing
7314 baðe a·blenden and an·hon
7341 ȝ mid his spere hine þurh·nom
7360 ȝ nauere wurs þene þa
7362 þe wes long ȝ swiðe stærc
7371 ȝ ber anne 3erd an his hond
7376 þe heom luuede þurh alle þing
7399 for heore kume he wes fæin
7400 ich æm þissere leodene king
7422 for swulche worden he wes fain
7435 ȝ hire freondene deað
7474 for hire spæche he loh
7483 ȝ þat atter þer·in
7505 buten hi3endliche ich beo dæd
7506 al mi seoluer ȝ al mi gold
7509 ȝ hældeð 3e seolf eowre lond
7521 ȝ þus he endede þar
7524 nu was Vortigerne æft king
7540 neuer wrse þan þæ
7543 þat he wel cudde þær
7603 þurh his a3ene brand
7635 þer forð·rihtes he i·wat
7656 wolde bi·tæchen heom an heond
7661 ase hit bi Lundene went
7709 muchel seoluer ȝ gold
7715 ȝ þa ferde mid him
7736 þat þe wal þe wes swa strong
7743 þat þe wal þat wes swa strong
7775 þat þe streonde hire on
7796 stunt a Vortigernes hond
7840 al of golde i·diht
7852 þe on Godes halue i·diht
7879 þurh heore cræfte kenneð anan
7925 ȝ he grimliche spæc
7944 at·foren þan kinge anon

7954 ælche deore unn·i·lich
7977 þat i·sah Vortigerne þe king
7979 ꝛ his hæfued him bi·nam
7990 ꝛ þat wunderliche fæht
Total: 408

Multiple S-

42 mid pretwrenche bi·won
126 þat Eneas heore fader hefde on hond
149 þa brude dead i·wearð
170 moni kineborene mon
229 þrelwerkes doð
320 monie þusund læs
386 þa beste quike he at·heold
406 his horn he vastliche bleu
647 þa fæie he sloh þe quike he bond
650 þat gold ꝛ pal ne dude him on
700 þer Brutaines noma nu on stond
703 Brutus i þare hauene læi
710 ꝛ greten þes londes king
715 þes kinges sonde of þat eard
727 þa kinges stiward of þat eard
874 þa Corineus of wode com
904 þa heore alre lauerd wes
1047 fower and twenti winter on his hond
1133 ꝛ laðelich him lokede on
1190 ah his lauerdes heste to don
1203 nes feirure child nan
1254 at Cristeschirche heo falleð i þare sæ
1271 þe sunen duden vuelne ræd
1371 wa wes Lumbardisce folc þes
1381 sixti winter he wes heore king
1397 þat þe king dead lai
1449 þe Leil sune þes riche kinges wes
1519 hu deore þe beo lif min
1887 an Morgan ꝛ Cunedagies heond
1890 Morgan hauede norð ꝛ est
1894 Cunedagies he hauede moni god hus
1913 þat Morgan is mæi ferde þus
1937 þat Cunedagius deæd læi
1951 þat Riwald kinge i·werð dea[d]
1957 he wes fif ȝere god king
2121 þe guldene crune dude him on
2126 hæfde grið alswa þe king sulf
2127 ȝef slaht oþer þeofðe hæfde i·don
2415 þa leide þa king heom laȝen on
2465 þeo Brennes þis mæide nom
2987 wel wes Romanisce folc þæs
3071 and Gurguint Denemarkene king of·sloh
3119 seoðden Noes flod hit hauede ouer·gan
3135 clæne mon and god king
3173 kene and custi muchel and long
3193 þe king þene duc ouer·com
3243 and þa hilt on his hand bræc
3398 þe king in þære ture læi
3461 þat þe king deæd læi
3513 his hæ[d] wes swulc swa beoð gold wir
3532 abuten þe burh of Lundene al
3712 Norð Walene king
3721 þe axede lon-gauel her
3754 ꝛ þat sweord a ðene scelde bat
3809 inne Rome Crocia Mors
3988 an heorte he hafde sorȝe ꝛ sar
4000 [bi] an eorl swicful ꝛ bald

4085 þat hond him durste leggen on
4114 King Androgeus ȝeornneð þi grið
4215 to þolien his hirdes dom
4495 þe Lud his fader hafde an hond
4532 wes god mon þurh alle þing
4613 þe wes Bruttene king her
4630 ⁊ his gold i·leired bord
4649 þes kinges breosten he to·bræc
4653 þat his broðer i·slæȝe wes þus
4674 ⁊ Hamun mid heorsen to·droh
4753 his dohter to quene vnder·fon
4818 bute Claudius inne Rome wes dæd
4821 þat Gloi wes swiðe god cniht
4855 ⁊ æt Doure he þohte nimen lond
4936 he wes clærc ⁊ god cniht
4938 for þe king his fader wes dæd
4961 þere he Rodric king fond
5024 god grið ȝeo[n]d his lond
5026 þat þe king dæd læi
5057 ⁊ Cristes laȝen vnder·fon
5110 þat þe king dæd læi
5227 þat Basian wes Bruttene king
5277 þritti þusend ful·i·wis
5315 a Carrais aȝere hond
5323 wes wis ⁊ strong mon
5448 on bocken heo cuðe godne cræft
5492 ⁊ þe king wes wunderliche seoc
5493 þe king swiðe seoc lai
5514 Godes mildce him wes neh
5523 þe wæs leof to deme riht
5527 þat Custance þe king i·wærð dæd
5592 in Rome þer he wunede in
5593 his folc i·slaȝen and i·hon
5627 ⁊ Octaues folc nam flem
5728 of al þat Conan eorl spæc
5808 hit þuhte Bruttes i·don wel
5822 to makiene riche mon
5834 for dæd wes Octaues þe king
6019 þat is deore lauerd min
6082 inne Rome wes hæh mon
6093 Maximien þe riche king
6151 þat þe luðere king wes dæd
6199 ænne strongne stanene wal
6218 þe riche cniht and seide þus
6373 þat Aldroein king hit vnder·stod
6405 wæpmonnes claðes duden heom on
6539 and þa blake claðes dude him on
6864 god cniht ⁊ swiðe i·war
6942 an hæh godd in ure lon[d]
6975 heore Sæxisce cnihtes wel i·don
7079 to stonden a mire aȝere hond
7083 hæðene monne habbe bi·tæht
7087 to sechen ænne bræ[d]ne fæld
7180 þer þe king þat maide [n]o[m]
7298 ⁊ þa boc-i·læred men
7309 Cristine king þer
7381 wes duhti mon þurh alle þing
7385 riche king wuneden her
7411 his rihte ȝif Godd hit an
7463 þes kinges deoreste win
7513 þer Saxisce men wulleð cumen a lond
7516 dæ[d] i·warð þe gode king
7529 þat dead is Vortimer þe king
7744 ⁊ þe king his swinc læs
7800 ⁊ his plaȝe-i·ueren mid him
7811 to Vortigernes kinges muð

Total: 123

ww-

46 þe was mid him i·sund
1982 into þisse lond
5353 into þere burh
5876 ȝif ich hit mæi i·fo
7146 þat ær com her
7188 and seoðden he þurh his cun
7469 uor þe ich am swiðe uæin
Total: 7

(w)S(w)-

90 þar Turnus feol
2354 to Belin king
Total: 2

G.2 Verses Ending in LX

(w)Sww-

38 mid teone bi·wonen
39 þa leoden of·slawen
356 toniht þu scalt faren
431 blisse wes on daie
644 þa kenneste þa weoren o þon dawen
690 þat Brutus wes þider i·comen
1828 on ueste it bi[ð] i·wreken
1840 to habben on fore
1848 efter þi[ne] daie
2451 mid sohfeste huȝe
2562 sulkuðe a þan dawen
3238 and ræsde o þene stede
4011 for wurðscipe ich habbe i·biden
4702 mid wunderliche here
4712 ⁊ leopen on heore steden
5223 þes wes a sellich gume
5616 his ferde wes al i·scipen
5893 bi·tæche heom name
5950 wurðscipe habbe he þer·fore
5965 þe Adionard hafde i·numen
5978 twelue þer weoren for·loren
6243 mid wandreðe ⁊ mid care
6444 a child wes wel i·coren
6648 neowenliche wule hider uaren
6881 to londe heo weoren i·cummen
6999 Vortigene to ouer·cumen
7041 þurh swicfulle laȝen
7210 leouede a þan dæȝen
7243 hiȝenliche him to cume
7546 swa fader sculde to his sune
7827 wha streonede hine
7940 staðel habbeoð i·numen
Total: 31

wwS(w)-

58 ȝend þat wide water
121 þe wes i kinges stude
163 ⁊ his fader of·slawen
217 þa he into þane castlen dude
276 al he to·drof þes kinges here
321 þat wes for his monne lure
359 þat þene king bi·witeð
587 þa weren on þan heðen dawen
865 ⁊ into þane castle dude
872 þer wes balu muchel
920 þer heo hurtes duden
924 ⁊ þa eotendes fluȝen
961 þat his ban to·cluuen
1000 wes þat folc swa muchel
1588 oðer bi·ȝete mæie
2163 þat þu wult beon for·loren
2522 ⁊ nu þu ært sel i·cumen
2653 þe i þissere burh wuneð

2834 þat heo come to Rome buri
3183 and monie burstes dude
3190 al bi lihte dæie
3328 þe dude heom wel to witen
3475 nouðer god ne ufel
3757 ne mihte he þat sweord ut dra3en
4372 for he wes his bro[ð]er sune
5240 ⁊ habbeoð alle his men i·sla3en
5245 ⁊ senden me twælf scipen
5510 ⁊ 3euen him his fader nome
5650 oðer mid steles bite
5665 þa wolde þe king faren
5734 þe is a swiðe wis gume
5979 ⁊ forð mid þere sæ i·liðen
6213 swa heo sculden forð faren
6252 ⁊ habbeð alle godne dæie
6437 wel neh his fader nome
6661 3if þær bið to lute gumen
6762 ⁊ we seolf hired haben
6778 þat scal beon eowre laste kare
6833 nes þer neowðer sceld ne spære
7130 þa wes heom þa bet i·loten
7185 þe weoren swiðe hende gumen
7654 ne wið nenne freond speken
7771 þerfore þu scalt habben grome
7772 ⁊ þu ært of noht i·cumen

Total: 44

wwSww-

125 þe wes Lauine sune
148 þat þe cnaue wes i·boren
199 þe wes under wedlac i·boren
378 for he wes his leodene swike
562 buten westi3e pæ[ð]es
574 an are hæitnesse nome
621 þar is wilderne muchel
645 þer weore feondes to feole
965 þat þat weos Geomagoges lupe
986 þurh heora sotliche cure
1007 ⁊ þene leofliche wode
1057 þat æfter him Locres wes i·cleped
1425 an ære hæhtnesse nome
1548 þe ich æm waldinge ouer
1757 for al is lond is him bi·nomen
1792 ⁊ is fæirliche cume
1793 buten he beo neowene i·cume
1967 Ær ich þe slæ mid mine spere
2202 After eore rade ich wulle færen
2234 nuste noht of his fære
2275 ⁊ þa quene heo i·gripen
2307 into whuche londe heo beoð i·cume
2825 þat he nas wod on his la3e
2910 ure frenden to scare
3037 wellen æðele wes þe gume
3487 þe wes Oæines sune
3666 and of anne kunne we beoð i·cumen
3771 mid alle þan Romanisce here
3780 ⁊ of mære he hæfde kare
3820 ⁊ for þi weoren fæin of his scome
3884 ⁊ mid þan feo sculden faren
3925 wes a Lundene mid his hære
3950 ⁊ al his Romanisce here
3991 wes from þissen londe i·faren
4118 of þine broðer he is i·cumen
4140 mid al his Romanisce here
4182 þe heo weoren wældinde ouer
4271 mid his Romanisce here
4318 þer com Androgeus faren

4377 ⁊ wið þon Romanisce here
4400 mid his Romanisce here
4446 mid his Romanisce here
4471 of þære arche weoren i·cumen
4522 anes maidenes sune
4554 ⁊ þa writen me beoð to i·cume
4590 þe of Rome weore hider i·cumen
4605 ⁊ al his Romanisce here
4622 ⁊ al þan Romanisce here
4665 þat heo neoren i·slæȝen oþer i·nomen
4688 mid alle his Romanisce here
4694 mid al his Romanisce here
4729 at mire heorte ic habbe grome
4794 wel wes Claudiene þer·foren
5032 þe wes Bruttene aðel
5085 a þes Helindes nomen
5113 seoððen ure Drihte wes i·boren
5121 inne Rome he wes i·bore
5234 ⁊ wið þan Romanisce here
5237 ba bi worden ⁊ bi writen
5271 þe his lond hadde bi·boȝen
5652 mucle þe lasse weoren þi kare
5717 ⁊ he wes Leonines sune
5784 ⁊ inne Rome he wuneð
5795 for nu tomarwen ich wulle faren
5891 ⁊ heo stude habbeð i·numen
6143 þer he burh hafueð i·chosen
6203 þa næfde Bruttes nane kare
6216 ⁊ ælc his stude hafde i·nomen
6333 an heore liue swulche care
6358 þa heo bi·læfden an ure daȝen
6547 ⁊ hine gretten þurh Gode
6633 hu þes swiken him gon uaren
6645 of oðere londen alse hit is i·wune
6826 ⁊ forð·riht ich wulle uaren
6880 swiðe selcuðe gumen
6947 an ure ælderne dæȝen
6949 and heom wurðscipe duden
7106 næueden þæ burh þene nome
7112 muchele æhtene scipen
7179 þe stoden an hæð[ne] dæȝen
7219 mid wurðscipe muchen
7278 a·fo hæðene laȝen
7285 he is mi fader ⁊ ich his sune
7307 þe to þan hustinge wes i·cumen
7414 hire lauerdes quide
7502 þa wes þe king swiðe un·trumed
7655 uppen halidom þat wes i·coren
7766 imong childrene plæȝe
7854 hu he to worulde is i·cume
7913 ich wes i·scæpen him to bone
7998 ⁊ heore feondliche gripen

Total: 89

Multiple S-

193 ah his moder wes of Troien i·boren
202 þurh staðele his fader ȝefe
3435 of Peredures kunne i·cume
3694 and wrað he ha[f]de þis lon[d] i·numen
3696 þat hauen of Douere he hauede i·nu[m]en
4160 ⁊ þi folke i·slaȝen an i·nomen
4195 he wes his hæluesuster sune
4272 and þa hauene at Doure hafde i·nomen
4445 i·sund of Brutlonde faren
4515 ⁊ of Lud kinge i·cume
5320 ⁊ Basian þene king of·slæȝen
5633 ⁊ Traheres men bi·cumen

5756 of hæh3e cunne þu ært i·cumen
5967 seouen and twenti scepen
5993 tweien eorles i·uaren
6117 hou þe king þis lond for·dude
6201 þe vtla3en to londen cumen
6387 ah of Frensce monnen he hæfde kare
6995 a þas hælf þere Humbre, heo weoren i·cume
7110 Hengestes wif mid hire scipen
7296 þat is Crist Godes sune
7387 ⁊ tahte þan folke Godes læ3e
7511 Hengest eow wul makien kare
7530 for dæd is Fortimer mi sune
7839 þa fæireste þing þat wes i·boren

Total: 25

ww-

4412 þer he wes i þon here
5138 he heom sette bi·neoðen
6613 don þer þa mis·bode
7813 wes mid hire þer i·cumen
7884 ⁊ ich æm to þe i·cumen
7901 ⁊ do to mine lime
7974 ⁊ seoðden he wes bi·neoðen

Total: 7

(w)S(w)-

Total: 0

G.3 Verses Ending in HX

(w)Sww-

1 La3amon wes i·hoten
2 liðe him beo drihten
4 sel þar him þuhte
8 ⁊ wonene heo comen
11 quic þat he funde
21 þe wel couþe writen
25 liþe him beo drihten
28 þrumde to are
32 segge to·sumne
40 of Menelaus quene
49 þe fulede þan duke
51 he guðliche fulde
64 þar Rome nou stondeð
70 ⁊ mare him bi·heyte
71 siden ⁊ widen
74 to habben to wife
76 þe sarure was his heorte
78 ⁊ wunsum hire monnen
81 to hei3en are quene
83 3ef Lauine his douter
85 ⁊ soruful on his mode
87 mid teonen he wes i·drefe[d]
91 his monscipe wes þe lasse
92 leofliche to wife
98 wel þat he hire uþe
99 mid wrðscipe to welden
100 his freonden hit of·þuhten
1001 of folke swiþe hende
1013 riche ane burhe
1017 Troye þe Newe
1019 longe þer·after
1031 ⁊ Lundres heo hehten
1036 þurh warf of þon folke
1041 liðen heom bi·tweonen
1051 mid muchelure blisse
1054 Locrin wes i·haten
1056 stif he wes on þonke
1059 þat Cambrie wes i·haten

1069 þa luueden heom þeos leoden
1070 seouentene winter
1071 sone þer·æfter
1074 his þeines weoren kene
1082 kempen þer feollen
1085 i·slawen in þon fehte
1087 flu3en of þan londe
1088 to Locrine þon stronge
1089 sorhfulle spelles
1094 mid hæ3ere strengðe
1098 comen heom to·3eines
1099 wane wes on folke
1100 ⁊ Bruttus weoren bliðe
2003 mid sexe hine to snæde
2009 monschipe on leode
2026 to a3en þas riche
2031 þe sel wes on eorðe
2032 to feahten he wes mære
2040 he felde heom to his foten
2043 þe reh wes to fehte
2045 to sibbe and to some
2046 swiken þat heo nolden
2048 to Cornwale his eærde
2050 he scrað to þisse londe
2051 þat wæl wes þe more
2052 þis floc heo hær slowe
2053 tuones heo for·barnden
2054 mid harmen þan mesten
2063 þe grið wulle halden
2066 for seoluer ⁊ for golde
2073 þe Bruttes come hær liðen
2076 ⁊ hardeliche fuhten
2077 falewede nebbes
2078 i·fayed mid blode
2080 wes feondliche kene
2086 to wi[3]e alre hardest
2089 sceldes þa brade
3001 of Romanisce ende
3003 legiuns i·haten
3006 of weorren heo weoren wise
3019 þe strengeste of al þe tune
3024 leoueden hine swiðe
3031 of golde and of 3imme
3040 god mid þon bezste
3043 ne gauel of þon londe
3046 ⁊ 3ærekede ferde
3049 sel hit him þuhte
3053 mid godene i·wille
3054 mid gromiende speche
3063 ⁊ berne[ð] heore halles
3064 ⁊ swaleð heore bures
3068 mid hæh3ere strengðe
3070 mid godliche strengðe
3072 he felden to þan grunde
3075 and æðes him sworen
3082 þe schipe wel a·fulle[d]
4002 liggen to·swungen
4016 ⁊ bonnien his ferden
4018 and græiðen heore i·weden
4021 cnihtes ⁊ sweines
4032 i·boned mid golde
4033 hæhliche on hæfde
4039 selcuðe spelles
4051 i·scængte mid beore
4053 mid scæftes ⁊ mid sceldes
4055 pliht com on ueste
4057 prute heo weoren beien
4058 Æueling þe oðer
4061 mid sceldes to scurmen
4064 cnihtes come riden
4077 mid grimliche lechen
4084 his sweord he bar on honde

4087 i·cud h[it] wes him sone
4090 his mæi to þon kinge
4097 heh vnder þon kinge
5003 heo repen heo meowen
5006 mid græi[ð]lichen worden
5008 ȝeue swiðe deore
5009 to habben to wiue
5011 heokerliche heom þuhte
5012 ⁊ fleon of heore londe
5013 þa þinges þe heo ȝernden
5025 his leoden weoren bliðe
5027 Coil wes i·haten
5031 his lond he huld a blisse
5042 soððere wordes
5046 þe Petrus dude in Rome
5049 Luces þon kinge
5054 ⁊ feire hine gon greten
5058 ⁊ luuien his drihte
5059 þe wuneden inne þissere þeoden
5064 þa biscopes forð wenden
5078 wel mid þan bezsten
5084 ⁊ stureden heom·seoluen
5087 þan folken to dihten
5088 þat clærcscipe to rihten
5092 ⁊ lond þerto leide
5093 ⁊ freoden alle þe chirchen
6001 na lengere at·stonde
6006 sellic heom þuhten a þissen liue
6010 wið Malgan his i·uere
6012 faren we heom æfter
6013 þe gode beon to fihten
6016 uaren to summe londe
6020 bi·winnen hine ⁊ his cnihtes
6023 ⁊ ȝeolpen for þere winne
6029 a·wald to þan deðe
6031 ⁊ niȝene heo i·uengen
6032 ferden to þan londe
6038 ⁊ ladde heo to his bedde
6040 to makien to heore
6045 mid reowðe þan mæste
6051 i·wenden into Scotten
6052 ⁊ herȝeden ⁊ barnden
6057 ⁊ senden touward Rome
6062 Gracien þene hende
6070 mid griðfulle worden
6072 ⁊ halden þe for lauerd
6085 i·dæled from þen oðer
6088 to aðelen þan folke
6098 ⁊ Maximien heo sloȝen
7001 þat Hængest wes þere
7005 feollen þa fæie
7014 stod a þan ilke
7022 ⁊ fæire hine gon greten
7029 swa Henges hit wolde
7030 cnihten alre fæirest
7033 hæhst of þine cnihten
7035 heo hatieð þe swiðe
7037 ⁊ spilieð mid runen
7042 ⁊ wræken heore broðer
7043 ⁊ slæn þine leoden
7044 driuen ut of londe
7050 þa gode beoð to fihte
7055 bi·clused inne castle
7057 senden after mine wiue
7061 fulliche at·stonde
7065 þan ȝungen ⁊ þan olden
7068 ⁊ wurðliche scruden
7073 cnihten alre hendest
7076 sende after mine wiue
7078 þa bezste of mine cunne

7081 a·midden ane ualde
7082 þe hæne ne þe riche
7090 bi·ȝite to his neode
7092 þe wel cuðe a craften
Total: 185

wwS(w)-

5 þer he bock radde
6 ⁊ on his mern þonke
16 þa makede Seint Beda
17 þe makede Seinte Albin
24 ⁊ þa leaf wende
33 þa hine for[ð] brouhte
50 þe he to þare sæ brouhte
1018 whone he i·comen weore
1021 hit i·werð seo[ð]ðen
1040 þat weoren lawen gode
1052 hi togadere comen
1064 i þon norð ende
1084 þurh wode burȝe
2001 þus hire sune murðde
2006 þa heore sone a·cualde
2020 ⁊ heom ne[ð]ðer sætten
2028 and of gode londe
2033 ⁊ he wes ȝeua custi
2038 sulch hit an liun were
2082 hauede swuðe gode cnihtes
2084 wat he don mihte
2088 þe bi þisse walle ligge[ð]
2090 alse we of heoren weoren
2100 swa his word tahte
3007 alle leode sorwen
3029 for þæs kinges dæðe
3035 for he wes here dure læuerd
3048 ⁊ fram þan londe hælde
3060 and al þis lond bearneð
3066 alse heo duden Belin kinge
3067 swa þæ king hæhte
4010 þe i sæ i·drunken
4014 to mine goden halden
4025 on ælches cunnes wise
4070 þat him wes swa i·lumpen
4072 wæt he don mihte
4078 þa wes his hurte æðe
4092 he hine flæme wolde
5004 þa nomen heo twælf i·ueren
5005 þat heo to þisse londe comen
5014 ⁊ heore wæi forð·wende
5020 þa þer wuneden longe
5028 þes wes stið an þonke
5050 of þan Lauerd Criste
5055 þat him god uðe
5072 þe him buȝen wolden
5081 inne swærte fure
6004 ⁊ i·seȝen þat weder stronge
6007 þa ȝeond þa sæ weolken
6036 inne sæ for·radde
6037 þa scolden beon quene
6043 in þere sæ deope
6086 into Puille londe
6090 alle gaderen værde
7020 what he don mihte
7028 þat ich wel leare
7036 ȝif heo hit dursten cuðe
7045 þer heo somned sitteð
7088 on his feire hude
7089 in enne fæire uelde
7093 ⁊ a bord leide
7094 alse he schæren wolde
7098 muche del of londe
Total: 63

wwSww-

77	seþen heo wes leodena quene
95	⁊ þa leodene bi·wnnen
1009	þat him leof was on heorten
1058	þat wes þe midleste broðer
1086	dude Humber þe stronge
2015	þeah hit weren his broðer
2081	⁊ swuðe stær[c] ⁊ swuþe longe
3015	to þan blisfulle kinge
3052	þe his fader hauede an honde
4012	mid alle his Romanisce leode
4023	⁊ to Lundene heo comen
5053	of his leofuste monnen
5076	þe þa heðene hafden i·timbrid
5098	þa ferden þa biscopes to Rome
6044	⁊ to haðenescipe token
7018	þat þe king wes swiðe bliðe
7031	þine monscipe i·hæȝed
7086	to his aȝene londe
	Total: 18

Multiple S-

96	mid starke ston walle
1014	mid hæȝe stan walle
1035	þa on Brutus dæi stode
1037	þa Neowe Troie was i·haten
1050	in Newe Troye þere burhȝe
3018	þe burh he leoue[de] swiðe
3077	swa Gudlac king bi·hehte
4013	þa burh ich luuie swuðe
4040	twa hundred cokes
5017	Gille Caor i·haten
5048	þe mid Godde hah weoren
5099	þat folc a Godes heonde
6024	fiftene scipen gode
	Total: 13

ww-

60	þat him was i·queme
1004	þat weoren swiðe mære
1015	þa wes he swiðe mare
1026	æfter þone kinge
1092	⁊ al heora leoden
2034	he haueda on his moda
2062	ȝend alle mine londe
2094	þat þeo beon heore i·feren
3023	in alre blisse
3051	æfter his i·wille
3056	ȝif he wulle libbe
3058	wher beoð mine sweines
3079	aȝæn into þisse londe
3083	swiðe i·bone
3096	æftere þine i·wille
4004	me to bi·swiken
4024	[al] swa hit weoren i Rome
4043	⁊ al swa feole hinden
4099	⁊ þer he hit scal habben
5007	⁊ alle i·sunde
5044	comen ut of Rome
5061	þat weore alswa bliðe
5065	into þissen londe
5090	ase þerto mihte semen
5097	swa hit weolde drihten
6011	⁊ after heom bi·liue
6027	what hit beon mahte
6042	heo þer of·sloȝen
6054	ouer þere Humber
6059	whet heo duden here
6071	after þine willen
6077	into þissen londe
6083	in ane castle
6095	þa comen þa uerden
7003	þe þider comen mid Horse

7015	cumen i þan londes
7052	þa while þa ich libbe
7075	æfter þine ræde
7077	þe me is swa deore
	Total: 39

(w)S(w)-

7	þa æðelæn tellen
9	ærest ahten
23	þes heȝes kinges
4036	aððeles madmes
4080	niðer ba heolden
5083	þurh Godes mihten
6076	gumene ælder
7010	Hors ȝ Hængest
7026	deorne runen
7047	þas aðele Bruttes
7084	swa Hengest ȝirnde
	Total: 11

G.4 Verses Ending in LXX

(w)Sww-

3	at æðelen are chirechen
27	sette to·gadere
59	redes him trokeden
94	ȝ freoliche loueden
120	þe Feond hine ferede
131	mid darnscipe he heo luuede
152	ȝ þeweas hit luuede
237	lengre i·þolien
246	mid þræte he spilede
313	ȝ ræmden to·gadere
413	heihliche he cleopede
455	to faren þe to wonien
480	king þat we makien
511	beine to·gadere
532	ȝ freonscipe makien
554	tuhten from hauene
575	þe Deouel heo luuede
906	þe Wrse hine luuede
911	þat Brutus ȝ his duȝeðe
919	treon swiðe muchele
939	banes þer crakeden
980	Brutuns heom cleopede
992	ȝ brouhten heom þer neoðere
1003	feire ȝ muchele
1046	ȝ rædes heo luueden
1066	Albanie hit clepede
1075	ȝ leodene bi·swikene
1136	seorwe þe beoð ȝeueðe
1351	þa hæȝe weoren i·borene
1429	wintres ne sumeres
1467	ȝ wakede an aðelan
1526	men þe wllet luuien
1639	of æðelene hire fædere
1656	to quecchen to cuchene
1685	for rædes him trukeden
1772	to leuene mine fadere
1801	mid soðere stefuene
1805	feuwerti daȝene
1978	ȝ hæhliche hine clepede
2068	þe beiene beoh for·sworene
2136	[wa] wes his duȝeðe
2295	sære him gromede
2410	Fosse heo clupeden
2443	his hap wes þe betere
2444	Brennes cuðe an hauekes
2468	and Brennes hauede his duweðe
2520	i·drecched þe neuede
2546	freondscipe makeden
2582	bei[ene] to·gaderes

2604 beiene to·gaderes
2739 beiene weoren i·farenne
2785 ȝ summe to·driuene
2873 beiene to·gadere
2890 remden heom uuenen
2895 balu eow is ȝeueðe
3028 sari wes his du[ȝ]eðe
3103 bi wilde þisse watere
3126 and vuele heo weoren i·gærede
3132 seorhful wes his duȝeðe
3172 þurh kenschipe muchele
3239 ban and þa senuwen
3271 gærsumme muchele
3283 and sturne wið þa dusie
3371 i·liðenned to·gadere
3427 þe Wurse hine leouede
3439 his þeode wes þæ betere
3479 þat wifmen hine luueden
3490 of fiðele ȝ of coriun
3506 his leode hine hateden
3526 for rædes he luuede
3545 ȝ Lundene heo cleopeden
3738 buȝen heom to·gaderes
3787 þe king mid his duȝeðe
3873 ȝ Oðeres heo cleopede
3886 wunderliche muchele
3887 ȝ sette heo to hauene
3935 ȝ luueliche spilede
3986 of Cesares duhȝeðe
4020 blisse to makien
4069 balu þe scal beon ȝifueðe
4133 i compe hine werien
4189 ueire i·gerede
4201 dæd sculde þolien
4364 for dæð þu scalt þolien
4460 ȝ wurðscipen muchele
4592 mid grimme his gomene
4663 feondes heom uereden
4829 bitterest alre baluwen
4920 duȝeþen heom gereden
5002 þat lond wes swiðe æðele
5037 Bruttes hine luueden
5060 þat tiðende swiðe murie
5215 ȝ Basian heo luueden
5291 king me wulleð makien
5367 go[d]liche werede
5375 ȝ lude gon cleopien
5403 at grunde was bi·buried
5532 þe Wurse hine luuede
5733 wurhscipe muchele
5846 wunder ane monie
5858 duȝeðen heom gereden
5883 Brutlond to witene
5984 mid hæhȝere steuene
6035 swa wræcchelichen a·toȝene
6100 ȝ keiser hine makede
6140 quickere stæuene
6153 sorȝen heom weoren ȝiueðen
6259 riden toward scipene
6435 Costantin hæfuede
6696 swa Fortiger hoȝede
6894 hæhliche spilede
7099 dic swiðe muchele
7186 Passcent ȝ Katiger
7262 mid sorhfule steuene
7303 Pascent ȝ Katiger
7318 wintres ȝ sumeres
7334 Pascent ȝ Categer
7401 mi broðer hatte Catimer
7410 ȝ hæðenescipe hatien
7493 stelen ut of buruwe

7548 unriht he wolde scunien
7594 cnihten alre swikelest
7609 cnihtene swikelæst
7611 ȝ nænne ne sparieð
7732 ȝ sende after witien
7914 Ioram þine witie
7923 Ioram þe witie
7948 wintres ȝ summeres
7999 þa sunde to cumene
Total: 129

wwS(w)-

144 ȝ þene deað þolien
319 of heom fael makien
501 ȝif we ræd luuieð
639 þe heom wel ferede
744 þer he bi sæ wonede
749 þer he lai bi hauene
782 ȝ þas word cleopede
783 þa þe mid honden smeo[ð]ðede
790 wi wolt þu fleam makian
826 þat he wolde þar castel makian
837 ȝ noðelas heo stal makeden
899 þe þat folc makode
1245 in ane deope watere
1246 ȝ þer heo deað þoleden
1294 werfore he deð þolede
1554 for hire fader heo scunede
2019 þe haueden ferden muchele
2131 he sculde dom þolien
2595 ȝ þis wel bi·leouede
2610 þe heore læwen leoueden
2706 þat heo i·seid haueden
2748 i þon weie narewe
2843 þe heore ferde makede
2992 ȝ anne burh makede
3221 þer þe feond wunede
3229 þat þe feond wonede
3302 he hine vncuð makede
3428 hine to deaðe hateden
3470 and seo[ðð]en he dæd þolede
3496 ȝ æuere he gomen luueden
3622 þer heo teone þoleden
4062 and seoððe pliht makeden
4172 þer him wes balu ȝeueðe
4177 ȝ þer lof makien
4183 we gunnen lof makien
4284 into ane wude muchele
4310 ȝ þene dune muchelne
4365 ȝ mid sceome muchele
4984 heore flæm makeden
4986 þer heo heærm þoleden
5112 þene king bureden
5414 alle Brut luueden
5998 þer heo leoðe hafueden
6000 þer he scaðe makede
6002 þer heo fiht þoleden
6008 ȝ þat weder leoðede
6055 and hene lond makeden
6274 ȝ þene wal weoreden
6729 ich sal laȝe þolien
6810 nænne ræd luuien
6868 ȝ his heorte gromede
7144 þe þat maide spilede
7157 heo beoð i·halden aðele
7547 he wolde on sele wunien
7567 wolde i·seon þas duȝeðe
7651 oðer ælles him is balu ȝiueðe
7779 þeruore dæd þolien
7849 þisne cnaue ich hæfuede
7864 þar þe king wunede
7989 þe þene dune makeden

7997 þe þene dune makeden
Total: 61

wwSww-

1404 he wes sturne þon dusien
2421 and his quene þe he leouede
2820 þa þe wæne heom wes ȝeueðe
2948 here hæp wes þe lættere
2993 uppen Uske þan wætere
3009 inne Wales heo wuneden
3107 þine monscipe herien
3152 þe me Mærcie cleopede
3305 þer he hun[t]ede on comelan
3703 and þas leoden him hereden
7670 heore aðeleste ȝuȝeðe
7731 whænne Hengest come an·uuenan
Total: 12

Multiple S-

154 ⁊ feiesið makede
1238 Locrin deað þolede
51998 he sarne dæd þolede
7127 gomen men gunnen cleopien
Total: 4

ww-

72 noþeles heo hit þolede
227 þe we beoð of i·comene
1625 þe while þe he leouede
1629 þe while þe he leouede
1758 touward him for·sworene
2177 nulle we þe trukien
2274 þa wile þa ich liouie
3195 and al his duȝeðe
3383 ⁊ duden hine to his a[ð]ðelen
3690 inne þare Temese
3893 into þere Temese
3895 æfter þere Temese
3908 inne þere hauene
3923 þe wile þe heo luueden
4496 þa while þat he luuede
4513 þe weoren swi[ð]e bisie
4730 þa while þe ich leouie
4776 uppe Sæuerne
4927 þe while þe he luuede
5287 wunieð inne comela
5289 ⁊ ich eow wulle griðien
5322 þe weoren swiðe aðele
5524 swiðe hine bi·hoȝeden
5832 uor him wes to murie
5988 forð mid þan wederen
6418 for·ærnen þa wateres
6450 þa while þe he luuede
6532 þat þis ich wulle uorien
6681 for ich eow wullen luuien
6814 habben scipinge
7421 þa while þa we luuien
7556 at·foren al his duȝeðe
7576 þat scolden þas duȝeðen
7657 ⁊ al his co[m]elan
7909 beo swiðe swikele
Total: 35

(w)S(w)-

428 ⁊ lude clepian
556 þa Brutus hauede
4956 his ræflac makede
5043 ærst Crist luuede
7921 mid quickere steuene
Total: 5

G.5 Verses Ending in HXX

(w)Sww-

745 for wisdome him fulede
915 blisse wes on hirede
1020 �

Trinouant heo nemneden
1029 ꝥ cleopeden heo Lundene
1177 steolen vt of hirede
1368 þah stræmes heom to·dæleden
1559 hæleðen he wes ældere
1566 i·speken of þan mæidene
1599 wilnede þeos mæidenes
1640 to Maglaune hire louerde
1681 forð·rihte to Cornwalen
1773 godere gretinge
1814 blisse wes an hirede
1958 beiene vn·i·selie
1994 sloh þene eldere
1995 þe quike here wes leoðere
2109 lim from þen oðere
2794 ꝥ warscipe him folweden
2877 Gabius and Prosenna
2917 to hæȝen ane castele
2938 Belin ꝥ his bro[ð]ere
3244 and to þan kinge weoðede
3269 þa uuele he hæh3ede
3309 eædi beo þu æuere
3315 weop mid his e3enen
3523 þe ȝungeste hehte Nennius
3804 of Iulius Cesare
3876 gold and his gærsume
4135 sende ich wulle to þon kæisere
4142 Iulius þe keisere
4194 heh he wes on hirede
4239 Iulius þe keisere
4253 Wulcume ært þu Iulius
4392 þan Romanisce keisere
4408 ꝥ sæhtnien him wið Cesare
4432 Hærcne hiderward Iulius
4449 Iulius þon kæisere
4474 mid selcuðe murȝeþe
4521 þe king wes inne Bruttene
4527 of sele þon mæidene
4550 i·wurðen heo beoð in Beðleem
4563 Noe ꝥ Abraham
4583 Aruiragun þe ȝungere
4612 þurh Glaudius þan kæisere
4618 to Claudiene þan kæise[re]
4725 Iulius þe kæisere
4739 ꝥ halden me for lauerde
4749 from Claudien þæn kæisere
4751 þas cnihtes a·wurðede
4778 þæn kaisere Claudius
4782 þan Romanisce kæisere
4841 Vaspasien kæisere
5079 þe Mahun weoren i·hatene
5164 wunder ane cræftie
5168 mid Seuare þan kæisere
5187 þan Romænisce kæisere
5188 Bruttes to Fulgenes
5236 þe king þe græteð Basian
5275 for golde and gæirsume
5386 scriðen to hirede
5432 þe king wæs on Bruttene
5442 king inne Bruttene
5501 þe king wes inne Bruttene
5504 þa wunede a Bruttene
5687 þe wuneden on Bruttene
5748 mid Gracien ꝥ mid Ualantin
5770 þe mæste of his childeren
5803 of Maximian and of his hirede
6092 Valentin ꝥ Gratien

6415 Galewaȝes ȝ Irreisce
6904 þurh soðen eouwer wurðscipen
6913 selcuðe tiðende
7032 i richen þine hirede
7192 ȝ henede þa Cristine
7257 þa Cristine ȝ þa hæðene
7310 fulede þan hæðenen
7329 verde ut of Lundene
7429 i·riht þene Cristindom
7442 luuien þene Cristindom
7457 blisse wes on hirede
7484 blisse wes on hirede
7518 ȝ ladden to Lundene
7519 fæire hine bi·burȝeden
7586 þe wuneden on Bruttene
7693 for golde ȝ for gærsume
Total: 85

wwS(w)-

757 ȝ hem to scipe fusede
831 þene castel kennede
1424 ȝ þan folc halwende
1506 hire uader i·lefede
1789 to i·sen is eastresse
2284 and þa sæ he wraðede
3564 þa here fader deȝede
3641 þene king of Bruttaine
3959 ah bi twenti þusende
4530 þe wes a wræche fiscære
4535 he wes i·haten Teilesin
4673 bute þritti rideren
4972 ȝ hehte þene stan Westmering
5222 vnder þon kinge Basian
5836 ȝ vnimete gærsume
6559 wenden to uinde Costance
6817 cumen a·ȝan to hirede
6849 into þere lasse Brutene
7067 þu sca[l]t habben gærsume
7203 weoren hæhst an hireden
7471 þene king Uortimer
7821 ȝ hire fader nemnede
Total: 22

wwSww-

1091 þat weoren þa tweiene broðeren
1165 bituxe Corineo ȝ Locrine
1168 bitwux Corineo ȝ Locrine
1286 enne sune on hire he streonede
1359 of þan sustren ȝ of þon breoð[er]en
2584 mid his folke of Burguine
3080 bi þan ende of Orcanai
3657 þine gumen sunden ȝefere
3758 hu uerden Cesar ȝ Nennius
4031 ane þechene bærninde
4773 and þæn kæisere Claudius
5157 þe inne Rome wes kæisere
5574 wes in Rome mid Costantin
5802 a·ȝan Valentin ȝ Gracian
5916 uppe Valentin ȝ vppen Gracien
6609 þat his quides durste halsien
Total: 16

Multiple S-

168 þes kinges sune Priame
293 þes kinges broþer Pandrasum
836 of þane Freinsce þreo þusende
2970 þes kinges grið wilniæn
3039 unstronge monnen he leoðede
3559 Port Lud a Bruttisce
3799 at þon norð ȝæte i Lundene
4297 þritti hundred riderne

4299 ten þusend rideren
6384 his deore broðe[r] Costantin
6503 þas kinges sune of Bruttene
7025 Lauerd hærcne tiðende
Total: 12

ww-
263 to þan wilderne
438 ihc am him þa laðere
510 vt of quarcerne
937 at þere wrastlinge
1055 þe wes þe warreste
1131 þat he com to Locrine
1144 bi·foren Brutone
1327 of þere ræuinge
1394 buten heora scærninge
1492 for þira gretinge
1518 of þe Cordoille
1731 þenne ich nes weldinde
1791 mid mine lauerde
1867 into Cornwaile
1906 þat he heom i·leuede
2055 þer he wes i Cornwale
2616 swa heomself demmeden
2946 alle ridinde
2977 into Bruttæine
3323 dude for Argale
3437 efter his alderen
3554 in þissere Bruttene
3579 and al þissere leodene
3603 swa he dude ouer Muntgiwe
3682 into Bruttaine
3847 þæh heo weoren i·uæiede
4019 wenden to Lundene
4046 [at] þere sereuunge
4107 ut of Lundenne
4213 wiðuten gretinge
4599 and alle þa radfulle
4755 i[n]to Winchæstren
4772 þe wes þanne i Bruttene
4805 inne Gloichæstre
5124 ⁊ ofte hine a·bæileden
5152 into Lundene
5217 bi·twenen þissen broðeren
5390 ut of Mureine
5539 þe heom dude þe kæisere
5606 he com to Portchæstre
5685 ⁊ sette his hustinge
5724 mid muchele wisdome
5792 þe wunieð on Brutene
5805 into Londenne
5874 on to libbenne
5910 into Lohernne
5925 inne þiss[e] Bruttene
5947 heo hæhte Vrsele
5960 wide ȝeond þas Bruttene
5987 to nane wummannen
5989 i þan ane wes [Vrsele]
6028 nes þer nan ændswere
6135 in ane wilderne
6215 to heore hustinge
6217 inne Lundenne
6320 of ure tiðendes
6392 into Lundenne
6441 inne Winchæstre
6479 wes i Winchæstre
6500 he hauede on his hirede
6577 into Lundenne
6737 mid muchelere wurðscipe
6791 al ure wurðscipen
6843 into Winchæstre
7009 wende to herberwe

7117	⁊ bad him gistninge
7125	þat he on lokede
7207	mid are hailinge
7264	inne þissen Brutene
7276	⁊ þu ane Cristine
7300	þat heo comen to Lundene
7301	at þan hustinge
7304	þat comen mid þan broðere
7323	come to hirede
7382	ferde ʒeond þas Bruttene
7396	to·ʒeines þan biscopen
7419	scunede þene Cristindom
7632	he æhte Glochæstre
7746	ah hit þuhte læsinge
7752	of þere læsinge
	Total: 80

(w)S(w)-

1027	⁊ neowe tidinde
1489	his doster læisinge
1511	his dohter Gordoille
2603	wes Belin kaisere
2609	halden hustinge
2659	of æhte ʒissinge
3420	sune Argales
4265	to speken wið Iulius
4525	walden englenne
4770	sixti rideren
5480	þat gauel of Brutlonde
5966	þat mæiden Vresele
6009	þa scipen wandrien
6087	þan Duc of Lumbardie
6984	neowe tiðenden
7021	holden runinge
7148	fæirest wimmonnen
7286	his dohter Rouwenne
	Total: 18

Appendix H

Norse *Fornyrðislag*

This appendix presents the data discussed in chapters 11 and 12. Since several distinct issues are addressed, the data is divided into five subsets. In all cases, the main line numbers follow Bugge (1867), and those in parentheses give the lineation of Jónas Kristjánsson & Vésteinn Ólason (2014a,b), where this is different. Data from *Vǫlundarkviða* and *Hyndluljóð* is given in italics, since these two works may potentially be somewhat marginal to the standard metrics of *fornyrðislag*.

H.1 lists type-A2k verses, sorted by the shape of the final word: LH, LL, and a third group that is LL if final *-r* or *-s* is counted as extrametrical. See further §11.1.1.

H.2 gives the data bearing on the question of whether unconditioned suspension of resolution is possible in type A: that is, verses that have been scanned variously as *SwS̆w* or *SwS*^{w}. The main data is sorted into four categories. First, simple *SwS*^{w} verses are given, then the more frequent unresolved type *SwS*, which I argue in §11.1.2 these should be equated with. Then verses with expanded dips of both types are given: first *Sww…S*^{w}, then *Sww…S*. Finally, for the sake of a full comparison, the same procedure is given for type 'A3-', that is, verses of the shapes *ww…S*^{w} and *ww…S*. See further §11.1.2.

H.3 includes verses containing trisyllables such as *konungum* (LHX), giving those likely to not be resolved, followed by those that are plausibly resolved. See further §11.2.

H.4 collects the examples of *fornyrðislag* half-lines with potential resolution in the fourth position. These are sorted into clearer examples and disputable examples (the latter involving the names *Vǫlundr*, *Sigurðr*, and *Jǫrmunrekkr*).

H.5 lists type-A verses pertaining to the relationship of resolution and word-breaks. First I give those with resolution on the first lift followed by a word-break (*S*^{w}*#w*, *S*^{w}*#s*), then those without such a break. I then repeat the procedure for resolution on the second lift. For comparison, I also list all other verses that show a word break after the final lift, ending in *S#w* or *S#s*. See further §12.1.

H.6 provides the data for Craigie's law in *fornyrðislag*. This is sorted into four groups: verses with clearly bimoraic final nominals, those with final nominals

that are bimoraic if inflectional *-r* and *-s* are considered extrametrical, and those that are certainly overheavy. Four verses involving relevant uncertainties are specially marked. A final group gives verses ending in overheavy numerals and past participles, which may or may not be subject to Craigie's law. See further §12.2.

H.1 Type A2k

LH-final

Vǫluspá

37.7 (36.7)	bjórsalr jǫtuns
45.6 (44.6)	hórdómr mikill

Hymiskviða

4.7	ástráð mikit
19.3	hátún ofan
22.7	umgjǫrð neðan
23.7	ofljótt ofan
25.1	óteitr jǫtunn
30.3	ástráð mikit
30.7	kostmóðs jǫtuns

Þrymskviða

26.2	ambótt fyrir
28.2	ambótt fyrir

Helgakviða Hundingsbana I

1.7	Borghildr borit
8.7	blóðorm búinn
10.6	Hunding veginn
11.7	fjárnám mikit
18.6	Hǫðbrodd kveðinn
21.2	allvaldr þaðan
25.5	víglið konungs
30.2	Sigrún ofan
30.7	gjalfrdýr konungs
36.12	hvarleiðr skriðit
54.2	hjalmvitr ofan

Helgakviða Hjǫrvarðssonar

10.2 (11.2)	heilráðr konungr
33.3 (34.3)	ǫlmál, Heðinn

Helgakviða Hundingsbana II

1.8	Hundingr konungr
3.2	hildingr þegit
10.3	Hundingr konungr
14.2	sikling glaðan
16.8	munráð brotit
25.3 (19.3)	Hǫðrbroddr konungr
26.2 (20.2)	alvitr, gefit
27.2 (21.2)	Starkaðr konungr
36.8	Vígblær þinig
40.8	heimfǫr gefin
41.8	heimfǫr gefin
44.8	valdǫgg sleginn
45.4	harmdǫgg sleginn

Grípisspá

4.4	ókuðr kominn
14.3	framlyndr jǫfurr
21.3	ljósast fyrir
21.6	ráðspakr taliðr
23.4	ǫðlingr, nemask
28.8	ørlǫg fyrir
42.7	snarlynd sofit

Fáfnismál

35.3	ástráð mikit

Brot af Sigurðarkviða

12.4	vilmál talit
19.3	margdýrr konungr

Guðrúnarkviða I

4.6	forspell beðit
14.7	hugborg jǫfurs
26.4	ormbeðs litum

Sigurðarkviða

22.7	kynbirt ïarn
56.6	versæl gefin
59.4	ormgarð lagiðr
63.2 (63.4)	Jónakrs sonum
68.3	egghvasst ïarn

Helreið Brynhildar

2.3	hvarfúst hǫfuð
6.2	hugfallr konungr

Guðrúnarkviða II

19.1	Valdarr Dǫnum
23.5	umdǫgg arins
29.7	hrægífr, huginn
29.8	hjartblóð saman
31.11	eggleiks hvǫtuð

Oddrúnargrátr

29.9	kynríkr konungr

Guðrúnarhvǫt

8.5	geir-Njǫrðr, hniginn

Baldrsdraumar
9.2 hróðrba[r]m þinig
Rígsþula
38.2 (36.2) átján bú[u]m
Hyndluljóð
28.8 *Randvés faðir*
30.9 *skautgjarn jǫtunn*
32.4 *Hjǫrvarðr faðir*
40.8 *Býleists komit*
Hervararkviða
3.8 ámátt firum
Total: 71

LL-final
Vǫluspá
32.8 einnættr vega
42.7 (41.7) fagrrauðr hani
43.7 (42.7) sótrauðr hani
52.5 (51.5) grjótbǫrg gnata
55.3 (53.3) Víðarr, vega
66.7 (63.7) Níðhǫggr nái
Vǫluspá (Hauksbók)
30.2 vígbǫnd snúa
Hymiskviða
8.7 brúnhvít bera
20.3 áttrunn apa
35.7 folkdrótt fara
Þrymskviða
3.6 fjaðrhams lïa
6.4 gullbǫnd snøri
18.6 Ásgarð búa
20.4 ambótt vera
Vǫlundarkviða
4.2 *ve[ð]reygr skyti*
8.6 (10.2) *veðreygr skyti*
Helgakviða Hundingsbana I
7.2 dǫglingr vera
7.8 ítrlauk grami
12.4 nefgjǫld fá[a]
14.6 Hundlings sonu
18.4 Granmars syni
20.2 Ísungs bana
26.6 dagsbrún sïa
27.7 lofðungs floti
37.3 skollvís kona
38.7 svévís kona
43.2 siðlauss vera
50.12 hjǫrþing dvala
52.8 viðrnám fá[a]
53.6 Hundings bani
54.6 sárvitr flug[u]
Helgakviða Hjǫrvarðssonar
5.6 (6.2) Sæmorn vaða
38.2 (39.2) Hjǫrðvarðs syni
Helgakviða Hundingsbana II
25.8 (19.8) Granmars sona
39.3 fótlaug geta
43.8 dagsbrún sïa
46.6 angrljóð kveða
48.2 ørvænt vera
49.4 flugstíg troða
49.8 sigrþjóð veki
Grípisspá
9.6 Hundings sonu
23.7 naddéls boði
48.6 lofsæl kona
49.4 allvel skipa
Reginsmál
16.5 (17.5) Seglvigg eru
17.7 (18.7) hlunnvigg hrapa
Fáfnismál
43.2 folkvitr sofa
43.7 hǫr-Gefn hali
Guðrúnarkviða I
12.6 annspjǫll vera
Sigurðarkviða
31.4 heiptgjǫrn kona
34.7 fullgǿdd fe[i]
41.2 þunngeð kona
44.8 morðfǫr konu
51.2 hǫrskrýdd kona
55.5 Svanhildr vera
65.8 jafnrúmt se[i]

Helreið Brynhildar
11.7 víkingr Dana
Guðrúnarkviða II
7.7 Gothorms bani
12.2 niðmyrkr vera
17.2 gotnesk kona
19.3 Eymóðr þriði
25.6 Hlǫðvés sali
30.7 verlaus vera
41.7 sorgmóðs sefa
42.7 n[a]uðig[r] ná[i]
Oddrúnargrátr
13.2 (11.2) sorgmóð kona
21.7 hliðfarm Grana
Guðrúnarhvǫt
1.8 Guðrún sonu
Baldrsdraumar
4.6 valgaldr kveða
11.4 einnættr vega
14.8 (15.8) rjúfendr koma
Hyndluljóð
5.6 *goðveg troða*
9.7 *fǫðurleif hafi*
15.8 *átján sonu*
41.4 *hugstein konu*
46.8 *Heiðrún fari*
49.4 *fjǫrlausn þola*
Grottasǫngr
19.3 vígspjǫll vaka
Hervararkviða
17.3 Tyrfing bera
20.8 Hjalmars bana
21.2 Hjalmars bani
24.6 buðlungr hafa
25.3 fláráð kona
27.4 Hjalmars bana
Total: 84

LL-final?
Hymiskviða
5.3 hundvíss Hymir
10.3 harðráðr Hymir
11.4 Hundings synir
53.10 alltrauðr flugar
Helgakviða Hjǫrvarðssonar
1.6 Hjǫrvarðs konur
43.6 (44.6) Hjǫrvarðs sonar
Helgakviða Hundingsbana II
11.6 hildings synir
12.8 vígspjǫll segir
24.2 (29.2) Granmars synir
27.4 (21.4) Hrollaugs synir
46.2 Granmars synir
49.6 vindhjalms brúar
Reginsmál
15.2 (16.2) Hundings synir
Brot af Sigurðarkviða
11.7 (10.7) heiptgjarns hugar
Sigurðarkviða
18.6 her-Baldr lifir
37.8 auðins f[e]ar
64.4 óþarft lifir
Guðrúnarkviða II
19.7 Langbarðs liðar
Hyndluljóð
21.2 *Ǫlmóðs synir*
24.3 *Arngríms synir*
Grottasǫngr
1.6 Friðleifs sonar
Hervararkviða
9.2 Arngríms synir
15.6 muntún hugar
Total: 23

H.2 *Sw(…)S* and *Sw(…)S*^{w}

SwS^{w}
Hymiskviða
5.6 móðugr ketil
21.2 móðugr hvali
28.7 krǫpturligan
Þrymskviða
5.1 fló þá Loki
9.1 fló þá Loki

Grípisspá
12.5 leið at huga
18.5 leið at huga
Sigurðarkviða
13.14 sǫknuð mikinn
Guðrúnarkviða II
34.4 nauðig hafa
Rígsþula
6.6 mánuðr níu
8.5 kroppnir knúar
16.1 sat þar kona
20.6 (18.6) mánuðr níu
33.10 (31.10) mánuðr níu
41.3 (39.3) Jóð ok Aðal
Hyndluljóð
19.8 *Alfr um·getinn*
Hervarkviða
6.8 skulum við talask
Total: 17

SwS
Vǫluspá
31.8 mistilteinn
Hymiskviða
7.2 dag þann fram
Þrymskviða
17.2 þrúðugr áss
Vǫlundarkviða
5.7 (6.7) *svá beið hann*
11.4 (12.4) *viljalauss*
31.2 (30.2) *vilj[a]lauss*
Reginsmál
5.3 bróðrum tveim
Fáfnismál
36.2 hildimeiðr
Guðrúnarkviða I
6.6 sunnan lands
7.2 fjórir bróðr
9.7 hersis kván
17.9 systir mín
18.7 jarknasteinn
24.12 vífa mest
25.6 bróðir minn
Sigurðarkviða
5.4 ekki grand
6.2 aptan dags
8.2 ills um·fylld
8.4 aptan hvern
13.8 vinna sømst
13.10 vinna bezt
14.4 árar títt
24.3 sorgalaus
24.6 vilja firrð
25.2 sínar hendr
26.6 svart ok dátt
26.8 nýlig ráð
27.3 systur sonr
30.7 gjallan grát
32.6 blóðugt sár
39.6 (36.6) yðr um·líkr
43.2 h[v]eim þar sér
56.10 bróðir minn
61.6 góðra ráð
63.5 (63.7) sína mey
64.2 Bikka ráð
71.5 ómun þverr
Guðrúnarkviða II
3.2 mínir bróðr
Guðrúnarkviða III
8.4 svása bróðr
Oddrúnargrátr
4.4 Húnalands
Guðrúnarhvǫt
4.6 svefni ór
9.7 móðug spjǫll
Baldrsdraumar
2.2 ald[inn] Gautr
11.5 hǫnd um·þvær
13.4 aldinn Gautr
Rígsþula
4.2 økkvinn hleif
4.8 krása beztr

7.4	hétu Þræl
8.4	hrokkit skinn
10.6	nefndisk Þír
11.7	Þræll ok Þír
11.8	þrungin dógr
12.14	grófu torf
16.2	sveigði rokk
16.3	breiddi faðm
16.10	áttu hús
23.7 (21.7)	bjuggu hjón
27.2 (25.2)	golf var strát
27.3 (25.3)	sátu hjón
29.1 (27.1)	keisti fald
31.2 (29.2)	merkðan dúk
31.4 (29.4)	hulði bjóð
34.5 (32.5)	bleikt var hár
37.2 (35.2)	myrkvan við
37.3 (35.3)	hélug fjǫll
37.6 (35.6)	skelfði lind
39.5 (37.5)	møtti hann
41.4 (39.4)	Arfi, Mǫgr
41.7 (39.7)	Sonr ok Sveinn
41.8 (39.8)	sund ok tafl
41.9 (39.9)	Kundr hét einn
Hyndluljóð	
7.9	*dvergar tveir*
17.3	*Svávu barn*
25.9	*folkum grimms*
29.3	*Baldr er hné*
44.5	*fáir sjá nú*
	Total: 76

Sww…S^{w}

Þrymskviða	
30.7	vígið okkr saman
Grípisspá	
18.1	[nú] er því lokit
Guðrúnarkviða I	
22.4	sǫðlaði Grana
Hyndluljóð	
1.6	ríða vit skulum
8.2	sitja vit skulum
Hervararkviða	
16.2	*hlýttu til meðan*
	Total: 6

Sww…S

Vǫluspá	
29.2	hringa ok men
Þrymskviða	
8.8	Freyju at kvæn
9.7	møtti hann Þór
11.8	Freyju at kván
22.6	Freyju at kván
Vǫlundarkviða	
19.3 (18.13)	*bíðka ek þess bót*
31.3 (30.3)	*sofna ek minnst*
31.7 (30.7)	*vilnumk ek þess nú*
33.1 (32.1)	*eiða skaltu mér áðr*
37.1 (36.1)	*mæltira þú þat mál*
Helgakviða Hundingsbana II	
32.1	skríðiat þat skip
32.5	rennia sá marr
33.1	bítia þér þat sverð
Sigurðarkviða	
7.2	iðrumk eptir þess
8.6	ganga á beð
29.6	kalkar í vá
31.3	hlæraðu af því
60.8	grýmir á beð
65.1	biðja mun ek þik
66.1	tjaldi þar um þá borg
Guðrúnarkviða III	
9.1	brá hon til botns
Oddrúnargrátr	
10.1	hnékat ek af því
Guðrúnarhvǫt	
14.5	ól ek mér jóð
Rígsþula	
6.1	þar var hann at þat
20.1 (18.1)	þar var hann at þat
21.3 (19.3)	kǫlluðu Karl
33.5 (31.5)	þar var hann at þat

Hyndluljóð
14.1 *Áli var áðr*
20.5 *fyrnd er sú mægð*
Hervararkviða
3.1 spyrjattu at því
Total: 30

H.3 Non-Resolving LHX Words

Clear Examples
Vǫlundarkviða
3.5 *en inn níunda*
Guðrúnarkviða I
20.2 ok í sæingu
Sigurðarkviða
16.5 ok unandi
24.2 í sæingu
54.4 við konung[i]
Guðrúnarkviða II
4.8 [und] vegǫndum
34.2 af konungum
Total: 7

Disputable Examples
Þrymskviða
10.1 hefir þú erendi
11.2 ok ørindi
Vǫlundarkviða
9.6 (10.10) *fyr Vǫlundi*
Helgakviða Hjǫrvarðssonar
5.2 (6.2) ok ekki ørindi
Grípisspá
6.7 hvé mun Sigurði
25.1 nú skal Sigurði
Guðrúnarkviða I
13.2 af Sigurði
Sigurðarkviða
24.4 hjá Sigurði
63.6 (63.8) ok Sigurðar
65.10 með Sigurði
70.6 ok faðerni
Helreið Brynhildar
13.3 at ek Sigurði
Guðrúnarkviða II
11.10 um Sigurði
12.4 yfir Sigurði
24.5 kvómu konungar
29.5 síz Sigurðar

H.4 Resolution in the Fourth Position

Clear Examples
Vǫlundarkviða
4.3 (4.5) *Slagfiðr ok Egill*
18.8 *é fjarri borinn*
18.10 *til smiðju borinn*
37.6 (36.6) *at þik af hesti taki*
Hyndluljóð
19.3 *var hann móðurfaðir*
Total: 5

Disputable Examples
Vǫlundarkviða
29.5 (28.5) *hléjandi Vǫlundr*
38.1 (37.1) *hléjandi Vǫlundr*
37.3 (36.3) *né ek þik vilja, Vǫlundr*
Fáfnismál
41.7 þá mundu, Sigurðr
Hyndluljóð
25.6 *frá Jǫrmunrek(k)i*
Total: 5

H.5 Resolution and Word breaks

First lift: S^w#w, S^w#s
Vǫluspá
2.5 níu man ek heima
4.2 bjǫðum um·yppðu
24.5 brotinn var borðveggr
51.2 (49.2) koma munu Múspells

Vǫluspá (Hauksbók)
39.8 sefi of gleypir
Hymiskviða
17.1 Véurr kvazk vilja
21.7 Véurr við vélar
37.8 Loki um·olli
Þrymskviða
7.8 hamar um·folginn
8.2 hamar um·folginn
10.6 sǫgur um·fallask
10.8 lygi um·bellir
14.8 hamar um·sótti
30.3 berið inn hamar
31.4 hamar um·þekkði
Vǫlundarkviða
2.2 *Egill at verja*
4.4 (4.6) *sali fundu auða*
9.2 (10.6) *beru hold steikja*
11.8 (12.8) *fjǫtur um·spenntan*
21.3 (20.3) *opin var illúð*
23.7 (22.7) *opin var illúð*
31.1 (30.1) *vaki ek ávallt*
40.4 (39.4) *saman í holmi*
41.4 (40.4) *saman í holmi*
Helgakviða Hundingsbana I
22.5 þaðan beið þengill
46.8 hjǫrum at bregða
47.3 Svipuð ok Sveggjuð
49.1 snúask hér at sandi
49.7 gǫfugt lið gylfa
55.7 jǫfur þann er olli
Helgakviða Hjǫrvarðssonar
5.3 (6.3) mara þraut ora
36.2 (37.2) Sigar at ríða
Helgakviða Hundingsbana II
4.12 Sigars ok Hǫgna
14.6 konung und hjalmi
17.3 hafa kvazk hon Helga
22.5 (27.5) hafa þér í hendi
24.8 (29.8) hjǫrum at bregða
26.7 (20.7) Bragi ok Hǫgni
30.2 trega þér at segja
46.4 munar ok landa
Grípisspá
7.5 gjǫfull at gulli
9.2 fǫður um·hefna
11.7 Regin ok Fáfni
16.1 brotin er brynja
18.2 numin eru fróði
18.4 búinn at ríða
19.5 farit er, Sigurðr
21.8 farit þats ek vissak
38.3 litum ok látum
38.7 atalt með ǫllu
Reginsmál
13.1 (14.1) kominn er hingat
15.6 (16.6) munar at sókja
Fáfnismál
42.6 halir um·gǫrvan
Brot af Sigurðarkviða
7.5 (6.5) gnapir æ grár jór
11.5 (10.5) gramir hafi Gunnar
14.5 hvetið mik eða letið mik
Guðrúnarkviða I
7.1 faðir ok móðir
24.3 þegi þú þjóðleið
Sigurðarkviða
8.9 konungr inn húnski
29.1 kona varp ǫndu
57.5 vaðin at vilja
Helreið Brynhildar
10.6 yfir at ríða
14.3 konur ok karlar
Guðrúnarkviða II
3.5 sofa þeir né máttut
4.1 Grani rann at þingi
16.2 skriðu frá landi
18.3 sakar at bóta
18.11 ǫrum at skjóta
40.8 [b]eðit mik at tyggva
Guðrúnarkviða III
4.8 hnigum at rúnum

Oddrúnargrátr
2.8 sǫðul of·lagði
4.7 vina þín Oddrún
21.1 buðu þeir árla
26.1 buðu vit þegnum
Guðrúnarhvǫt
10.4 vegin at húsi
Baldrsdraumar
2.4 sǫðul um·lagði
Rígsþula
2.9 Ái ok Edda
13.9 þaðan eru komnar
21.4 (19.4) kona sveip rifti
24.7 (22.7) Búi ok Boddi
27.5 (25.5) Faðir ok Móðir
34.7 (32.7) ǫtul váru augu
Hyndluljóð
3.5 *byri gefr hann brǫgnum*
7.1 *dulin ertu, Hyndla*
7.10 *Dáinn ok Nabbi*
23.1 *Búi ok Brámi*
31.3 *vǫrumk at viti svá*
32.1 *Haki var Hveðnu*
34.3 *vǫrumk at viti svá*
36.3 *vǫrumk at viti svá*
39.3 *vǫrumk at viti svá*
41.1 *Loki a[t] hjarta*
Grottasǫngr
5.5 siti hann á auði
5.6 sofi hann á dúni
5.7 vaki hann at vilja
9.5 Iði ok Aurnir
18.4 vaki þú, Fróði
18.5 vaki þú, Fróði
19.6 hinig af bragði
24.3 malit hǫfum, Fróði
Hervararkviða
6.8 skulum við talask
14.1 hnigin er helgrind
14.5 atalt er úti
25.2 vesǫl ertu mála
29.1 búið er allir
29.4 heðan vil ek skjótla
Total: 106

First lift: S^{w}w, S^{w}s
Vǫlundarkviða
22.5 (21.5) *segiða meyjum*
26.7 (25.5) *þoriga ek at segja*
Sigurðarkviða
66.3 valarift vel fáð
Guðrúnarkviða II
10.1 svaraði Hǫgni
Rígsþula
21.6 (19.6) riðuðu augu
Hervararkviða
18.10 dugira þér at leyna
Hyndluljóð
9.7 *fǫðurleifð hafi*
Total: 7

A3 lift: S^{w}#w, S^{w}#s
Vǫluspá
6.1 þá gengu regin ǫll
9.1 þá gengu regin ǫll
23.1 þá gengu regin ǫll
23.7 eða skyldu goðin ǫll
25.1 þá gengu regin ǫll
Þrymskviða
4.1 þó mynda ek gefa þér
12.7 vit skulum aka tvau
20.5 vit skulum aka tvau
Helgakviða Hundingsbana II
9.3 því var á legi mér
Hervararkviða
12.1 grófat mik faðir niðr
Total: 10

A3 lift: S^{w}w, S^{w}s
Vǫluspá
48.3 (50.3) gnýr allr jǫtunheimr
Fáfnismál
40.3 era konungligt

Sigurðarkviða
14.5 at frá konungdóm
Guðrúnarkviða II
4.5 ǫll váru sǫðuldýr
Total: 4

A3 lift: S#w, S#s
Vǫluspá
21.5 ok í hǫll Hárs
25.5 hve[rr] hefði lopt allt
Vǫlundarkviða
5.3 (6.3) *hann sló gull rautt*
17.2 *er honum er tét sverð*
21.7 (20.7) *at véri gull rautt*
Helgakviða Hundingsbana
50.3 þó er í Sogn út
Helgakviða Hundingsbana II
2.3 era þat karls ætt
8.1 þat vann næst nýs
9.1 nú er sagt, mær
18.5 þú skalt, mær ung
40.1 hvárt eru þat svik ein
41.1 era þat svik ein
Grípisspá
32.5 er ek skal við mey þá
42.5 þóat hafi þrjár nætr
Reginsmál
11.5 (12.5) fá þú mey mann
13.7 (14.7) ok er mér fangs vón
14.7 (15.7) þrymr um ǫll lǫnd
Fáfnismál
35.7 þar er mér ulfs vón
Sigurðarkviða
69.7 þeygi mun vár fǫr
Helreið Brynhildar
2.5 þú hefir, vár gulls
10.1 lét um sal minn
10.5 þar bað hann einn þegn
Guðrúnarkviða II
2.3 sem véri grønn laukr
13.3 unz ek hǫll Hálfs
Guðrúnarkviða III
3.1 þér mun ek alls þess
Rígsþula
45.1 (43.1) hann við Ríg jarl
47.3 (45.3) hvat skaltu, Konr ungr
Hyndluljóð
5.1 *nú taktu ulf þinn*
5.5 *seinn er gǫltr þinn*
5.7 *vil ek ei mar minn*
6.5 *er þú hefir ver þinn*
7.3 *er þú kveðr ver minn*
10.3 *nú er grjót þat*
Hervararkviða
1.1 hitt hefir mær ung
19.1 kveðkat ek þik, mær ung
Total: 35

Second lift: S^{w}#w, S^{w}#s
Hymiskviða
34.5 hóf sér á hǫfuð upp
Brot af Sigurðarkviða
14.5 hvetið mik eða letið mik
Guðrúnarkviða II
5.5 hnipnaði Grani þá
Hyndluljóð
13.1 *móður átti faðir þinn*
17.7 *varð[ar] at viti svá*
18.9 *varðar at viti svá*
31.3 *vǫrumk at viti svá*
34.3 *vǫrumk at viti svá*
36.3 *vǫrumk at viti svá*
39.3 *vǫrumk at viti svá*
Total: 10

Second lift: S^{w}w, S^{w}s
Vǫluspá
26.7 mál ǫll meginlig
Vǫlundarkviða
41.5 *eina ǫgurstund*
Oddrúnargrátr
12.5 slíks dómi kvaðattu

Hyndluljóð

18.7	*Ámr ok Jǫsurmarr*
	Total: 4

Second lift: S#w, S#s

Vǫluspá

20.3	þrjár um þeim sal
31.7	mjór ok mjǫk fagr
44.1 (43.1)	geyr [nú] Garmr mjǫk
49.1 (47.1)	geyr nú Garmr mjǫk
58.1 (56.1)	geyr nú Garmr mjǫk

Þrymskviða

15.3	vissi hann vel fram
15.5	bindu vér Þór þá
19.1	bundu þeir Þór þá

Vǫlundarkviða

31.6 (30.6)	*kǫld eru mér ráð þín*

Brot af Sigurðarkviða

7.5 (6.5)	gnapir æ grár jór

Sigurðarkviða

66.3	valarift vel fáð

Guðrúnarkviða II

33.5	eigðu um aldr þat

Hyndluljóð

13.7	*ǫll þótti ætt sú*
16.9	*allt er þat ætt þín*
17.5	*allt er þat ætt þín*
18.3	*ólusk í ætt þar*
20.1	*Nanna var næst þar*
20.9	*allt er þat ætt þín*
21.7	*allt er þat ætt þín*
23.5	*allt er þat ætt þín*
24.9	*allt er þat ætt þín*
26.7	*allt er þat ætt þín*
27.9	*allt er þat ætt þín*
28.11	*allt er þat ætt þín*
29.9	*allt er þat ætt þín*

Hervararkviða

13.1	segðu eitt satt
13.2	svá láti áss þik
	Total: 27

H.6 Craigie's Law

Bimoraic Final

Vǫluspá

6.3	ginnheilǫg goð
6.8	ok miðjan dag
7.3	þeir er hǫrg ok hof
8.7	ámáttkar mjǫk
9.3	ginnheilǫg goð
14.7	Aurvanga sjǫt
16.7 (16.3)	langniðja tal
23.3	ginnheilǫg goð
25.3	ginnheilǫg goð
44.7 (43.7)	um ragna rǫk
49.7 (47.7)	um ragna rǫk
51.8 (49.8)	Býlei[s]ts í fǫr
58.7 (56.7)	um ragna rǫk

Hymiskviða

3.4	hann næst við goð
3.5	bað hann Sifjar ver
3.6	sér føra hver
3.7	þanns ek ǫllum ǫl
5.7	rúmbrugðinn hver
10.5	gekk inn í sal
21.5	en aptr í skut
24.6	sá fiskr í mar
31.1	harðr reis á kné
34.4	golf niðr í sal
39.3	ok hafði hver

Þrymskviða

25.7	né inn meira mjǫð
27.4	endlangan sal
30.6	í meyjar kné
32.8	fyr hringa fjǫ[l]

Vǫlundarkviða

3.8	*á myrkvan við*
7.4 (8.4)	*endlangan sal*
8.8 (10.4)	*um langan veg*
16.2 (16.4)	*ennlangan sal*
17.10	*í sævar stǫð*
20.8 (19.8)	*í sævar stǫð*
30.4 (29.4)	*endlangan sal*

Helgakviða Hundingsbana I

2.1	nótt varð í bó
3.7	ok und mána sal
5.1	Ylfinga nið
11.2	Sigmundar bur
13.5	sleit Fróða frið
13.7	fara Viðris grey
13.8	valgjǫrn um ey
17.3	líddi randa rym
18.8	sem kattar son
21.3	of lopt ok um lǫg
24.5	langhǫfðuð skip
28.5	sem bjǫrg eða brim
31.7	með hermðar hug
35.3	flugtrauðan gram

Helgakviða Hjǫrvarðssonar

2.2	Iðmundar son
6.7 (7.7)	þóttu harðan hug
8.7 (9.7)	vígnesta bǫl
43.3	Rógheims á vit

Helgakviða Hundingsbana II

4.1	þat er lítil vá
4.14	Ylfinga man
8.3	fyr vestan ver
12.6	Sigmundar bur
15.2	af ǫllum hug
18.3	né illan hug
21.7 (26.7)	ef vér lægra hlut
39.7	gefa svínum soð
40.3	eða ragna røk
41.3	né aldar rof
49.3	láta fǫlvan jó

Grípisspá

22.8	á mínum hag
27.7	harðugðigt man
33.6	bjarthaddat man
35.7	heitr þú fljótliga fǫr
47.6	af ǫllum hug
52.7	und sólar sjǫt

Reginsmál

14.2 (15.2)	folkdjarfan gram

Fáfnismál

33.3	vill tæla mǫg

Brot af Sigurðarkviða

4.7	á horskum hal
10.4 (9.4)	af ǫllum hug
10.7 (9.7)	er þér fróknan gram
16.3	svalt allt í sal
16.8	í fjánda lið
17.3	er þit blóði í spor
18.8	við inn unga gram

Guðrúnarkviða I

14.3	sá hon dǫglings skǫr

Sigurðarkviða

2.2	ok meiðma fjǫ[l]
7.6	skópu oss langa þrá
9.4	af grimmum hug
22.2	hergjarn í sal
30.4	af ǫllum hug
31.8	inum hvíta lit
35.7	en þeira fǫr
36.7 (37.7)	ok engi [h]lut
37.6 (38.6)	um bróður sǫk
38.3 (39.3)	lék mér meirr í mun
39.7 (36.7)	né á engi [h]lut
42.7	af heilum hug
47.6	vara gott í hug
51.7	um óra sǫk
53.5	muna yðvart far
54.6	at dauðan ver
58.9	ef okkr góð um·skǫp
60.10	af sárum hug
61.7	eða ætti hon hug
62.3	of óra sǫk

Helreið Brynhildar

6.7	er ek ungum gram

Guðrúnarkviða II

3.3	at ek ætta ver
6.4	folkvǫrð at gram
7.6	fyr handan ver
12.10	sem birkinn við
21.7	sva[l]kǫldum sæ

24.4	jórbjúg í sal
38.3	vílsinnis spá
38.7	læblǫndnum hjǫr
39.3	fyr dul ok vil
44.3	þrágjarn í kǫr
Guðrúnarkviða III	
1.3	er þér hryggt í hug
6.2	sunnmanna gram
Oddrúnargrátr	
3.6	endlangan sal
3.8	af svǫngum jó
6.3	hann varði mey
7.3	gekk mild fyr kné
9.4	ok fleiri goð
13.3 (11.3)	at telja bǫl
14.2 (12.2)	í jǫfra sal
25.3	um myrkvan við
Guðrúnarhvǫt	
3.9	eða harðan hug
9.8	á margan veg
18.4	inn blakka mar
Baldrsdraumar	
8.7	ok Óðins son
9.5	ok Óðins son
14.7 (15.7)	ok [í] ragna røk
Rígsþula	
10.5	niðrbjúgt er nef
Hyndluljóð	
24.7	*um lǫnd ok um lǫg*
35.3	*rammaukinn mjǫk*
35.8	*við jarðar þrǫm*
38.3	*svalkǫldum sæ*
Grottasǫngr	
4.3	svá at Fróða man
11.8	setberg ór stað
13.8	gráserkjat lið
14.4	Gothormi lið
19.7	ok brenna bó
	Total: 137

Extrametrical?	
Vǫluspá	
3.3	vara sandr né sær
32.7	sá nam Óðins sonr
38.4 (37.4)	norðr horfa dyrr
38.7 (37.7)	sá er undinn salr
45.11 (44.11)	mun engi maðr
56.3 (54.3)	gengr Óðins sonr
56.10 (54.10)	Fjǫrgynjar burr
Hymiskviða	
3.2	orðbæginn halr
15.5	át Sifjar verr
28.3	þrágirni vanr
34.5	hver Sifjar verr
35.3	aptr Óðins sonr
Þrymskviða	
1.7	réð Jarðar burr
8.5	hann engi maðr
11.5	hann engi maðr
18.1	Laufeyjar sonr
20.1	Layfeyjar sonr
23.2	gullhyrnðar kýr
24.9	drakk Sifjar verr
32.9 (33.1)	svá kom Óðins sonr
Vǫlundarkviða	
22.2 (21.2)	*komið annars dags*
Helgakviða Hundingsbana I	
6.7	sá er varga vinr
20.3	fyrr mun dolga dynr
27.1	varð ára ymr
27.2	ok járna glymr
41.3	vargljóðum vanr
47.7	skalf mistar marr
48.9	hví er hermðar litr
54.3	óx geira gnýr
54.7	át hǫlða skær
56.4	ok in ríkja mær
Helgakviða Hjǫrvarðssonar	
4.3 (5.3)	gullhyrnðar kýr
35.7 (36.7)	Sigrlinnar sonr

Helgakviða Hundingsbana II
13.9 en Hǫgna mær
17.1 nama Hǫgna mær
27.7 (21.7) er barðisk bolr
46.5 skal engi maðr
Grípisspá
7.8 ok í orðum spakr
52.5 munat mætri maðr
Reginsmál
14.3 (15.3) nú er Yngva konr
Fáfnismál
33.7 vill bǫlva smiðr
Sigurðarkviða
55.4 en inn heiði dagr
Guðrúnarkviða III
3.7 er vǫr[ð] né verr
Oddrúnargrátr
8.1 knátti mær ok mǫgr
Baldrsdraumar
4.2 fyrir austan dyrr
7.2 of brugginn mjǫðr
11.3 sá mun Óðins sonr
Rígsþula
26.4 (24.4) suðr horfðu dyrr
Grottasǫngr
22.2 mun Yrsu sonr
Total: 49

Overheavy Final
Vǫluspá
?19.7 stendr á yfir grønn
29.5 sá hon vítt ok um vítt
62.5 (60.5) búa þeir Hǫðr ok Baldr
Vǫlundarkviða
1.5 *þǽr á sævar strǫnd*
33.4 (32.4) *ok at skjaldar rǫnd*
33.6 (32.6) *ok at mækis egg*
Helgakviða Hundingsbana I
4.1 þǽr austr ok vestr
8.1 gaf hann Helga nafn
27.3 brast rǫnd við rǫnd
37.5 kvaztu engi mann
43.5 en í annat sinn
50.9 þar er miklu mest
51.7 látið engi mann
Helgakviða Hjǫrvarðssonar
32.1 (33.1) mik hefir myklu glǫpr
39.7 (40.7) þótt þetta sinn
Helgakviða Hundingsbana II
10.7 ok busti blóð
33.7 ef þú vǽrir vargr
35.5 hafðu halfan heim
?51.1 verðu eigi svá ór
Grípisspá
42.1 mun góða kván
Reginsmál
26.1 (27.1) nú er blóðugr ǫrn
Sigurðarkviða
14.2 jafnlanga stund
38.7 (39.7) né ek annars manns
52.5 neitt Menju góð
Helreið Brynhildar
8.5 gaf ek ungum sigr
9.7 er hvergi lands
10.7 þanns mér førði gull
?13.5 þar varð ek þess vís
Guðrúnarhvǫt
20.5 megi brenna brjóst
Rígsþula
22.8 (20.8) ok keyra plóg
31.8 (29.8) ok hulði dúk
Hyndluljóð
35.6 *naddgǫfgan mann*
40.5 *eitt þótti skass*
Grottasǫngr
19.2 fyrir austan borg
Total: 31 (34)

Numerals and Participles
Hymiskviða
9.3 hugfulla tvá
12.7 en áðr í tvau
38.7 er hann bǽði galt

Vǫlundarkviða	
22.1 (21.1)	*komið einir tveir*
28.5 (27.5)	*nú hefi ek hefnt*
Sigurðarkviða	
67.7	þá er ǫllu skipt
Guðrúnarkviða II	
35.7	en aðra sjau
35.9	en ina þriðju sjau
Guðrúnarkviða III	
4.7	er vit hǫrmug tvau
Oddrúnargrátr	
11.7 (15.7)	sem vit bróðrum tveim
Rígsþula	
47.2 (45.2)	sat kvisti ein
Grottasǫngr	
1.3	framvísar tvær
13.3	framvísar tvær
	Total: 13

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Note on Alphabetisation

Since a number of languages are covered in the following indices, I sort by plain alphabetical order rather than adhering to the conventions more typical for each language. In particular, *æ* comes after *a* (it is neither treated as *ae* nor placed at the end of the alphabet), *ǫ*, *ø*, and *œ* follow *o*, and *þ* follows *t*. The index of verses is alphabetized by title of poem, except in the case of skaldic poetry, which is sorted by skald then poem. In indexing words, asterisks and diacritics are ignored.

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