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5

Dating the Old Norse *Poetic Edda*

A multifactorial analysis of linguistic features

Christopher D. Sapp

John Benjamins Publishing Company

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This work is dedicated to all
whom we lost over the past two years,
especially my Meemaw and my Abuela.

Deyr fé, deyja frœndr,
deyr siálfr it sama;
ec veit einn, at aldri deyr:
dómr um dauðan hvern.
(*Hávamál* 77)

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Acknowledgments

This work began as a study of relative clauses in the history of Icelandic. When I realized that *sá* must have reanalyzed from a demonstrative to a relative marker before the 12th century, I was inspired to look for evidence of this change in purportedly earlier Eddic and skaldic poetry. The audiences of the 22nd and 23rd Germanic Linguistics Annual conferences at the University of Iceland and the University of Texas offered lively discussion and valuable early feedback on this idea. The editors and reviewers of *Language (Historical Syntax)* and *Working Papers in Scandinavian Syntax* prompted me to tighten up the methodology and think more deeply about the theoretical underpinnings of this work. I am especially grateful to Ida Larsson and Johan Brandtler for encouraging me to expand that study into a book-length project.

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and a reviewer for the *Studies in Germanic Linguistics* series provided incisive and detailed feedback on the original, and the work is much stronger than it was a few months ago.

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CHAPTER 1

Introduction

1.1 On the importance of dating Eddic poetry

The twenty-nine poems of the Old Norse *Poetic Edda* are among the most enigmatic poetry of the European Middle Ages. The Eddic poems fall into two types: heroic and mythological. The heroic works draw on material that is also found in Continental European sources such as the German *Nibelungenlied*, chiefly the cycle of legends surrounding Sigurðr (Siegfried), Guðrún and her brothers, and Atli (Attila the Hun). Some of the mythological poems are narratives involving gods such as Þórr and Loki, while others employ a spiritual figure that describes a prophetic vision of Norse cosmology. The most famous of these, *Vǫluspá* ('Prophecy of the Sybil'), describes the creation of the world, the inhabitants of its various realms (gods, giants, humans, the underworld), and *Ragnarǫk* that brings about its destruction.

Nineteenth-century scholars and German Romantics saw in the *Poetic Edda* the remnants of the Viking-age worldview, a culture and religion unique to Northern Europe and not yet influenced by Christianity. They believed that the Eddic poems, despite being contained in a late-13th-century manuscript (Codex Regius, GKS 2365 4to; hereafter CR), were older than any other Scandinavian literature, having survived as an oral tradition despite over two centuries of Christianity. According to this view, the Eddic poems, which are metrically similar to other early Germanic works such as *Beowulf*, represent the native poetic genre inherited from a common Germanic tradition. Other Scandinavian literature, then, must have arisen out of the older, Eddic tradition: according to this view, skaldic poetry (typically associated with court poets of the 9th to the 13th centuries) was an elaboration of the simpler Eddic meters, and Snorri Sturluson's 13th-century treatise the *Prose Edda* was simply a prose explanation of the supposedly much older poetry.

Over the last century, this uncritical view on the age of the *Poetic Edda* has been called into question. The themes of Eddic poetry are very ancient indeed, because some purportedly 9th-century skaldic poetry refers to Eddic sources (Andersson 2004). However, there is clearly some later material in many of the poems, with Christian concepts present even in the mythological poems such as *Vǫluspá* (Gísli Sigurðsson 2013). Attempts to date poems based on their content are problematic: for example, while the Nibelung cycle makes some reference to historical events

of the 4th and 5th centuries, no serious scholar today would date the poems that far back.[1] Rather than seeing skaldic poetry as an elaboration of the older Eddic meter, Andersson suggests that the simple Eddic meter arose late as an imitation of continental traditions. He characterizes the current consensus on the ability to date Eddic poetry as "agnostic resignation" (2004: 171). More recently, scholars such as Gunnell (2016) and Thorvaldsen (2016) have called into question the entire enterprise of trying to establish dates of composition for these poems. McKinnell characterizes this lack of consensus as "[o]ne of the major embarrassments of discussing the mythological poems of the *Poetic Edda*" (2014: 200).

The inability to date poems would be unfortunate, because if the mythological Eddic poems prove to be ancient, they are our best source for pre-Christian beliefs in Scandinavia, while if they are more recent, they illustrate the ways in which Christian scholars in medieval Scandinavia tried to synthesize older material into the mainstream European culture.[2] Similarly, the primary sources for Old Norse heroic legend are mainly represented by the poems of the CR (Shippey 2013: xiii), and the history of these legends "has been the master problem of German philology since its inception" (Kuhn 1952, cited in Andersson 1980: 15). Clearly, then, scholars should continue to attempt to date Eddic poetry in order to shed light on the broader questions of Old Norse and Germanic philology. In fact, Jónas Kristjánsson (1990: 204) insists that dating is fundamental to any historical research, and Myrvoll (2014: 15) notes that the field of philology is especially centered around the dating of texts, because the date of a text informs how that text is to be evaluated and interpreted. Jónas Kristjánsson goes so far to say that "It is impossible to view them [Eddic poems] as isolated phenomena, they must always be seen in some way in the light of their environment" (1990: 204). McKinnell argues that dating mythological poems in particular is important "because the outlook of a tenth-century heathen poet composing about gods in whom he or she genuinely believed is likely to have

1. The Burgundian king Gunnarr is based on the historical king Gundaharius, who was defeated by an army of Huns ca. 437 (Stefán Einarsson 1957: 33). Ermanaric (ON Jǫrmunrekkr) was a Gothic king who died ca. 375 after his kingdom was invaded by the Huns (Stefán Einarsson 1957: 33). Jordanes first records the legend that Ermanaric executed Sunhilda (ON Svanhildr), who was avenged by her brothers Sarus and Ammius (ON Sǫrli and Hamðir). For more on the historical bases of these characters, see Hallberg (1975: 92–95).

2. Lindow notes that "the eddic poems are considered of great value in the study of Scandinavian mythology and Germanic religion," although this value is based on the assumption "that the texts were composed during the pagan period and transmitted unchanged until their recording during the thirteenth century" (1985/2005: 29). Skaldic poetry is less useful, because most mythological poetry in that genre involves popular tales of Þórr, and "much has been lost or garbled" (Lindow 1985/2005: 24–27).

been rather different from that of a Christian of two centuries later, for whom they were no more than an entertaining fiction…" (1994: 15).[3] However, Myrvoll concedes that dating Old Norse poetry can be different from dating other types of texts, because instead of relying on criteria tied to the medium of writing (e.g. paleography), we are dealing with texts that were purportedly transmitted only orally for as many as four centuries before being committed to parchment (2014: 16).

Despite the resignation of scholars such as Andersson, Gunnell, and Thorvaldsen, some work in the last 30 years has breathed new life into the enterprise of dating the *Poetic Edda*. Rather than revisiting the intractable problem of dating the Eddic poems by their content, more recent attempts at dating have concentrated on linguistic and metrical criteria. Fidjestøl (1999) introduces the basic method that I will adopt in my study: because much of skaldic poetry is datable (being composed by known skalds and often describing historical events), Fidjestøl examines some linguistic features whose decline can be tracked over the development of skaldic poetry and then compares these developments to the frequencies found in the Eddic poems (see Chapter 2, Section 2.3 for details). Thus Fidjestøl is able to identify some Eddic poems as genuinely early, while others were composed closer to the time when they were recorded in the 13th-century manuscripts. The research program to compare Eddic and skaldic poetry has been given a further boost by studies such as Gade (2001) and Myrvoll (2014), which have greatly added to the list of criteria for dating skaldic poetry (see Chapter 2, Section 2.3.9). In my research, I expand on the work by Fidjestøl and others by investigating a large number of linguistic and metrical features in Eddic and skaldic poetry. In Chapters 3–7, I evaluate each feature to determine whether it makes for a useful comparison between dated skaldic poetry and undated Eddic verse. In Chapter 8, I build a model for the development of the three most viable dating criteria in skaldic poetry, and I use a statistical technique called a Naïve Bayes Classifier to assign an approximate date to each Eddic poem based on that model. This new dating system can then be compared to other scholars' claims about the age of the Eddic poems.

In the remainder of this chapter, I will give a brief introduction to some of the genres of Old Norse writing (Section 1.2), present my corpora (Section 1.3), and discuss the methodology that will be used in subsequent chapters (Section 1.4).

3. More precise datings are desirable even within broader eras such as pre-conversion and post conversion. Because "the whole mythological system was rather fluid" (McKinnell 1994: 23), it could be important to know whether a given poem represents e.g. 9th- or 10th-century paganism.

1.2 A brief introduction to Old Norse poetry

The earliest stage of North Germanic (ca. 550–1050 CE), termed "Proto-Norse," "Ancient Nordic," or "Common Scandinavian", is rather sparsely attested by runic inscriptions. These inscriptions do not allow a full picture of the language's linguistic features, given the limited graphemic inventory of the runic script and the fragmentary and formulaic nature of the inscriptions. Moreover, most runic inscriptions are from Denmark and Sweden, thus in Norway and Iceland, Eddic and skaldic poetry that are thought to date to this time are potentially richer sources than the few runic inscriptions from those countries (Kjartan Ottosson 2002a: 40). However, the poetic evidence cannot simply be taken at face value, because the poems, if they are indeed that old, must have been transmitted almost exclusively as an oral tradition until being written down starting in the 13th century.[4]

After ca. 1100, the language starts to be attested in the Latin alphabet, at which stage we can speak of "Old Norse" or of individual dialects such as Old Icelandic and Old Swedish (Kjartan Ottosson 2002b: 787). Because most of the pre-1300 manuscripts were written in Iceland (Kjartan Ottosson 2002a: 40), the term "Old Norse" is often synonymous with Old Icelandic. Because the focus of this research is Eddic poetry, some of which may have been composed in Norway before being recorded in mostly Icelandic manuscripts, in this book "Old Norse" (ON) will subsume Old Icelandic and Old Norwegian.

According to Vésteinn Ólason and Sverrir Tómasson (2007: 64–65), the earliest Old Norse work written in Iceland in the Latin alphabet was the early-12th-century chronicle *Íslendingabók* 'The Book of Icelanders,' followed by the *First Grammatical Treatise*. After those works, there was a flourishing of non-fiction and fiction writing in Iceland, including histories of Iceland, royal biographies, the sagas of Icelandic families, Continental-inspired *riddarasögur* 'knights' sagas,' legal texts, sermons, and poetic treatises such as Snorri's *Prose Edda* (Vésteinn and Sverrir 2007: 75). There are far fewer Old Norse texts from Norway. The oldest surviving Old Norwegian text of any length is the *Book of Homilies*, dating to ca. 1200 (Rindal 2002: 802). The other texts are a small number of kings' sagas and knights' sagas, late runic inscriptions on wooden sticks from Bergen, and a large corpus of letters and official documents known as *diplomas* (Rindal 2002: 802–803)

4. Some scholars have argued that many early runic inscriptions are metrical and represent an early form of the Germanic alliterative long line. This is called into question by Gade (2002) and Schulte (2010); Schulte sees only the inscriptions on the Gallehus horn and the Pforzen buckle as truly metrical (2010: 60). Some later runic inscriptions, however, clearly contain poetry, and direct lines can be drawn from the meter of these inscriptions to skaldic meters (Gade 1995).

It is important to note that a great deal of Old Norse literature is antiquarian in nature. Although the peak in literary activity in medieval Iceland was in the 13th and 14th centuries, the stories are largely set centuries before: the 9th-century settlement of Iceland, the 10th- and early-11th-century "saga age" and the rise of the kingdom of Norway, and the legendary past of the *fornaldarsögur*. For this reason, we speak of the 13th- and 14th-century antiquarian revival. It is against this backdrop that the interest in poetry must be understood: scholars such as Snorri Sturluson were interested in preserving the older poetic tradition, not only out of a general interest in their country's mythology and history, but also as a way to revive interest in the art of skaldic composition.

Since the 19th century, scholars have divided Old Norse poetry into two main genres: Eddic and skaldic. However, it is not known whether such a distinction would have been clear to medieval audiences, as the term "Eddic" is a modern one (Abram 2011: 16). In fact, the main criterion for determining whether a poem is Eddic is its presence in the CR or its resemblance to the poems of the CR (Abram 2011; Harris 1985/2005). The title "Edda" is attested in some manuscripts of Snorri Sturluson's work that is now known as the *Prose Edda* or *Snorra Edda* ('Snorri's *Edda*'): "bók þessi heitir Edda" 'this book is called Edda' (Szokody 2002: 981).[5] Snorri's *Edda* is an early-13th-century antiquarian catalog of mythology, skaldic diction, and metrics; Snorri quotes from some of the CR poems in his mythological treatise, and some non-CR Eddic poetry is quoted in the sections on verse-forms (Clunies Ross 2016: 27). When the CR manuscript was discovered by the Icelandic bishop Brynjólfur Sveinsson in 1643, he believed it to be the source of Snorri's work and presumed it written by a predecessor of Snorri, Sæmundr the Learned (Phillpotts 1973: 20). Thus the collection of poetry in Codex Regius came to be known as the *Elder Edda* or *Sæmundar Edda*. Both names, however, are inaccurate, as the CR manuscript is actually some decades younger than Snorri's work, and the text is no longer attributed to Sæmundr. To avoid confusion with Snorri's *Prose Edda*, in this study I will avoid the unmodified use of the term *Edda*; hence the body of poems under investigation will be referred to as either "Eddic poetry" or the *Poetic Edda*.

5. The origin of the term "Edda" is obscure. It is homonymous with the word *edda* 'great grandmother'. Scholars have related it to the early center of scholarship Oddi or the word *óðr* 'poetry', which are semantically promising but not clearly phonologically related to *Edda*. Harris proposes that it is formed from the Latin verb *edere* 'compose' (cf. *kredda* 'the credo' < *credo*), plus a pun on 'great-grandmother' (1985/2005: 74–75). At any rate, by the 14th century it clearly means composition, as shown by phrases such as "the rules of *edda*" (Kari Gade, p.c.).

Skaldic poetry is most easily defined as that which is not Eddic (Frank 1985/2005: 161). The word "skaldic" comes from ON *skáld* 'poet', but skalds composed poems in both the Eddic and skaldic genres. There are about 4,000 lines of Eddic poetry found in CR and a small number of related manuscripts, but about four times that many lines of skaldic verse embedded in hundreds of different prose texts (Frank 1985/2005: 159). The skaldic stanzas serve various purposes within their prose contexts: as examples of poetic diction and kennings in the *Skáldskaparmál* section of Snorri's *Prose Edda*, to lend historical veracity to kings' sagas, and as part of the narrative in the sagas of the Icelanders (Clunies Ross 1998: 59–60).[6]

There are more differences between the two genres than just their manuscript attestation. Eddic poetry is anonymous and thus of obscure origin, while much skaldic poetry is associated with a known skald and thus a historical context. Eddic poetry uses a relatively straightforward style, while skalds seemed to delight in convoluted syntax. Eddic poems are attested in a limited repertoire of meters (*fornyrðislag*, the similar *málaháttr*, and *ljóðaháttr*), all based on the ancient Germanic alliterating long line and lacking any type of rhyme, while skalds could employ one of several meters, many of which involve strict syllable counting: the elaborate *dróttkvætt* (with its complex rules of internal rhyme), *kviðuháttr, hrynhent, runhent*, other minor skaldic meters, or one of the "Eddic" meters (see Appendix 1 for details). Both types of poetry employ *heiti* (poetic synonyms) and *kenningar* (kennings, i.e. poetic circumlocutions with often mythological referents), although "the kennings of the *Poetic Edda* completely lack the amazing exaggerations which may be found in skaldic poetry" and are usually limited to just two elements, e.g. *gulls miðlandi* ('distributor of gold', i.e. 'prince') (Hallberg 1983: 60).[7] And while Eddic poetry treats mythological or legendary episodes, most skaldic poetry is composed in praise of a particular person or in commemoration of a specific event. Frank sums up these differences as follows: "eddic poetry is anonymous, narrative, uncomplicated, natural, objective, popular, concerned with mythic/heroic tradition or mythic/heroic wisdom; skaldic verse is emphatically nonanonymous, occasional, recondite, unnatural, subjective, elitist, concerned with the present, and situation-bound" (1985/2005: 159). However, she goes on to point out that this "dichotomy breaks down when closely examined" (1985/2005: 160); for example, the skaldic *Þórsdrápa* is by a known skald (Eilífr Goðrúnarson) and in *dróttkvætt* but relates an episode of mythology. Frank concludes that the stylistic differences within the skaldic corpus "are usually more striking than the similarities" (1985/2005: 161).

6. On the composition and textual history of the *Prose Edda*, see Lindow (1985/2005: 34 ff).

7. Furthermore, kennings are mostly found in the heroic poems of the CR (113 instances), with only 26 kennings in the mythological poems, of which 12 occur in *Hymiskviða* alone (Hallberg 1983: 60–61).

Thorvaldsen places Old Norse poems on a stylistic scale, with the Eddic style on one pole and *dróttkvætt* poetry on the other, with some types of poetry (e.g. skaldic verse in the meter *kviðuháttr*) between these two extremes (2004: 277).

Even within the *Poetic Edda*, some poems are more skaldic-like than others; the Helgi poems are considered by many scholars to show skaldic influence. *Hymiskviða* and the Helgi poems have a greater number of kennings, and more complex kennings, than other Eddic poems; e.g., *brjótr berg-Dana* ('smasher of the rock-Danes (giants)', i.e. Þórr) and *gǫgl systra Gunnar* ('geese of the sisters of Guðr (valkyries),' i.e. 'ravens') (Turville-Petre 1976: lv).[8] Schorn (2016) offers further discussion and criticism of the genre boundaries of Old Norse poetry, including sub-genres within Eddic poetry, such as the wisdom contest.

With all that in mind, the current study will continue to use the term "Eddic" to refer to the mythological and heroic poems of CR, plus a handful of similar poems, and "skaldic" poetry will be all of the poetry by known skalds, regardless of style. This dichotomy serves the goal of this study–to date the as yet undated poems of CR by comparing them with datable poetry by historically established skalds.

1.3 Corpora

1.3.1 The Eddic poems

As discussed above, the genre of poetry known as "Eddic" consists of the poems of CR together with a handful of poems that are similar in style or content. As an example of Eddic poetry, consider the second stanza of the first poem in the *Poetic Edda, Vǫluspá*:[9]

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8. Turville-Petre (1976) notes that most kennings in Eddic verse are *sannkenningar* (kennings in which the object is straightforwardly described), as when Þórr is referred to in *Vsp* 56 as *Óðins sonr* 'Óðinn's son.' A large number of kennings are used for gods and warriors, as in skaldic poetry (1976: liv), although this could be simply due to the fact that Eddic poetry mainly treats mythological and heroic figures.

9. For Eddic poetry, I follow the spellings, line divisions, and stanza numbers of Neckel/Kuhn's (1983) edition. Word-for-word glosses are my own. The translations are taken from Larrington (2014), sometimes adapted slightly to reflect the ON syntax more closely. Eddic poems are referenced by an abbreviation of the poem name (see Table 1.1) and the stanza number. Quotations from skaldic verse are formatted as in the Skaldic Project (*Skaldic Poetry of the Scandinavian Middle Ages; SkP*). Word-for-word glosses are my own, and translations are adapted from those provided by the Skaldic Project. Works in the Skaldic Project are referenced by the poet's abbreviated name, the poem's abbreviated title, and the stanza number.

(1) *Ec man iotna, ár um borna,*
I remember giants early PRT born
þá er forðom mic fœdda hǫfðo;
sá REL formerly me nurtured had
nío man ec heima, nío íviði,
nine remember I worlds nine giant-woman
miot=við mœran fyr mold neðan.
measure=wood noble for earth below
'I remember giants born early in time, who nurtured me long ago; I remember nine worlds, I remember nine giant-women, the mighty Measuring-Tree below the earth.' (*Vsp* 2)

The Eddic poems can be subdivided two different ways. One division of these poems is by their attestation in the manuscripts; a typical approach is that of Harris (1985/2005: 68–69), who divides Eddic poems into three groups. First are what he calls "the eddic poems proper," consisting of the 29 poems of the CR manuscript. Harris (but not all scholars) includes in this group *Baldrs draumar*, which is not in CR but is found together with some of the CR poems (*Hárbarðsljóð, Skírnismál, Vafþrúðnismál, Grímnismál*, and *Hymiskviða*) and with Snorri's *Prose Edda* in the manuscript AM 748 I b 4° (ca. 1300–25). Secondly, the "eddic appendix" consists of poems that are grouped with the CR poems in later compendia and manuscripts and in modern editions of the *Poetic Edda* (notably Neckel/Kuhn 1983): *Rígsþula, Hyndluljóð, Hlǫðskviða, Grottasǫngr*, and perhaps some others.[10] Thirdly, the so-called *eddica minora* is a corpus of poems that resemble the major Eddic poems in form and theme, collected from the *fornaldarsögur* (prose sagas about legendary figures) by Heusler & Ranisch (1903).[11] Harris recognizes that this division is mostly a matter of convenience. Nevertheless, he argues that the concentration of most scholarship on the "eddic poems proper" of CR is justifiable, because CR represents a well-curated collection of poems, and the degree to which a non-CR poem is considered "eddic" depends on its perceived similarity to the poems in CR (1985/2005: 69). Throughout this book, the terms "Eddic poetry" and

10. While Harris, following Neckel & Kuhn (1983), places *Hlǫðskviða* and *Hildibrand's Death-Song* in the "eddic appendix," Suzuki (2014) follows Heusler & Ranisch in consigning them to the *eddica minora*.

11. Clunies Ross describes the *eddica minora* as containing over 800 stanzas interspersed in nineteen of the *fornaldarsögur*, some of which have so many stanzas that they approach prosimetrum (2013: 187). These use the same meters as Eddic poetry proper, treat legendary material, and are also eddic-like in their light use of *heiti* and kennings (2013: 189–193). A difference from the Eddic poems proper, however, is that while the heroic poems of CR are either dialogues or female elegies, the *eddica minora* contains many monologues by male heroes (2013: 195).

Poetic Edda will refer to the Eddic poems of CR, plus *Baldrs draumar, Rígsþula, Hyndluljóð, Grottasǫngr*, and *Svipdagsmál* where appropriate.

The second way to categorize Eddic poetry is by theme: mythological or heroic. (The plots of these poems are summarized in Appendix 2.) Not simply a modern scholarly construct, this division is reflected in the arrangement of CR itself, with the first 11 poems (mostly mythological) separated by a line break from the remaining 18 (all heroic). With one exception (*Vǫlundarkviða*), the first 11 poems of CR involve descriptions of the Norse mythological cosmos, dialogues among the gods or between the gods and other figures, and narratives of the gods' actions. Mythological poems from non-CR sources include *Baldrs draumar, Grottasǫngr, Hyndluljóð* (which includes a section called *Vǫluspá in skamma*), *Svipdagsmál*, and *Rígsþula*. The heroic poems in CR feature cycles of legends, some known from other Germanic traditions (Sigurðr/Siegfried, Brynhildr/Brünnhild, Guðrún/Kriemhild, Atli/Attila, etc.) and some attested only in Old Norse (Helgi Hundingsbani). In addition to these 18 core heroic poems, Eddic-style poems from outside CR on heroic subjects may include *Hlǫðskviða, Hildibrand's Death-Song*, and the poetry of the *eddica minora*.

The poems included in the corpus, categorized into these groups, are listed in Table 1.1.[12] Excluded from my corpus are two poems that are Eddic-like in style: *Hlǫðskviða* ('Battle of the Goths and Huns') and *Hildibrandskviða* ('Hildibrand's Death Song'). Similarly, stanzas in Eddic style embedded in the *fornaldarsögur* have been excluded (i.e. the *eddica minora*), although these make up "the great majority of eddic verses" (Larrington 2016: 2).[13] A practical reason for excluding these from my study is that they were not included in the studies by Fidjestøl (1999) or Suzuki (2014), thus there are (to my knowledge) no published counts of the particle *of/um* or of metrical types in these poems.[14] In addition, there are some principled reasons to limit the study to the poems listed in Table 1.1. While the included poems were clearly believed by the compiler of CR and other manuscripts to be coherent compositions, this is less clear for the excluded poems, given the way they are interspersed in the prose of the *fornaldarsögur*; for example, *Hlǫðskviða* and *Hildibrandskviða* are each edited in the *Skaldic Project* as a series of individual stanzas rather than as a single poem (Larrington 2016: 3).

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12. See also Table 1 in Abram (2011: 17), who further characterizes each mythological poem (a) as monologue, dialogue, or third-person narrative; (b) as narrative vs. wisdom; and (c) by the god who is the main protagonist.

13. These are discussed in Hallberg (1975: 95ff) and elsewhere.

14. Haukur Þorgeirsson (2012) does include *Hlǫðskviða* in his study of *fornyrðislag* poems. That poem contains one instance of expletive *of* and one clause-late placement of the finite verb (2012: 264).

Table 1.1 Sources, themes, and meters of Eddic poetry in my corpus

Poem (abbreviation)*	Source	Theme	Meter**	# stanzas	# lines†
Vǫluspá (Vsp)	CR	mythological	*fornyrðislag*	66	538
Hávamál (Háv)	CR	mythological	*ljóð. (forn./mál.)*	164	1086
Vafþrúðnismál (Vm)	CR	mythological	*ljóðaháttr*	55	331
Grímnismál (Grm)	CR	mythological	*ljóð. (forn./mál.)*	54	360
Skírnismál (Skm)	CR	mythological	*ljóðaháttr*	42	263
Hárbarðsljóð (Hrbl)	CR	mythological	*forn./mál. & ljóð.*	60	257
Hymiskviða (Hym)	CR	mythological	*fornyrðislag*	39	304
Lokasenna (Ls)	CR	mythological	*ljóðaháttr*	65	396
Þrymskviða (Þrk)	CR	mythological	*fornyrðislag*	32	258
Vǫlundarkviða (Vkv)	CR	myth./heroic	*fornyrðislag*	41	318
Alvíssmál (Alv)	CR	mythological	*ljóðaháttr*	35	211
Helgakviða Hund. I (HH I)	CR	heroic	*fornyrðislag*	56	456
Helgakviða Hjǫrv. (HHv)	CR	heroic	*forn. & ljóð.*	43	318
Helgakviða Hund. II (HH II)	CR	heroic	*forn. (ljóð.)*	51	434
Grípisspá (Grp)	CR	heroic	*fornyrðislag*	53	424
Reginsmál (Rm)	CR	heroic	*ljóð. & forn.*	26	176
Fáfnismál (Fm)	CR	heroic	*ljóð. & forn.*	44	277
Sigrdrífumál (Sd)	CR	heroic	*ljóð. & forn.*	37	255
Brot af Sigurðarkviðu (Br)	CR	heroic	*fornyrðislag*	19	150
Guðrúnarkviða I (Gðr I)	CR	heroic	*fornyrðislag*	27	216
Sigurðarkv. in skamma (Sg)	CR	heroic	*fornyrðislag*	71	565
Helreið Brynhildar (Hlr)	CR	heroic	*fornyrðislag*	14	108
Guðrúnarkviða II (Gðr II)	CR	heroic	*fornyrðislag*	44	350
Guðrúnarkviða III (Gðr III)	CR	heroic	*fornyrðislag*	11	80
Oddrúnargrátr (Od)	CR	heroic	*fornyrðislag*	34	250
Atlakviða (Akv)	CR	heroic	*forn./mál.*	43	351
Atlamál in grœnlenzku (Am)	CR	heroic	*málaháttr*	105	764
Guðrúnarhvǫt (Ghv)	CR	heroic	*fornyrðislag*	21	174
Hamðismál (Hm)	CR	heroic	*forn./mál. (ljóð.)*	31	222
Baldrs draumar (Bdr)	AM 748 I b	mythological	*fornyrðislag*	14	114
Rígsþula (Rþ)	Wormianus	mythological	*fornyrðislag*	48	366
Hyndluljóð (Hdl)	Flateyjarbók	mythological	*fornyrðislag*	50	390
Grottasǫngr (Grt)	*Prose Edda*	mythological	*fornyrðislag*	24	182
Svipdagsmál (Svm)	paper mss.	mythological	*ljóðaháttr*	66	397
Total				**1,585**	**11,341**

* I follow Larrington et al.'s abbreviations and normalization of the Old Norse spellings of the titles (2016: xi–xii).

** These characterizations are based on Suzuki (2014: 2). Where two meters are listed, the first is the most frequent. A meter in parenthesis indicates that only a small proportion of lines (less than 10% of the poem) is in that meter. Suzuki's designation "*fornyrðislag/málaháttr*" indicates poems with sometimes four, sometimes five metrical positions.

† Counts of stanzas are based on the Neckel/Kuhn (1983) edition for all poems except *Svm*, for which I used Bugge (1965). Throughout the book, I will follow the convention in studies of ON poetry of counting half-lines, paired as odd and even lines (Gade 2012: lxvii), rather than the practice followed when analyzing other Germanic alliterative poetry of counting long lines divided into an on-verse and an off-verse. Unless otherwise noted, "line" in this book means "half-line" (or the "full lines" of *ljóðaháttr*). The line counts for the CR poems are taken from Fidjestøl (1999: 221), and those for the four remaining poems are my own.

1.3.2 The skaldic poems

As mentioned above, there is about four times as much skaldic poetry preserved as there is Eddic poetry. Skaldic poetry comes from a much larger number of manuscripts and many more meters are represented. Nevertheless, my skaldic corpus is similar in size to my Eddic corpus. This is because I have carefully selected only skaldic poetry that can be used to help date the Eddic poems. To this end, the poetry in my skaldic corpus meets the following criteria.

First, only poems that are listed in the Skaldic Project (*SkP*; Clunies Ross et al. 2012) as being composed by a known skald are included in my study. Poetry not associated with a known skald is usually more difficult to date with any certainty, thus the many anonymous skaldic poems have been excluded.

Secondly, I have selected only poems that occur in volumes I, II, III, and VII of *SkP*. Volumes I–II are the poems attested in historical sources (mostly from the kings' sagas), volume III contains those cited in *Snorra Edda* and the metrical treatises, and volume VII consists of poetry on Christian topics.[15] The dating of these poems is more secure than some of the poetry attested in the sagas of Icelanders. As Bjarni Einarsson (1974) argues, in historical works such as the kings' sagas, poetry often functions as evidence for the veracity of the historical events described in the prose. On the other hand, in the sagas of Icelanders, the function of poetry is often for entertainment (Bjarni Einarsson 1974) and the attestation of many of these stanzas continues to be disputed (see discussion of Gade 2001 in Chapter 2). The dates of the poetry in the sagas of the Icelanders need to be investigated further and cannot serve as a chronological control in the current study, thus these stanzas have been excluded from the corpus.[16] In addition to poetry from the sagas of the Icelanders, I have excluded most poetry from the *fornaldarsögur*.[17]

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15. I exclude verses within the metrical treatises that are by the author of the treatise (Snorri's verses *Háttatal* and Rǫgnvaldr jarl and Hallr Þórarinsson's verses in *Háttalykill*), as these verses represent a scholarly endeavor. However, verses by other skalds cited in the metrical treatises are included, because the author of the treatise considered such verses authentic.

16. The skalds Eskál, Hfr, ÞKolb, and Kolb are generally included in the database as they are largely attested in the included volumes. However, the following poems by these skalds, which occur in the skald sagas, have been excluded from the study: Eskál's *lausavísur* in *Egils saga*, Hfr's *lausavísur*, ÞKolb's *Gunndr* and *lausavísur*, and Kolb's *lausavísur* from certain sagas. Verses by the skald Þorm that appear in vol. 1 of *SkP* have been excluded from all analyses, because his other poetry is attested in *Fostbrœðra saga*.

17. These verses are collected in volume VIII of *SkP*. Most verses in this volume are excluded from my study, as these sagas are situated in the distant, legendary past, and the verses in them were certainly not composed by the legendary characters who utter them in the sagas. Many of these verses were probably composed by the saga author, but like the Eddic poems proper, the poems of the *fornaldarsögur* need to be dated on linguistic grounds. However, I have chosen to include

Thirdly, only poems by skalds who are represented in *SkP* by 80 or more lines have been included, following Myrvoll (2014). While the number 80 might seem arbitrary, it turns out that skalds with fewer than 80 attested lines do not provide enough examples of the linguistic phenomena that I use for dating.[18]

Fourthly, only skaldic poems dated to before 1250 have been included. Any poems after that date cannot serve as the basis for comparison with Eddic poetry, as the extant CR dates from the ca. 1270.

The skalds and their poems that make up my skaldic database are presented in Table 1.2.

Table 1.2 Skaldic poetry analyzed in my corpus

Skald (abbreviation)	Poem(s) in database	Dates (*SkP*)	50-year bin*	# stanzas	# lines**
Bragi inn gamli Boddason (Bragi)	*Rdr, Þórr, Troll, lv, frag*	825	9th	27	146
Þjóðólfr ór Hvini (Þjóð)	*Haust, Har, Yt, lv*	850	9th	57	569
Þorbjǫrn hornklofi (Þhorn)	*Gldr, Harkv, lv*	900	10th early	33	244
Glúmr Geirason (Glúmr)	*Eir, Gráf, lv*	950–970	10th late	17	100
Eyvindr skáldaspillir Finnsson (Eyv)	*Hák, Hál, lv*	961–985	10th late	48	344
Einarr skálaglamm Helgason (Eskál)	*Hákdr, Vell, Hardr, lv*	975–986	10th late	43	268
Tindr Hallkelsson (Tindr)	*Hákdr, lv*	987	10th late	13	96
Hallfreðr vandræðaskáld Óttarsson (Hfr)	*Eirdr, ErfÓl, Hákdr, Óldr*	990–1001	11th early	44	294
Eilífr Goðrúnarson (Eil)	*Þdr, frag*	1000	11th early	24	168
Óláfr inn helgi Haraldsson (Ólhelg)	*lv*	1010–1025	11th early	9	92
Sigvatr Þórðarson (Sigv)	*Ást, Austv, Berv, ErfÓl, Erl, Erlfl, Knútdr, Nesv, Óldr, Tryggfl, Vestv, Víkv, lv*	1010–1040	11th early	164	1246

Merlínusspá I and *II*, despite the fact that they are found in the *Breta sögur*, because they can be attributed to the early-13th-century poet/scholar Gunnlaugr Leifsson (Clunies Ross 1998: 83).

18. Of 27 skalds who meet all criteria but have fewer than 80 attested lines, 21 have only one relative clause, thus they would skew the picture of the frequency of the different relative clause types by showing either 0% or 100% of *sá er*. With respect to the expletive particle, 20 of these poets have no instances of *of*; with so few lines, it is impossible to say whether the lack of the particle is due to the poems being late or simply too short. Similarly, 20 of these poets do not have a single attested use of negation. In contrast, the skald just over the threshold (Þfagr, with 90 lines) has 4 relative clauses, 2 instances of *of*, and 5 clauses with negation.

Table 1.2 (*continued*)

Skald (abbreviation)	Poem(s) in database	Dates (*SkP*)	50-year bin*	# stanzas	# lines**
Þórðr Kolbeinsson (ÞKolb)	*Eirdr*	1014	11th early	17	126
Óttarr svarti (Ótt)	*Hfl, Knútdr, Óldr, lv*	1018–1026	11th early	40	263
Þórarinn loftunga (Þloft)	*Glækv, Hfl, Tøgdr*	1028–1032	11th early	18	138
Haraldr harðráði Sigurðarson (Hharð)	*Gamv, lv*	1040–1054	11th early	21	125
Þjóðólfr Arnórsson (ÞjóðA)	*Har, Magn, Magnfl, Run, Sex, lv*	1033–1066	11th late	92	615
Arnórr jarlaskáld Þórðarson (Arn)	*Hardr, Herm, Hryn, Magndr, Rǫgndr, Þorfdr, lv*	1046–1070	11th late	94	581
Þorleikr fagri (Þfagr)	*Sveinn, lv*	1051	11th late	13	90
Steinn Herdísarson (Steinn)	*Nizv, Óldr, Úlffl, lv*	1062–1070	11th late	25	192
Gísl Illugason (Gísl)	*Magnkv, lv*	1096–1104	12th early	21	168
Markús Skeggjason (Mark)	*Eirdr, Knútr, frag, lv*	1100–1106	12th early	37	218
Einarr Skúlason (ESk)	*Elf, Eystdr, Geisl, Hardr I–II, Harkv, Ingdr, Øxfl, Run, Sigdr I–II, lv*	1120–1159	12th late	147	1015
Ívarr Ingimundarson (Ív)	*Sig*	1140	12th early	45	324
Rǫgnvaldr jarl Kali Kolsson (Rv)	*lv*	1145–1154	12th early	35	260
Gamli kanóki (Gamlkan)	*Has, Jóndr*	1180	12th late	69	552
Hallar-Steinn (HSt)	*Rst, frag*	1200	13th early	42	298
Gunnlaugr Leifsson (GunnL)	*Merl I–II*	1200†	13th early	171	1498
Bjarni biskup Kolbeinsson (Bjbp)	*Jóms*	1223	13th early	45	324
Total				**1411**	**10354**

* For skalds whose work spans more than one 50-year bin, assignment to the bin is based on the dates of the majority of verses in the database by that skald. For example, although ESk composed some poems as early as 1120, most of the examples in the database are from *Geisl*, composed in 1153.

** Number of stanzas as reported on the *SkP* website. Number of half-lines for most skalds are as reported in Fidjestøl (1999). Number of lines for HSt and Bjbp are as in Myrvoll (2014). When I have excluded certain stanzas (in the case of Eskál, Hfr, and ÞKolb) or when numbers are not reported by Fidjestøl or Myrvoll (Ólhelg and Rv), the counts are my own.

† According to von See et al. (2019: 72); at any rate the death of Gunnlaugr in 1218 is the definitive *terminus ante quem*.

1.4 Overview of book

Chapter 2 discusses the scholarly debate on the age of Old Norse poetry, especially Eddic poetry. After presenting the attempts to date the Eddic poems on literary grounds, I take a detailed look at linguistic and metrical methods used by previous scholars to date both Eddic and skaldic poetry. Finally, I lay out the methodology used in the rest of the book, which is to date Eddic poems based on the frequencies of specific linguistic features, using skaldic poetry as a control to establish a timeline for each change. The choice of the dating features is also justified in that section.

The next several chapters are devoted to the individual dating criteria. Chapter 3 examines a well-established dating criterion for Old Norse poetry: the decline of the particle *of/um*. Chapter 4 discusses the use of different negation types as a dating feature, particularly the rise of *eigi* at the expense of older negation with clitics. In Chapter 5, changes in word order over time, well understood in skaldic poetry, are examined in the Eddic corpus. In Chapter 6, a novel criterion is proposed: the rise of relative clauses introduced by the complex *sá er*. Chapter 7 considers a number of metrical features that might be used to date Eddic poems.

Having examined each criterion separately, Chapter 8 selects the three most successful criteria from the previous chapters for a multi-factorial analysis. A statistical method called the Naïve Bayes Classifier is used to assign each Eddic poem to a 50-year period, based on its similarity to skaldic poems of that period. The result is a new absolute chronology for the *Poetic Edda*, which to some degree confirms some previous scholarship, but also refines the dating of specific poems with interesting implications.

CHAPTER 2

Previous scholarship and methodological considerations

2.1 The debate on the age of Eddic and skaldic poetry

Gade notes that much skaldic poetry can be dated based on linguistic and metrical features, but dating Eddic poetry "is notoriously difficult and has sparked considerable debate" (2002: 857). The history of scholarship on the dates of Eddic poems is much too long to be treated exhaustively here: Fidjestøl's (1999) survey is over 180 pages and only manages to cover scholarship through the 1940's. Therefore, this section offers only the broadest outline of the literary debates on the dating of these poems. Section 2.2 discusses scholarship on the dating of individual Eddic poems, again mostly on literary grounds. Section 2.3 turns to more objective linguistic and metrical criteria, and Section 2.4 presents my own assumptions and methodology.

2.1.1 Early speculation; early scholarship

Some 17th- and 18th-century readers considered the Eddic poems truly ancient, predating the Bible or even being composed by Óðinn himself (Fidjestøl 1999: 9–10). In the early 19th century, scholars such as the Grimm brothers debated the age of the poems based on "internal arguments" (subjective and religious aspects), emphasizing the original, "purer" poems (Fidjestøl 1999: 34ff). During this time, some of the poems were dated as far back as the 5th century (de Vries 1941: 34), a somewhat more reasonable date that is nevertheless implausibly early. According to Hollander (1927), "practically all scholars" before himself took the pagan subject matter of Eddic poetry as evidence that it was composed before the conversion of Iceland to Christianity (in the year 1000 CE). As an example, the authoritative Finnur Jónsson argued that "it follows from their very contents and their relation to paganism that they were composed in heathen times. Precisely this fact is an excellent point of departure for dating them" (1907: 35, as quoted in Hollander 1927: 96). This point of departure, however, is problematic because of "the continuance of pagan tradition beyond the Conversion and the antiquarian interests of later writers" (Larrington 1992a: 16). As Simek (2004: 377) notes, there is no such assumption of heathenness when Greek or Roman gods are treated seriously in works from eras such as the Renaissance.

The 1870's mark the real beginning of modern scholarship on the *Poetic Edda*, and the debate then already took much the same form as it does today, with some scholars dating the poems to the Viking Age and others to the Icelandic antiquarian revival (Fidjestøl 1999: 3). Jessen (1871) was an early voice against the antiquity of the Eddic poems; he argued on stylistic grounds that the extant poems do not represent the oldest mythological or heroic works of Old Norse but are rather a learned reinterpretation of older material in 12th-century Iceland. A key figure among those dating the poems early was Bugge, who in an 1876 lecture argued on linguistic and metrical grounds that the poems must date to the Viking Age, no earlier than 800 (Ulvestad 1954: 53). Since then, there has been consensus that the *terminus post quem* for the composition of Old Norse poems is the onset of syncope, because reconstructing poems to their pre-syncope forms results in unmetrical lines (de Vries 1934; Ulvestad 1954: 55). However, there is runic evidence that syncope occurred as early as the 7th century (Bandle et al. 2002: 711–712), so perhaps the *terminus post quem* of some poems can be set back to the eighth century (Ulvestad 1954: 55). De Vries suggests that even this earlier date for syncope need not have been a "catastrophe" for the poetic tradition: perhaps some pre-syncope lines could have been modified as they were passed down into the post-syncope era (1941: 35). Jónas Kristjánsson gives the specific example of the 5th-century runic inscription on the Norwegian Tune stone, which is arguably metrical; it maintains its "metrical character" when phonologically normalized to 13th-century Old Icelandic forms (1997: 28).

Around the turn of the 20th century, Finnur Jónsson wrote a history of Old Norse literature and a survey of poetic language (1st ed. 1894–1901; 2nd ed. 1920). Fidjestøl considers these works some of the most influential in Eddic studies for several reasons: they were the most comprehensive descriptions of these poems for about a century (until von See et al.'s 1997–2019 *Kommentar*), Finnur claimed based on similar linguistic forms that Eddic and skaldic poetry are contemporaneous, and Finnur attempted to date each individual Eddic poem (Fidjestøl 1999: 104–105). The Eddic corpus as a whole is dated by Finnur to the period between 800, on the basis of syncope, and 1100, based on hiatus forms (1920: 41, 43). However, his dates for individual poems are less secure and have been widely criticized, being determined primarily by his interpretations of the poems' religious meanings and natural settings (Ulvestad 1954: 55–56). Finnur's dating scheme will be compared to other scholars' and discussed in detail in Section 2.2.21 below.

Other scholars began to argue for multiple dates of composition for the *Poetic Edda*: Andersson (1985) attributes this to Andreas Heusler and later Wolfgang Mohr. These two scholars saw the *Poetic Edda* not as a static work, but as a multi-layered, "live and growing form, subject to changes in style and taste, and to influences from abroad" (Andersson 1985: 51). Heusler (1906) proposes three rough periods

of composition: the common Germanic or heroic stage, the Viking Age, and the post-conversion Icelandic period. Similarly, Hollander (1927) argues that in addition to pagan motifs, there is possible Christian inspiration for scenes from certain Eddic poems, such as Guðrún's ordeal by water in *Gðr III* (paralleling St. Óláfr's ordeal) and the hanging god motif of *Háv*. Hollander claims that while some poems may be early, many are products of a "Renaissance movement," i.e. the Icelandic antiquarian revival: "the whole literary activity of men like Ari, Snorri, Saxo, and the many unnamed authors … shows that they were able to project themselves with remarkable success into the spirit of heathen antiquity" (1927: 105).

De Vries, like Hollander, argues that content is subjective and thus a poor criterion for dating; the linguistic criteria are stronger (1934: 254). De Vries mentions criteria such as hiatus words and alliteration with *vr-*, which will be discussed below. He also notes that while *Grp*, widely considered late, consistently has 8-line stanzas that are characteristic of skaldic poetry, possibly older poems (*Hym, Þrk*, and *Vsp*) are less regular in the number of lines per stanza, giving an "antique impression," although such irregularities could also be due to errors in the transmission of the poems (1934: 256). However, Schorn (2016) argues that variation in the length of stanzas is part of Eddic style, allowing the poet to slow down or speed up the pace of the narrative, as in the relatively late poem *Od* (Quinn 2009: 326). Moreover, the earliest recorded *fornyrðislag* stanza, recorded on the early-9th-century Rök stone, is a perfectly regular stanza with 8 half-lines (Gade 2002: 859). Hence de Vries' idea that regular stanzas are a sign of younger poetry is not a reliable criterion for dating.[1] Other metrical criteria considered by de Vries are similarly inconclusive (1934: 256–257). Although de Vries warned against using a poem's content for dating, he does argue for one content-based dating criterion: the mention of pagan gods. In skaldic poetry, god-based kennings drop off sharply after conversion and are hardly used from 1000 to 1150, presumably because skalds did not wish to be accused of harboring pagan sympathies; by the end of the 12th century, such kennings were safe to use again and begin to reappear (1934: 259–261). Extending this observation about skaldic poetry to Eddic verse, de Vries argues that the mythological poems of CR were unlikely to have been composed 1000–1150, leaving two possibilities: they were either composed pre-conversion and then transmitted orally until the 12th century, or they were composed after the 12th century during the antiquarian revival. De Vries concludes that the *Poetic Edda* reflects a compilation of poems from these two types of transmission (1934: 262–263).

1. Similarly, an unsuccessful attempt was made by Neckel to date poems based on the frequency of enjambment, which he assumed to be a feature of later poetry (1908, cited in Stefán Einarsson 1957: 23–24).

As de Vries (1934) does for the mythological poems, Heusler (1941), assigns the heroic poems of the *Poetic Edda* to two periods (having dispensed with the common Germanic stage of his 1906 study), primarily based on style. The oldest poems – *HH II, Rm, Fm, Br, Hlǫðskviða, Vkv, Hm*, and *Akv* – are full of action and are dated by Heusler to the early Viking Age, reflecting a shared Germanic culture (an interpretation sharply criticized by Sävborg 2004). Heusler proposes that a much later group of poems were composed in Iceland in the 11th and 12th centuries, as these are more focused on explaining the characters' inner feelings: *Sg, Am*, and the elegiac *Gðr I, Gðr II, Ghv, Od*, and *Hlr*. Einar Ól. Sveinsson (1962: 219) points out that there is even some evidence in the CR manuscript itself that the 13th-century scribe(s) who compiled it thought of some poems as early and others as more recent: one of Guðrún poems (probably *Gðr II*) is referred to in a prose passage as "Guðrúnarqviða in forna" ('the ancient poem of Guðrún'), and a prose sentence after *Hm* states "Þetta ero kǫlluð Hamðismál in forno" ('These are called the ancient words about Hamðir').

While the characters and motifs of many of these poems are clearly of continental origin (the Hunnish and Gothic kings of late antiquity, blended with the West Germanic Nibelung tradition), a few 20th-century scholars go further in claiming West Germanic linguistic influence on the extant forms of the Norse Eddic poems. Kuhn (1933) famously divided the Eddic corpus into "native matter" poems (the mythological poems plus the three Helgi lays) and "foreign matter" poems (*Vkv* and all the Niflung poems) based on the strictness of certain metrical rules (see Chapters 4 and 5 for details). Foreign influence, specifically from Old English, on the extant *Vkv* is plausible (see Section 2.2.10 below), but Harris finds arguments that other poems have West Germanic models to be less than convincing (1985/2005: 102–106). Still, Andersson argues that the very meter of the Eddic poems points to their West Germanic origins: "They are composed in the standard alliterative meter known from Old English, Old High German, and Old Saxon poetry, and they have the same dimensions as the Hildebrandlied …" (2004: 178). Andersson seems to be assuming that Old Norse borrowed the alliterative long line from West Germanic, a problematic account for the origins of Old Norse poetry.[2]

While the discussion above has largely concentrated on the earliest plausible dates for the composition of Eddic poetry, the latest possible date of composition

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2. Alliterative lines appears in early runic inscriptions from Scandinavia. If the 5th-century Gallehus horn truly bears a poetic inscription as assumed by many scholars, then the four-stress alliterative long line known from *Beowulf, Hêliand, Hildebrandslied*, and Old Norse *fornyrðislag* dates back nearly to Proto-Germanic times. See Gade (1995: 232ff) for a convincing argument that many of the conventions of Old Norse poetry were in place by the 9th century, as attested on the Rök runestone.

is easier to pin down, as CR dates from roughly 1260–1270. Many consider the *terminus ante quem* of the *Poetic Edda* to be 1230, the date of the *Prose Edda*, as Snorri cites Eddic poems in the *Gylfaginning* section of that work. Ulvestad notes that some poems indeed may have been composed as late as 1200, as they show some late phonological changes: "the shift of stress in diphthongs, the quality of unstressed *u* and *i*, the contracted forms of various word forms, etc." (1954: 57). Dronke (1969) arrives at a similar *terminus ante quem* based on the CR manuscript itself: the mythological poems (including *Vkv*) share scribal characteristics and thus stem from one pre-CR collection (which would explain why CR groups *Vkv* with the mythological rather than the heroic poems), while the remaining heroic poems were collected by a different scribe. The fact that these two groupings preserve their independent characteristics "would seem to exclude the possibility of more than one intermediary between the two independent collections and the extant Codex" (1969: xii). Thus "scribal and linguistic evidence" suggests that the poems of the CR came into their extant form (in a now lost exemplar) between 1200 and 1240, before being copied into CR circa 1270 (1969: xii). Although ca. 1270 is the date of the extant *Poetic Edda* as recorded in CR, the Eddic tradition continued in some form for centuries, as there are neo-eddic poems in the 14th-century *fornaldarsögur* and 17th-century imitations of mythological poetry (Clunies Ross 2016: 31).

2.1.2 More recent scholarship

According to Harris (1985/2005: 93), the old *terminus post quem* for Eddic poetry of 700 based on syncope is now abandoned, as no serious scholar dates any of the poems that early, and scholars have tended to date poems later and later. The "two modern literary histories" (Einar Ól. Sveinsson 1962 and de Vries 1941/1942) both propose three periods: roughly 850–1030, 1030–1150, and 1150–1300, and with a few exceptions (e.g. *Skm*) they agree on which poems belong to which period (Harris 1985/2005: 93). Outside these two works, however, Harris notes disagreement among scholars, with ranges of dates for a particular poem spanning as many as three centuries (see the discussion of individual poems below). Andersson, like other scholars, notes the trend to date poems increasingly later, to the point that "there is now considerable doubt whether any of the Eddic poetry that we have is older than the twelfth century" (2004: 177). However, although Andersson considers the extant Eddic poems to be late, he concedes that Eddic motifs appear in older sources such as Bragi's 9th-century shield poem, so "there were at least early precursors presumably in verse form. 'Eddic' poetry as such is probably not a late invention" (2004: 177). Sävborg makes a sweeping critique of the scholarly consensus since Heusler that some heroic poems are early while the elegiac ones

are late; he argues that any attempt to date Eddic poetry should disregard previous dating schemes and start from scratch using more objective methods (2004: 99).

Jónas Kristjánsson (1997: 29–30) identifies five lines of argument that scholars have used in attempts to date Eddic poems. First are the connections in theme or vocabulary between particular Eddic poems and certain skaldic stanzas, although the direction of borrowing is rarely clear.[3] Secondly, after the 11th century only Icelandic skalds composed in the Eddic style, thus any late Eddic poetry was probably composed in Iceland. Third, Snorri used some Eddic poems as sources for his *Prose Edda*; if Snorri considered these poems to be ancient and authentic, perhaps they are. Fourth, some scholars would consider a poem late if it is not mentioned by Snorri (which Jónas considers a weak argument). Fifth, Jónas considers linguistic and metrical features to be reliable dating criteria. Not mentioned by Jónas but very prominent in this debate are the role of classical learning and the influence of Christianity on certain Eddic poems, which are problematic criteria due to their interpretive and subjective nature. For example, Harris discusses attempts to show that *Háv* was influenced by such sources as Seneca's letters and the late antique *Disticha Catonis*, but he concludes that all such arguments are unconvincing (1985/2005: 106–111).

Dating Eddic poetry seems particularly difficult because most of these poems were probably transmitted orally before being committed to parchment; consequently, an individual poem may contain multiple diachronic layers. Harris notes that early attempts to apply Lord's (1960) oral formulaic theory to the composition of Old Norse poetry were not very successful (Harris 1985/2005: 112–114), but Acker, surveying scholarship through the 1990's, concludes that the oral-formulaic approach to the *Poetic Edda* "has made a foothold" (1998: 108). At any rate, there is a good deal of evidence that Eddic poetry was recited. One example is recorded in *Heimskringla*: before the battle of Stiklarstaðir, the skald Þormóðr recited the poem *Bjarkamál*, which, although by a known skald, draws on legendary/heroic material and uses the Eddic meter *málaháttr* (Harris 1985/2005: 118). Clunies Ross argues that telling only an episode of a larger story, as all of the Eddic poems do, is characteristic of an oral culture; compressed references to myths familiar to the audience, e.g. kennings, "would have given audiences great aesthetic and intellectual pleasure" (Clunies Ross 1994: 27). Several scholars have seen some of the Eddic poems as dramas, to be performed before an audience: Gunnell points out that certain *ljóðaháttr* poems (*Grm, Vm, Háv, Skm, Hrbl, Ls, Fm, Sd*) center on a

3. Schjødt cautions against using similarities between any two poems as evidence for influence of one on the other; likely there were many more mythological poems that were transmitted orally but never written down, and one cannot rule out the possibility that the two extant poems borrowed the same material from one or more lost sources (2016: 137).

single episode and feature direct speech by one or two characters, and he notes that CR contains marginalia indicating the speaker, a feature otherwise used in Scandinavian manuscripts only in dramatic works (2004: 238–239). Gunnell even goes so far as to suggest how these dramas might have been staged: *Háv* and *Vm* indoors, but *Grm, Skm, Fm*, and *Sd* outdoors lit by fire (2004: 239–241; 2016). Dronke likewise characterizes *Skm* as a play (1997: 386).

More recently, scholars have called the sharp oral/written dichotomy into question. Kellogg argues that "early European vernacular texts … represent a collaboration between two contemporaneous cultures," with "a spectrum of possibilities … between orality at one extreme and literacy at the other" (1991: 90). Hermann (2017: 32) tries to settle the debate on nature of Eddic poems by labelling them "oral-derived texts" in Foley's (1991) terms; they show many features of oral composition (allusion, repetition, and formulas) but are recorded in a rich manuscript tradition.[4] The resignation of scholars such as Hollander (1963) and Andersson (2004) about the ability to date Eddic poems is attributed by Hermann to "text-bound ideas of 'works' as finalized textual units"; questions of "exact dating and arranging the poems in chronological order are organizing principles that are not readily adaptable to … oral derived texts" (Hermann 2017: 33). Furthermore, she notes that that because scholarship has focused on oral aspects of Old Norse genres, "the orality/literacy pair has predominantly been conceived diachronically, i.e., first there was orality, then writing" (Hermann 2017: 44). This is a methodological error, however, because scholars are increasingly aware that multiple oral versions of a myth can exist simultaneously and that variation in versions of written texts can be attributed to different contexts and ideologies (e.g. Saxo's and Snorri's wildly different treatments of the Baldr myth); moreover, content can be transmitted "in parallel oral and literary media …" (Hermann 2017: 44–45). Finally, Harris suggests that we should not speak of the date and provenance of the extant poems, "projecting 'the poem' back into the past", but rather aim to find "the probable origin of the oral tradition leading to" the preserved version of a particular poem (2016: 43).

Simek (2004) warns us not to view all medieval material as "sources", in contrast to post-medieval "reception." Instead, some medieval works such as those by Snorri are also a kind of "reception" or scholarship of earlier material: "twelfth- and thirteenth-century Icelanders … are in some way making use of this religion for their own ends, whether these result in research, works of art, or political machinations" (Simek 2004: 377). Simek argues that the Eddic poets had done something

4. Hermann states that it is now "generally accepted" that Eddic poems were originally oral; however, "disputes have nevertheless arisen concerning eddic poems and their types of orality, and whether these poems are best understood from notions of improvisation, composition-in-performance, or memorization…" (2017: 33).

similar: *Grm* and *Vm* use earlier material for scholarly or artistic purposes, whereas the poets of *Rþ* and *Skm* make political statements about the royal power of the Norwegian kings (Simek 2004: 380). Abram maintains that, far from being the oldest Old Norse poetry, the *Poetic Edda* in its late-13th-century attestation is "one of the *last* great monuments of pagan Norse mythology," carefully arranged by the antiquarian compilers and elaborated upon with prose sections (Abram 2011: 222).[5]

Summing up the scholarship on the age of the *Poetic Edda*, the consensus today is that the poems were composed at various stages between the 9th and the early 13th centuries, with some scholars tending to date the poems across a wide range of dates and others arguing for mostly later dates. Fidjestøl finds "an unexpected stability in the general form of the controversy," which implies to him that the problem of dating these poems may be unsolvable (1999: 187).

2.1.3 Dating skaldic poetry

The earliest known composer of skaldic poetry is named Bragi Boddason the Old, who supposedly lived in Norway in the 9th century. There has been an assumption since the mid-19th century that Eddic poetry is older and that skaldic poetry developed from it, an assumption which has been challenged from the beginning (Fidjestøl 1999: 55). Abram (2011: 17) notes that it is a mistake to assume that a given Eddic poem is older than skaldic poetry simply because it is in the Eddic group, given that the designation "Eddic" as such is largely due to how the poems are transmitted. In fact, Frank notes that some skaldic poems are probably older than the earliest Eddic poem, and the early development of skaldic meters probably influenced Eddic poems in the use of kennings, syllable counting, and stanzaic structure (1985/2005: 160).[6] However, there are two differences between the genres with respect to dating. First, Eddic poetry lacks known poets and historical contexts, while this information is extant for much skaldic poetry (Clunies Ross 1998: 59). Second, the oral nature of Eddic poetry means that the poems were probably altered with each transmission, while the stricture of certain skaldic meters allowed some skaldic stanzas to be passed down orally in a fixed form (Hermann 2017: 33–34).

Unlike Eddic poetry, which exists as a small but relatively coherent collection, skaldic poetry is embedded in several kinds of prose texts: treatises on poetics

5. Abram (2011: 223–226) elaborates on these prose interspersions, the reasons for them, etc.

6. Frank also notes that skaldic scholarship has concentrated on the Viking age poems, even though the later poems outnumber them roughly four-to-one (1985/2005: 161). Worse, "the first two hundred years of the poetry survive only as quotation in later writers", such as Snorri's works (Frank 1985/2005: 162).

such as Snorri's *Skáldskaparmál*, where the poems are given as examples; the kings' sagas, in which the poems are often cited as historical evidence; and as quotations by various characters in the sagas of the Icelanders. Bjarni Einarsson cautions that quotations in the sagas have varying functions: in the kings' sagas, skaldic stanzas are used by the saga writers as sources, while in the sagas of the Icelanders poetry is mostly for "entertainment … an integral part of the artistic fabric of the text" (1974: 124). On the sagas, Turville-Petre (1976) notes that although stanzas attributed to some skalds may be authentic, those by Grettir Ásmundarson and Gísli Súrsson are of doubtful authenticity. However, "[e]ven if some of the verses are spurious, they can, in many cases, be proved by linguistic argument to be much older than the prose texts in which they are embedded" (Turville-Petre 1976: 17). In fact, the tendency to quote skaldic poetry in the sagas led to a revival of skaldic composition in the 12th-13th centuries: saga writers added (inauthentic) *lausavísur*, and skalds of the era made new compositions about historical figures, e.g. *Krákumál* about the legendary Ragnarr loðbrók (Clunies Ross 1998: 60).

In an overview of scholarship on dating skaldic poetry, Frank notes that much of this work has debated the authenticity of the poems attributed to ninth- or tenth-century skalds, and she claims that "today almost none of the verse in the family sagas is considered secure" (1985/2005: 173). However, she demonstrates that there are certain stanzas that, while perhaps not by the credited skald, are older than the prose part of the saga (Frank 1985/2005: 172).[7] This means that for each stanza attributed to a Viking Age skald, there might be three candidates for the actual composer of the stanza: "a tenth-century skald, a twelfth-century forger, and a thirteenth-century saga author" (Frank 1985/2005: 174). Deciding between these three possibilities can be difficult. In addition to various poets who might be responsible for a skaldic stanza, Abram additionally credits the audience who might have passed the stanzas along orally and the scribes who copied the manuscripts (2011: 12).

Frank claims that "philological and metrical criteria are of limited value" because archaic forms could be imitated by later poets, while what appear to be late forms could have arisen in transmission, if these changes did not alter the meter or alliteration (1985/2005: 174). Given progress of the last decades, however, more recent surveys are more confident about the ability to date skaldic poetry on linguistic grounds (see Section 2.3 below). Gade is confident that linguistic and metrical criteria can be used "to establish a certain internal chronology" (2002: 857). Abram claims that linguistic methods "are capable of differentiating a tenth-century poem

7. Frank (1985/2005: 173) notes misreadings of skaldic lines by saga writers (e.g. the "blood eagle" trope arising from misinterpretation of a kenning), which indicate that the stanza survived unaltered for a few centuries without being fully understood.

from one composed in the thirteenth century", especially for poems composed in *dróttkvætt* (2011: 13). Hermann argues that a skaldic poem, although usually composed orally, is a "stable text" due to the stricture of the meter (2017: 33–34), thus dating should be easier to achieve than in the more fluid type of oral poetry represented by Eddic verse.

2.2 Literary scholarship on individual poems

2.2.1 *Vǫluspá (Vsp)*

Finnur Jónsson dates the poem to 935–950, as the product of Norwegian opposition to King Hákon's missionary efforts (1920: 137). De Vries regards *Vsp* as a late 10th-century composition, as a statement of faith by a pagan living in tension with Christianity: he claims that the poet was a true believer in the old religion, who nevertheless was subconsciously drawn to the salvation narrative of Christianity (de Vries 1941: 175). Ulvestad suggests a date of 950 due to the poem's "mystic" character, attributing any Christian influence to "late interpolations" (1954: 67–69).[8] Turville-Petre notes that that some of the supposed Christian influence is vague and could be common to both pagan and Christian traditions, or due to a single "eclectic" poet who "adopted such pagan symbols as suited his taste and added others which he had learnt, perhaps at second hand, from Christian legend" (1976: 282).[9] McKinnell dates the poem to around 1000, seeing much evidence for Christian influence: ethical values, echoes of the book of Revelation (e.g. the blowing of a horn, the unchaining of Loki, the rise of a new earth), and the coming of a new god simply referred to as *inn ríki* 'the powerful' (1994: 120–125). However, this does not require that the poet was Christian, because the Norsemen had contact with Christianity for two centuries before conversion; McKinnell concludes that the poet was a pagan who borrowed Christian ideas and images without always fully understanding them (2014: 11). As Jónas Kristjánsson puts it, "the poet's mental furniture was fundamentally heathen even though he … got some of his ideas from the new religion" (1997: 44). Similarly, Einar Ól. Sveinsson dates the poem to the

8. Another aspect of *Vsp* that is considered an interpolation by many scholars is the list of dwarfs' names known as the *Dvergatal* (e.g. Stefán Einarsson 1957: 38). However, Jackson (1992) argues that such lists were part of "poetic art" of medieval Germanic literature and thus legitimately belong to the poems in which they are found.

9. Possible Christian influences noted by Turville-Petre: "decline of morals", "punishment for the wicked and reward for the good", and (in one manuscript) the replacement of the pantheon of gods by a single "mighty one, who rules all…" (1976: 282).

transition period from paganism to Christianity, probably before 1065 (1962: 228). Dronke also argues for a unitary poet, suggesting that *Vsp* was composed around 1000 in a form "fundamentally that of" the extant poem, with both the CR and Hauksbók versions tracing back to a (now lost) exemplar written down around 1200 (1997: 63–65).[10] Lönnroth, on the other hand, proposes a more complex authorship, with many or most stanzas existing for hundreds of years in oral tradition, before being compiled into its extant form in a 13th-century Icelandic milieu (2002: 22). Schulte (2005) similarly sees *Vsp* as a scholarly product, but he considers it to be the work of a single scribe who combined pagan motifs with mainstream medieval rhetorical structures. Sveinbjörn Rafnsson (1999, cited in Gísli Sigurðsson 2013) believes that *Vsp* is modeled on the late-12th-century *Merlínusspá* ('The prophecy of Merlin'), which if true would mean that *Vsp* was composed only a few decades before Snorri used a version of it as a source for *Gylfaginning*. McKinnell argues that the fact that Snorri used *Vsp* as his primary source indicates its antiquity; Snorri would not likely be fooled into thinking *Vsp* was ancient if it had been composed around the time of his birth (2014: 9). Rather, McKinnell (2014: 9) and Clunies Ross (2016: 31) maintain that the similarities between *Vsp* and *Merlínusspá* could result from the former's influence on the latter (2014: 9). Similarly, von See et al. (2019: 72–73) note the influence of *Vsp* on several presumably early Eddic poems (*Vm, Ls, HH I*, etc.), but as these are not definitively dated, the best *terminus ante quem* that can be established is that *Vsp* was composed before the early-13th-century *Merlínusspá* and *Bdr*.

Turning to a more objective criterion, de Vries (1934) notes that *Vsp* is irregular in the number of lines per stanza. Under the assumption that the original alliterative tradition was not stanzaic and that the 8-line stanza arose in Eddic poetry under the influence of skaldic poetry, this implies that *Vsp* is among the earlier poems (de Vries 1934: 256). As noted above, however, stanzaic length is not a reliable dating criterion, as the early-9th-century Rök stone contains a regular 8-line stanza (Gade 2002: 859), while the relatively late *Od* has stanzas of varying length (Quinn 2009: 326).

2.2.2 *Hávamál (Háv)*

More ink has been spilled about the origins of *Háv* than about any other poem in the *Poetic Edda*. This should not be surprising, given its length (by far the longest in the genre at 164 stanzas or over 1000 lines) and its complex structure. *Hávamál*

10. It is a predecessor of the Hauksbók version (called **H I* by Dronke) that Snorri used as the source for his *Gylfaginning* (Dronke 1997: 64).

is conventionally divided into five or six sections: the proverbs in the so-called Gnomic Poem (stanzas 1–103), the episode in which Óðinn steals the mead of poetry from Gunnlǫð (104–110), more proverbs called *Loddfáfnismál* (111–137), Óðinn's hanging and acquisition of the runes (*Rúnatal*, 138–145), and a list of spells known as *Ljóðatal* (146–164).[11] Many scholars view *Háv* as a patchwork of earlier material, and there is some evidence for this in the manuscript itself, as the capitals at the beginning of stanzas 111 and 137 are larger than those used to mark the other stanzas, "plainly intended to mark the beginning of new sections" (Evans 1986: 1). Furthermore, Evans claims that the episodes involving Óðinn's "love adventures" are not closely related to the rest of the poem and some stanzas are "disjointed". The meter is generally *ljóðaháttr* but with interspersed *málaháttr* and some very irregular stanzas in 80–90 and 141–145; while some of this is typical of Eddic poetry, Evans suggests that some of the irregularities may result from lost or added stanzas (1986: 4–5). Nevertheless, the scribe of CR treats *Háv* as a unified work, having begun the poem with the title *Hávamál* and an extra-large capital; Evans concludes that this is not the product of "mechanical stringing together of some half-dozen distinct poems" (Evans 1986: 8). Larrington is more certain of the unity of *Háv* as it appears in CR, arguing that it is "a coherent poem" of the wisdom genre, organized not as a narrative or chronologically but proceeding gradually from the most mundane advice to supernatural lore (1992a: 65–66).

Nevertheless, even Larrington concedes that some parts of *Háv*, "especially the advice in the Gnomic Poem and the allusions to Óðinn's self-sacrifice in the *Rúnatal*", are older than others (Larrington 2002a: 27). Finnur Jónsson (1920: 66–67) considers *Loddfáfnismál* the oldest part of the *Háv*, indeed the oldest material in the Eddic corpus, dating it to 875–900, with the other sections of *Háv* assigned to 900–930. De Vries suggests that while some stanzas may pre-date the settlement of Iceland (although he does not say which ones), most sections of the poem date to the end of the heathen era (1941: 156); however, these sections were not redacted into a unified whole until the 13th century (1942: 210). Einar Ól. Sveinsson seems to be alone in considering the Gnomic poem to be one of the oldest sections, dating to before 960 (1962: 228); he also dates *Rúnatal* and *Ljóðatal* to this early period (1962: 298).

Larrington notes that it is "the pagan nature of the poem" and the "absence of any reference to Christianity" that leads many scholars to assume an early date

11. This is the organization according to Larrington (2002a: 27). Other scholars offer slightly different structures, e.g., Evans (1986) suggests that the Gnomic Poem is stanzas 1–95, and he groups the "Billings mær tale" in 96–103 together with the Gunnlǫð episode in 104–110 as "Odin's love adventures." Alternatively, Gunnell (2005: 85) divides this part of the poem into the *Gestaþáttr* ('The Visitors' Section', stanzas 1–77) and the *Dœmi Óðins* ('Óðinn's Exempla', 78–110).

of composition for *Háv* (1992a: 16). The best representative of this view is Evans. He argues that the extant version in CR cannot be the first edition, because Snorri quotes stanza 1 in *Gylfaginning* (ca. 1230), and there are "errors which can hardly be explained except as misreadings of a text which was being copied" (Evans 1986: 2). Orthographic differences between *Háv* and the other mythological poems suggest that it was transmitted separately and grouped with the other poems "only at a late stage, very possibly indeed only in CR itself" (Evans 1986: 3). As for the dating of the different sections, Evans argues based on vocabulary and the lack of Christian influence that the Gnomic Poem (stanzas 1–79 or 1–95) was composed (or perhaps compiled from earlier proverbs) in pre-conversion Norway, i.e. before 960 (1986: 13–14).[12] Óðinn's love adventures with Billings mær and with Gunnlǫð have been variously characterized as purely pagan (as they present an unflattering view of Óðinn, unthreatened by the conflict with Christianity) or imitations of the later medieval comic tale (Evans 1986: 24). Evans suggests that *Loddfáfnismál* is similar enough to the Gnomic Poem to be tentatively dated to the 10th century (1986: 28).[13] Perhaps the most controversial part of *Háv* is *Rúnatal*: the image of Óðinn hanging from a tree pierced by a spear has obvious parallels with the crucifixion. However, Evans points out that there are numerous differences between this episode and the crucifixion as described in the Gospels (Óðinn hangs for 9 days and nights, thereby gaining the knowledge of the runes, while Christ hangs for only a few hours and does not gain any wisdom through his crucifixion), and the similarities to Christianity may be accounted for as purely pagan elements (1986: 29ff). Finally, the magical "contents of *Ljóðatal* make an attribution to the pagan period likely" (Evans 1986: 35).

Von See (1981, 1989) takes nearly the opposite view, that *Háv* is a unified, 13th-century work by a single learned author, who incorporated some old, traditional stanzas but otherwise is most influenced by classical and medieval European learning. Von See observes in *Háv* influence from the Bible, the Old Norse *Hugsvinnsmál* (a verse translation of the Latin *Disticha Catonis*), and even

12. There is debate on whether this part was ever a unified poem or itself a compilation. Evans thinks that it is stylistically and linguistically unified (e.g. containing no imperatives, unlike 111–137), but too obscure to be the conscious work of a single editor (Evans 1986: 9–10). Evans argues both against von See's theory that this part of the poem is based on the clearly Christian-influenced *Hugsvinnsmál* (1986: 16–18) and against the notion that it represents the virtues of a viking or feuding Icelander, maintaining instead that it represents the values of a Norwegian farmer (1986: 18–19). Evans also argues that the Gnomic poem is not really about Óðinn, although the last few stanzas have sexual love as a theme, setting up his love adventures in the following section (1986: 21–23).

13. This section involves advice to Loddfáfnir in the imperative. It is "less lively and memorable than the Gnomic Poem" but "the content of the advice … is often very similar" (Evans 1986: 27).

Snorri's *Gylfaginning*. This approach has been strongly criticized by Evans (1989), who shows that much of the supposed Christian influence (e.g. pairing the words *fé* 'cattle' and *frændr* 'kinsman') are common enough in Old Norse that no outside influence need be assumed. Larrington is more sympathetic, sharing "von See's theory of a series of authors arranging and adapting the material in *Hávamál*" (1992a: 10), but she systematically dismantles von See's *Hugsvinnsmál* hypothesis (1992a: 97ff) and instead highlights parallels with Old Norse poetry such as *Sonatorrek* and *Hákonarmál* (1992a: 174ff). In another article, Larrington (1992b) dismisses the parallels between *Háv* and biblical/classical wisdom writings as unconvincing or coincidental, because all wisdom writings tend to impart similar kinds of advice (1992b: 141). Von See et al. (2019: 496) conclude that if one does not accept the influence of the *Disticha Catonis* in the 12th century, there is no good *terminus post quem* for *Háv*; as for a *terminus ante quem*, they do not believe that any texts older than *Merlínusspá* (composed at the turn of the 13th century) have been influenced by *Háv*. Thus we are left with a very wide range of plausible dates, from 875 (Finnur Jónsson) to 1200.

McKinnell (2014) discusses the possible dates of individual sections of *Háv*. He notes that the first section (his *Háv A*, i.e. stanzas 1–79 of the Gnomic poem) is "loosely structured" and might represent varying ages; nevertheless, the frequency of the particle *of* is relatively high, and quotations of some stanzas in later works are consistent with a date in the 10th century (2014: 91–92). McKinnell's *Háv B* (the Billings mær and Gunnlǫð episodes) similarly might date to the 10th century on linguistic criteria (2014: 100). *Loddfáfnismál* (his *Háv C*) has a much lower rate of *of* and shows a more "Christian tone", and thus it is later than the rest of the poem (2014: 93). McKinnell argues both on linguistic and mythological grounds that the most controversial section, which he calls *Háv D* (combining *Rúnatal* with *Ljóðatal*) is mostly 10th century; he finds it more likely that a pagan poet borrowed some imagery from the Christian crucifixion than that a Christian poet would have risked comparing Christ with Óðinn (2014: 125).

2.2.3 *Vafþrúðnismál (Vm)*

Finnur Jónsson (1920: 143) argues that *Vm* is a product of the early 10th century, representing pagan resistance to Christianity, but Ulvestad (1954: 63) sees no sign of religious conflict and so dates it earlier, perhaps to the end of the 9th century. Einar Ól. Sveinsson (1962) likewise dates it to the Viking Age. De Vries considers it to be the high point of a pagan poetic tradition; because the poet is so certain of his heathen lore, and the depiction of *Ragnarǫk* lacks the tragic element of *Vsp*, he dates it to the early 10th century (1941: 153). Although McKinnell is hesitant to date

Vm, he notes that its depiction of the doom of the gods shares none of the Christian influence found in *Vsp*: rather than a concern with morals, the focus is on courage and strength in the face of death (1994: 106). Larrington states that *Vm* "is often considered to be among the older poems in the Edda" (2002b: 59). Most recently, von See et al. (2019: 999) suggest that *Vm* may be influenced by both 10th-century praise poems and by *Vsp*, but they also note that it contains certain words that are otherwise attested only in the 13th-14th centuries.

2.2.4 *Grímnismál (Grm)*

Finnur Jónsson (1920: 148) dates *Grm* to the same era as *Vm*. Similarly, de Vries places the poem at the end of the heathen era, as it seeks to conserve the religion under threat and shows the pessimism of *Ragnarǫk* (1941: 156). Einar Ól. Sveinsson likewise counts it among the older mythological poems (1962: 270). Ulvestad (1954: 64) argues that most of the poem is relatively old (similar in age to *Vm*) but with later interpolation of proper names. But see Jackson's (1992) contention that such lists were part of the early Germanic poetic tradition rather than late interpolations. Larrington notes that "[m]uch of the lore … is obscure … Scholars have assumed that the obscurity indicates that the poem is archaic; some discount the prose framework" as later (2002b: 59). Von See et al. (2019: 1224) point out the relationships between this poem and several other Eddic poems (*Vsp, Ls, Hrbl, Vm*, and *Fm*) but are hesitant to use these relationships to provide even a relative dating of these works. Instead, they conclude that *Grm* must be later than the 10th-century praise poems *Hákonarmál* and *Eiríksmál* but younger than Snorri's *Gylfaginning*, written around 1225.

2.2.5 *Skírnismál (Skm)*

Skm has been assigned a wide range of dates, with proposals in the literature ranging from 900 to the 12th century (Harris 1985/2005: 100). In the major literary histories, we find Finnur Jónsson (1920: 177) dating it to ca. 900, de Vries grouping it with the above mythological poems to 870–1000 despite "a novelistic treatment" (1941: 164), and Einar Ól. Sveinsson also placing it in his oldest group (1962: 276).

Dronke (1997) argues that *Skm* "must have developed before the imaginative vitality of pagan traditions had died away in Norway and Iceland…", whereas obviously later work such as *Svipdagsmál* "demonstrates that by the thirteenth century the art of composing Eddic verse was an antiquarian, not a living, exercise" (1997: 402).

Andersson (1985) suspects that *Skm* is quite late, calling it a "mythological travesty," and questioning the poem's "traditional character" because it contains a German-style bridal quest, foreign in Scandinavia until the 12th century. Von See et al. (1997: 64) also place the poem in the 12th or even the 13th century, based only on the playful and ballad-like nature of the poem and on the portrayal of Freyr as a "courtly lover." However, Clunies Ross counters such arguments by pointing out that the wooing of a giantess by Freyr fits within other Eddic narratives of wooing across the god/giant divide (1994: 132).

2.2.6 *Hárbarðsljóð (Hrbl)*

Finnur Jónsson (1920: 67) dates this poem with the above poems to ca. 900. De Vries (1941) and Einar Ól. Sveinsson (1962) also group *Hrbl* to the pre-conversion period (870–1000). De Vries' dating of the poem to this period is based on his intuition that the playful tone of the poem is only possible in a period of transition in which the poet is less certain about the old faith (1941: 170). Moreover, the language in some passages is difficult to interpret, which implies a long, complicated process of transmission rather than a young composition (1941: 171). Von See et al. (1997: 169) come to a very different conclusion: they argue that *Hrbl* is a late poem that was composed in writing, because its mix of prose and poetry would have been difficult to transmit orally. Moreover, the poem has many lexical items that only appear in 12th- and 13th-century texts. Because *Hrbl* was known by Snorri, von See et al. date it to before 1225.

2.2.7 *Hymiskviða (Hym)*

In an early article, de Vries suggests that *Hym*'s deviations from the eight-line stanza are a sign of its antiquity (1934: 256); however, de Vries also concedes that some of these stanzas may have been corrupted in the transmission and that this is not a sure criterion for dating.[14] In the literary histories, Finnur Jónsson (1920: 66) considers this the youngest of the mythological poems (975–1000), and Einar Ól. Sveinsson likewise calls it a younger poem, perhaps dating to the 11th century (1962: 348). In his literary history, de Vries (1941) settles on a much later, 12th-century date for the poem; he argues that a late poet collected a series of popular stories about Þórr and put them together into a humorous, fairy-tale-like narrative. The style and meter of the poem are de Vries' best evidence for a late date: the poem has

14. *Hym* has three stanzas with six lines, three with four lines, and one with ten lines (de Vries 1934: 256).

the highest number of kennings in the *Poetic Edda*, some of these kennings are uncharacteristically humorous ('cheek-forest' for 'beard', 'descendent of apes' for 'giant'), and alliteration is sometimes sloppy (1942: 131). Jónas Kristjánsson agrees that the poem is not old (1997: 39).

Within CR, *Hym* functions as a prequel to *Lokasenna*, and "its composite nature has led a number of scholars to assign it a relatively late date" (Larrington 2002c: 119). Von See et al. (1997: 277) only go so far as to date it to before the 12th-century *First Grammatical Treatise*. Snorri narrates the same tale of Þórr's fishing trip in the *Prose Edda* (ca. 1230), and Meulengracht Sørensen believes that the version in *Hym* is probably later than Snorri's (2002: 123). Also arguing for a late date is Dronke, who sees a parallel between Þórr catching the serpent on a fish hook and medieval tales of Christ catching the devil on a fish hook, even arguing that there was likely no native tradition of Þórr catching Miðgarðsormr, a mostly comic rather than demonic figure, before Christianity (2011: 89–9). Dronke's claim about the recency of the myth about Þórr's fishing cannot be correct, however, because this narrative is also attested in a skaldic poem by the 9th-century Bragi and in 9th- and 10th-century picture stones (McKinnell 1994: 74).

2.2.8 *Lokasenna (Ls)*

Finnur Jónsson gives *Ls* the same date as *Vsp*, namely 935–940 (1920: 187). Ulvestad (1954: 65) also considers it early, as it shows "relatively unimpaired heathen belief." De Vries, on the other hand, dates it to the very end of the heathen period, because of all the Eddic poems, *Ls* is the most critical of the gods and like *Vsp* it has a fatalistic depiction of *Ragnarǫk* (1941: 172). Einar Ól. Sveinsson, like de Vries, places it in the 10th-century, during transition period from paganism to Christianity (1962: 317–318). Harris (1985/2005: 97–100) notes that whether a scholar gives the poem an early or a late date depends on whether one believes that satire of the gods is a genuine pagan tradition or a ridiculing of old beliefs by Christian partisans. McKinnell sees Loki's accusatory role as influenced by the medieval view of Satan as accuser (1994: 52–53). Dronke maintains that ridiculing the gods does not necessarily imply that a poem is post-conversion (1997: 350). In fact, Anderson believes that *Ls* is an entirely pagan creation, "a kind of dictionary of mythology, a compilation of a list of the gods and the major myths associated with each one"; Loki's criticism of each god merely serves as a narrative framework, because only Loki would have the temerity to openly discuss the intimate details of the gods' lives (2002: 143). Abram agrees that the comedic and critical tone of *Ls* is not enough to date it to the Christian era, as pagans often enjoyed the foibles of their gods (2011: 228). However, he does see evidence for a late date in that the

poem appears to be a collection/aggregation of "mythological narratives from a very wide range of sources into a single poem", which he takes as "the mark of a rather late, self-conscious and quite possibly literate poet" (Abram 2011: 229). Similarly, von See et al. (1997: 384) regard *Ls* as the most elaborate and thus latest work in the *senna* 'flyting' genre; moreover, it shows signs of classical learning and uses vocabulary that are otherwise only found in prose texts. Von See et al. therefore date it to the 12th century, with the *terminus ante quem* 1225, when Snorri must have used it as a source for his *Prose Edda*.

2.2.9 *Þrymskviða (Þrk)*

Harris (1985/2005: 100) notes that this poem has been dated anywhere from the 9th to the 13th century. Finnur Jónsson is among those who date it very early, to just before 900 (1920: 166), and Einar Ól. Sveinsson assigns it to the pagan era as well (1962: 284). De Vries, despite claiming in an early work that *Þrk* is ancient based on its irregular meter[15] (1934: 256), comes to see it, like *Hym*, as 12th-century poem composed purely for the sake of entertainment under the influence of the ballad (1942: 135). Perhaps the latest date of composition is implied by Hallberg, who suggests that Snorri may have written *Þrk* (1975: 58).[16] Jónas Kristjánsson (1997: 39) claims that its "language and meter" suggest an early date, but he does not provide any examples of these supposedly archaic features. Von See et al. (1997: 526) argue for a late date, noting that *Þrk* seems to quote several late Eddic poems but is itself not referred to in any other Old Norse poetry. However, Clunies Ross cautions that one should not assume the poem is young only "because of its comic treatment of its mythic subject"; comedic stories were "part of the traditional culture of Iceland" and "part of a traditional approach to the subject of this myth, and not simply the independent invention of a thirteenth-century individual" (2002: 184). McKinnell notes that the poem has instances of end rhyme (a feature of later ballads), has erratic alliteration, presents an otherwise unknown myth, and bears parallels with the late elegiac poems; thus, while the poem may contain some archaic material, he argues that its extant form is the result of a 12th-century revision (2014: 201–202).

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15. Of its 32 stanzas, *Þrk* has two four-line stanzas, two stanzas with six lines, four with ten lines, and one with twelve.

16. Hallberg (1975) does not go into details but cites Hallberg (1954). Thorvaldsen (2008) argues against Hallberg's idea that allusions to other works by the poet of *Þrk* reflect not scholarly pastiche but rather poetic tradition.

2.2.10 *Vǫlundarkviða (Vkv)*

Among the literary histories, Einar Ól. Sveinsson (1962) places *Vkv* in the earlier group of heroic poems, and Finnur Jónsson (1920: 213) dates it to the beginning of the 10th century. Only de Vries dates the poem much earlier, placing it in his pre-historic period before 800, and postulating an originally Gothic source that made its way north to Sweden before the seventh century (1941: 57). While we may dismiss Gothic origins as wild speculation, there is better evidence for Old English influence: McKinnell (1992) weighs evidence from the vocabulary of the poem and concludes that it was probably composed in the bilingual Danelaw in the 10th or 11th century. Dronke (1997) accepts some of McKinnell's evidence for Old English borrowing, but concludes that *Vkv* was composed in Norway on the basis of a now-lost Old English Weland poem.[17] Von See et al. (2000: 116) note that the Vǫlundr/Weland legend is quite old, being depicted in visual art from the 8th century. However, they see the extant Old Norse poem as being influenced by *Gðr II* and thus date it to the 12th century or later.

2.2.11 *Alvíssmál (Alv)*

The views on the date of *Alv* range widely: Finnur Jónsson (1920: 169) dates it to the late 10th century, but Einar Ól. Sveinsson places it in his late group (1962: 338). De Vries considers it a catalog of poetic vocabulary, albeit with a mythological frame narrative that imitates *Vm*; it thus belongs to the late 12th-century milieu of scholarly interest in poetics and mythology (1942: 123–124). Watkins (1970) shows that the listing of men's, gods', giants', and elves' vocabulary for different words in *Alv* has parallels in other Indo-European traditions, where the unmarked lexeme is in the "language of men" and the marked one is in the "language of gods."[18] Nevertheless, recent scholars tend to view *Alv* as late; for example, von See et al. (2000: 192) date the poem to the 12th or 13th century, based on lexical items that only occur during that period. Acker considers it a compilation of *heiti* or poetic diction from ca. 1200, and notes that Snorri quotes from it in his *Prose Edda* (2002: 213).

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17. Like McKinnell, Dronke notes *barni aukin* as an expression for 'pregnant' must be borrowed from OE *eacen* under the possible influence of the Old English Weland poem *Deor*. However, she dismisses other claims of borrowings in *Vkv* from *Deor* (Dronke 1997: 278).

18. What distinguishes *Alv* from its counterparts in other traditions is that the choice of lexeme is constrained by alliteration: "if the men's word does not begin with a vowel, the gods are called *goð* [rather than *æsir*] and the gods' word must alliterate with the men's word" (Watkins 1970: 4).

2.2.12 The Helgi poems: *HH I, HHv*, and *HH II*

The first three poems in the heroic section of CR involve two legendary Norwegian figures named Helgi. Aside from the Helgi poems, the compiler of CR generally arranged the heroic poems in chronological order, attempting to create a coherent Sigurðr-Guðrún narrative from a cycle of poems with sometimes missing, sometimes overlapping content. It is thus odd that the 'First' Lay of Helgi Hundingsbani (*HH I*) appears as the first of the three Helgi poems, with the poem about his ancestor Helgi Hjǫrvarðsson (*HHv*) separating it from the Second Lay of Helgi Hundingsbani (*HH II*); this is often attributed to a mistake by a copyist (e.g. Gunnell 2005: 88). Andersson (1985: 53) argues that *HH I* was placed first because the scribe "considered it to be the oldest or poetically purest…" That is in accordance with de Vries' contention that *HH I* is a Viking Age poem, quoting from the late pagan *Vsp* and lacking the romantic and Christian influences that can be detected in *HHv* and *HH II*. De Vries maintains that *HH I* can be confidently dated to around 1070, as it is influenced by some 11th-century skaldic verse but is itself the source for certain passages in the skaldic poem *Erfikvæði* about Magnús berfœtt, composed by Gísl Illugason in 1104 (1941: 277–278). Finnur Jónsson (1920: 260) and Einar Ól. Sveinsson (1962: 229) also date *HH I* to the 11th century; however, both of these scholars consider *HH I* to be later than *HHv* and *HH II*. Phillpotts also believes that *HH I* is the youngest poem, noting that it bears traces of skaldic style, for example in its use of kennings; she argues that it was placed first in the group because it deals with the earlier part of Helgi Hundingsbani's life (1973: 78–79). Jónas Kristjánsson maintains that *HH I* is the youngest poem of the group, as it is the most compositionally unified and requires no explanatory prose (1997: 51). Von See et al. (2004: 163–164) consider the poem late, as it shows vocabulary that is otherwise only attested after the 12th century and shares motifs and even wording with a large number of other Eddic and skaldic poems; they date the poem to after the composition of *Vsp* and *Hm* but before *Vǫlsunga saga*, i.e. roughly between 1100 and 1250.

The characters in *HHv* are unknown outside this poem (although the names are familiar from other legends), which functions perhaps as an attempt to clarify the ancestry of Helgi Hundingsbani and also foreshadows his narrative. The section known as *Hrímgerðarmál*, a flyting in *ljóðaháttr* between Helgi's follower Atli and the giantess Hrímgerðr, is an obvious interpolation, and seems to have been added to the poem only because the other two Helgi poems also contain flytings (de Vries 1942: 59). Finnur Jónsson dates it to the second half of the 10th century, with the main narrative from 950–975 (1920: 249–250) and the *Hrímgerðarmál* from the very end of that century (1920: 252). Einar Ól. Sveinsson believes it to be older than the 11th-century *HH I* (1962: 445). De Vries does not consider it much of a

coherent narrative, but a collection of fragments that was stitched together rather unsuccessfully in the 12th century (1942: 59). Similarly, Andersson argues for a late date, noting that its plot elements are "an amalgamation of indigenous and foreign narrative patterns" (1985: 52). Andersson identifies several motifs that are typical of the *fornaldarsögur*, which date to the 12th and 13th centuries, and of the German romances, which make their appearance in Iceland in the 12th century (1985: 52). Thus Andersson dates the composition of *HHv* to roughly 1200 (1985: 74). Von See et al. (2004: 404) maintain that the poetic stanzas of *HHv* are from various older poems and that the prose interspersions are a younger attempt to create a unified the narrative. In fact, von See et al. claim that the stanzas were selected by the compiler of the CR collection, and that the prose passages were also authored by the compiler. Although the verse parts of *HHv* are certainly older than the prose, von See et al. date some of the stanzas as late as 12th century, as evidenced by the use of late lexical items (2004: 404).

HH II is considered the oldest of the Helgi poems by Finnur Jónsson, dating from the first half of 10th century (1920: 259). Einar Ól. Sveinsson (1962: 441) also places it in the 10th century. De Vries, on the other hand, considers the poem an amalgam of several poems and fragments. The oldest layer is claimed to be stanzas 14–18, marked in CR as *Vǫlsungakviða in forna* ('The ancient poem of the Vǫlsungs'), which is closely related to the oldest Sigurðr material and lacks skaldic ornamentation (de Vries 1941: 283). De Vries identifies three passages that he considers younger: the romantic motif of a hero disguised as a woman, followed by Helgi's dialog with the valkyrie Sigrún (stanzas 1–13), the dialog between Sigrún and Dagr (30–38), and the ghost narrative of stanzas 40–51 (1942: 55). All three passages are more romantic than heroic, although the differences between them (e.g. in the use of kennings) suggest that they were not originally a unified work; de Vries tentatively dates these sections to the early 12th century, perhaps a little later than *HHv* (1942: 56–57). As they claim about *HHv*, von See et al. (2004: 636) maintain that the combination of verse and prose that makes up *HH II* is the work of the compiler of the CR manuscript. They take the unevenness and contradictions between the passages as evidence that the stanzas are of varying ages; however, the only stanzas that they can date more precisely are 5–13, which they argue based on similarities to *Hrbl* to be earlier than 1225.

2.2.13 *Grípisspá (Grp)*

Grp is widely considered to be the youngest poem in CR. Finnur Jónsson (1920: 267–268) considers it an antiquarian endeavor by a single author and, like Einar Ól. Sveinsson (1962: 457), dates it to the 12th century. De Vries goes further, locating *Grp* in his 13th-century "Period of Completion." De Vries maintains that

Grp shows the influence of several Eddic poems as well as 12th-century skaldic verse, and he claims that the poet's difficulty with alliteration has resulted in odd word orders and metrical violations (1942: 211–212). Larrington argues that *Grp* draws on the other Sigurðr poems (1992a: 75), and Gunnell goes further, claiming that it "seems to have been deliberately composed in the thirteenth century to serve as a framework for the poems that follow" (2005: 89). Von See et al. (2006: 148) suggest that the poet knew *Fm* and *Sd* but not *Rm*, thus *Grp* is to be dated between the time of composition of *Fm*/*Sd* and the year 1250, when it served as a source for *Vǫlsunga saga*.

2.2.14 Young Sigurðr poems: *Rm, Fm*, and *Sd*

The next three poems in the *Poetic Edda* are about the deeds of young Sigurðr. These three are not marked as individual poems "but rather as a single unit: the Codex Regius does not supply titles for the lays but only some phrases perhaps intended to guide a performer or reader" (Haimerl 2013: 32). Einar Ól. Sveinsson considers these three poems to be moderately old (1962: 229). Each of the three contains some stanzas in *ljóðaháttr* and others in *fornyrðislag*; Gunnell suggests that the poems represent an amalgamation of various earlier poems that are now lost (2005: 89). De Vries does not attempt to reconstruct a source for the *fornyrðislag* stanzas, but he does believe that most of the *ljóðaháttr* stanzas come from a relatively uniform, single poem with gnomic, moralizing characteristics reminiscent of *Vm* and *Háv* (1941: 144–147). Whatever the dates of composition of the individual poems (or their component stanzas), their arrangement in CR "offers insights into the aesthetic principles and authorial intention of the thirteenth century" (Haimerl 2013: 32).

Turning to the first poem of this group, *Rm*, Finnur Jónsson (1920: 67) dates the *ljóðaháttr* stanzas to 925–950, while those in *fornyrðislag* may be a bit later, perhaps as late as 975. Similarly, de Vries sees not only the dialogue lines in *ljóðaháttr*, but also the *fornyrðislag* stanzas that deal with Sigurðr's father (13–18), as dating from the 10th century (1941: 145). Von See et al. (2006: 274) argue that the extant text is the reworking of an older written exemplar, which itself was an attempt to unify various prose and poetic versions of the story; however, they are unable to determine whether any of the sources are earlier than the 12th century.

Fm is dated by Finnur Jónsson (1920: 278) to the late 10th century. De Vries of course dates its *ljóðaháttr* stanzas to the pre-conversion era but finds that the *fornyrðislag* stanzas 32–36 and 40–44 have kenning types and concerns with prophecy that are typical of the 12th century (1941: 146). Einar Ól. Sveinsson dates the *ljóðaháttr* stanzas of both *Rm* and *Fm* to the 10th century (1962: 460) but considers

the *fornyrðislag* stanzas to be somewhat later (1962: 462). Von See et al. (2006: 393) tentatively suggest the composition of *Merlínusspá* around 1200 as the *terminus ante quem* for *Fm*. In addition, von See et al. claim that *Fm* is dependent on a stanza by the 11th-century Illugi Bryndœlaskáld but is probably somewhat later given its shared vocabulary with late prose and *Am* (2006: 394).

Finnur Jónsson dates *Sd*, like *Fm*, to the last quarter of the 10th century (1920: 283). De Vries notes the similarity of the *Rúnatal* section to certain parts of *Vm* and *Grm*, all of which he dates to the 10th century (1941: 148). Haimerl, on the other hand, maintains that this "runic" wisdom is influenced by Christianity, because there are seven sets of rules, and the poet uses the verb *signa* 'make the sign of the cross' (2013: 47–48). Einar Ól. Sveinsson dates the *Rúnatal* section of the poem to the pagan period, with the rest being composed around the year 1000 (1962: 466–467). Von See et al. (2006: 529–530) note the difficulty of dating the component parts of *Sd*, and for the poem as a whole they suggest 1200 or 1250 as a *terminus ante quem*.

2.2.15 Elegiac poems: *Br, Sg, Gðr I, Hlr, Gðr II–III*, and *Od*

Finnur Jónsson (1920: 67) considers all of these except *Gðr II* to have been composed between 975 and 1025. Einar Ól. Sveinsson places only *Br* in his early group (1962: 415), relegating the others to his late group of the 11th and 12th centuries (1962: 229). De Vries believes that while some stanzas (including a "core" section of *Gðr II*) date to the 11th century, most of the stanzas in these poems were composed in the late 12th century, having borrowed themes from the German Nibelung tradition and reflecting new, sentimental tastes (1941: 277). However, Harris (1982) points out parallels between the Old Norse and Old English elegies and argues that they derive from a common Germanic genre; thus the mere fact that the Eddic elegies feature monologues by female characters is not sufficient evidence for a late provenance. Nevertheless, Harris states that there is a consensus that these Eddic poems were composed in the 12th or 13th centuries (1985/2005: 101). Sävborg (2013) challenges the notion that these poems are late. He points out that there are elegiac elements in funeral scenes in *Beowulf* and in skaldic poetry (2013: 87–88). Furthermore, there is no clear distinction between heroic and elegiac parts of the *Poetic Edda*, but rather "grief and lamentation over the dead are traditional native motifs in Eddic heroic poetry, and are not alien …" (2013: 90).

Turning to the individual poems, as Einar Ól. Sveinsson notes, there is much uncertainty about their ages, other than that they are all relatively late (1962: 528). Finnur Jónsson divides these into three periods: *Gðr II* alone dates to the first half of the 10th century as several other poems depend on it (1920: 298); *Br, Gðr I*, and

Gðr III are from the late 10th century (1920: 286, 288, 300); and *Sg, Hlr*, and *Od*, are from the early 11th century (1920: 292, 295, 302). De Vries sees in *Br* some 11th century skaldic traits, but the influence of ballads and the focus on female figures suggests that it belongs with the elegiac poems of the late 12th century (1942: 140). Similarly, he regards *Gðr I* as a late 12th-century poem, not only influenced by *Gðr II*, but also by the ballad tradition; he claims that part of *Gðr I* is a folk song where two women share their laments while knitting (1942: 145). De Vries considers *Sg* to be the very latest poem of the group, as it borrows from the other elegiac poems, strings together unrelated fragmentary lines, and is metrically sloppy, e.g. alliterating unstressed words (1942: 155).[19] Andersson takes quite a different view, claiming that *Sg* predates *Gðr II* (1980: 120). De Vries considers *Hlr* to be from around the year 1200, as it shows all of the features of the other elegies and borrows from *Br* (1942: 154). Von See et al. (2009: 151) maintain that *Br* is the oldest of the poems about Sigurðr's death, having influenced *Gðr I* and *Sg*, and possibly also *Gðr I* and *Am*. Nevertheless, they suggest on the basis of lexicon and style that even *Br* may date as late as the 12th century (von See et al. 2009: 152). *Sg* is influenced not only by *Br*, but also by two poems that are widely considered late: *Ghv* and *Od* (von See et al. 2009: 317). *Gðr I* seems not to have influenced other poems but shows influence of *Sg*; thus von See et al. propose the chronology *Br* > *Od/Ghv* > *Sg* > *Gðr I* (2009: 222, 317). They claim that *Hlr* was influenced certain stanzas of *Fm* (2009: 511), which would date it to 1200 or earlier.

Gðr II, despite its numbering, has been argued to be earlier than the other elegiac poems with which it is grouped. First, it is also known as *Guðrúnarkviða in forna* 'the ancient lay of Guðrún', although de Vries maintains that it is from the mid 12th-century, only a few decades older than the other two *Guðrúnarkviður* (1942: 142–144). Secondly, it preserves an older depiction of Guðrún's relationship with her brothers: she invites them to Atli's court so that she can avenge Sigurðr's death on them, whereas in other poems she tries to save their lives (Acker 1998: 79). Thirdly, Harris claims that the type of elegy in *Gðr II* is closer to the common Germanic elegiac genre than the other poems are (1982: 160). Glendinning (1983: 276–277), like Finnur Jónsson (1920: 298) argues that *Gðr II* is a source not only for *Gðr I* and *Gðr III*, but also for *Sg*. However, McKinnell does not believe *Gðr II* to be particularly early, arguing instead that it was composed after *Br* and *Sg* but before *Gðr I* and *Hlr* (2014: 250–251). Von See et al. similarly find the influence of

19. Here, as with other elegiac poems, de Vries' arguments are unconvincing. Because he claims that these poems are all influenced by the 12th-century German Nibelung narratives, he attributes irregularities of meter and difficulties of interpretation to the decayed state of poetry in the late 12th century. However, for poems outside this group, irregularities of meter and fragmentary lines are taken as evidence for antiquity.

several Eddic poems on *Gðr II*, including the relatively late *Sg* and *Am*, and they reject any influence of *Gðr II* on other Eddic poems. The only text von See et al. find to be influenced by *Gðr II* is *Vǫlsunga saga*, resulting in a *terminus ante quem* of 1250 (2009: 625).

Gðr III is argued by de Vries to be one of the youngest poems of the group as it borrows from the late *Gðr I*; this would place it at the very end of the 12th century (1942: 148). Similarly, von See et al. claim that *Gðr III* had no influence on any other Old Norse text and thus must be one of the latest poems in the *Edda* (2009: 794). Finally, *Od* is quite unrelated in plot to the other Nibelung poems; de Vries suggests it may simply be based on a ballad but with the names of the characters borrowed from the genuine heroic poems (1942: 150). De Vries dates *Od* to around 1200, later than all the elegiac poems except *Sg* (1942: 151). Finnur Jónsson (1920: 302) claims that *Od* borrows from *Akv*; for this reason, Jónas Kristjánsson (1997: 63) places *Od* last in the elegiac group. Similarly, von See et al. detect influence of *Akv* and possibly *Hlr* on *Od*, which in turn influenced *Sg* (2009: 857). I summarize von See et al.'s relative dating of the elegiac poems as follows: *Akv* > *Br* > *Hlr* > *Od* > *Sg* > *Gðr I*/*Gðr II*.

2.2.16 *Atlakviða (Akv)*

Beginning with the literary histories, Finnur Jónsson (1920: 307) notes that *Akv* seems to be very early at first glance, but because of its ironic use of mythological terms and its borrowing from *Hm*, he claims that it is from the end of the 10th century. De Vries sees this poem, however, as much older, an example of "Gothic heroic poetry" (a genre unknown outside de Vries' reconstruction) that was brought to Scandinavia in the 6th century (1941: 49). Einar Ól. Sveinsson cautions, however, that one should attempt to date the extant poem, not its putative sources, and he places great stock in Finnur's arguments for a 10th-century date (1962: 410–411).

Dronke argues for an early date for *Akv* largely on stylistic grounds: she claims that the meter has an "archaic character" with "frequent anacruses, several short lines, alliteration in the b-line falling on the second stress or on the finite verb" (1969: 43). She attributes these metrical irregularities (also those in *Hm* and *Vkv*) to "their origin in West Germanic traditions; the traces of heroic lay in Old English and Old High German also show a comparable metrical license" (1969: 44). Similarly, Turville-Petre attributes the indeterminate meter (something between *fornyrðislag* and *málaháttr*) to its date of composition before these meters were differentiated (1976: xiv). Jónas Kristjánsson claims that *Akv* bears similarities to the skaldic *Haraldskvæði* by Þorbjǫrn hornklofi and thus dates it to before 870 (1997: 65). Larrington calls *Akv* "one of the oldest poems of the Edda, heroic in ethos and

highly stylized in its form and diction" (2013: 142). Von See et al. (2012: 191) only find evidence that *Akv* is older than *Háttalykill* (composed around 1145) and the Eddic poem *Br*, making it not one of the oldest Eddic poems, but certainly the oldest of the heroic poems.

Although CR titles the poem *Atlakviða in grœnlenzka* ('The Greenlandic Lay of Atli'), few scholars today accept the attribution to Greenland. Dronke argues that *Akv* was composed before the settlement of Greenland ca. 985 (1969: 45). The likely explanation for this moniker is that *Am* is (perhaps correctly) labelled *in grœnlenzku* in CR, and the Greenlandic attribution was then incorrectly applied to *Akv* due to the similar subject matter in the two poems.

2.2.17 *Atlamál in grœnlenzku (Am)*

Most scholars consider *Am* to be a much later work than *Akv*. This includes Finnur Jónsson, who dates it at least 50 years later than *Akv*, at around 1050, because of the attribution to Greenland and Christian influence (1920: 313). Likewise, Einar Ól. Sveinsson places it in the 11th or 12th century (1962: 229). De Vries groups *Am* with the 12th-century elegiac poetry about Guðrún, as it focuses more on her psychological motivation than *Akv* does; moreover, its sentimentality and limited vocabulary show that it is post-classical (1942: 158). Larrington characterizes it as "domestic and more expansive in its retelling of the narrative" (2013: 142)

Dronke discusses some of the possible "Greenlandic" evidence: the claustrophobic nature of the story (indicating an isolated colony of small families), the reference to a white bear (presumably a polar bear), and the contacts between Greenlanders and ports in northern Germany that would have allowed Continental legends to be known directly by Greenlanders (1969: 110–111). Dronke also suggests that it was composed in the 12th century, as it shares the version of events with the 13th-century *Þiðreks saga* and is stylistically similar to the 12th-century sagas of Icelanders (1969: 111). She also speculates due to its length that it was written as a literary work rather than composed orally (Dronke 1969: 111).

According to Andersson, the poet of *Am* must have known *Akv*, as there are several plot elements that only make sense as references to scenes in *Akv*; moreover, although *Am* is longer and more detailed, it follows an identical sequence of events to that in *Akv* (1983: 251–253). Even the compiler of *Am* views it as an expansion of *Akv*, writing "Enn segir gleggra í Atlamálom inom Grœnlenzcom" 'it is told even more clearly in *Am*' (Andersson 1983: 255). Andersson concludes that the poet of *Am* reworked *Akv* to incorporate knowledge of medieval German versions of the Nibelung cycle. Von See et al. (2012: 420) detect influence not only of *Akv* but also of *Vkv, Sg, Ghv*, and possibly *Br*, thus the youngest of these (*Sg*) serves as the

terminus post quem for *Am*. At any rate, the use of *Am* as a source for *Vǫlsunga saga* means that *Am* must have been composed before 1250 (von See et al. 2012: 421).

2.2.18 *Guðrúnarhvǫt (Ghv)*

Finnur Jónsson (1920: 316) argues that this poem originated in Greenland and borrows from *Hm, Gðr II*, and *Gðr III* and so must date to just after the year 1000. De Vries considers it one of the latest poems of the 12th-century group, because the poet has lost all sense of proportion and increases Guðrún's suffering to the point of exaggeration (de Vries 1942: 150). Einar Ól. Sveinsson (1962) suggests, however, that *Ghv* may be one of the earlier elegiac poems, perhaps as old as *Gðr II* (1962: 492).

Dronke notes that *Ghv* borrows stanzas from *Hm* but in condensed form (*Ghv* stanza 4 combines phrases from *Hm* stanzas 6–7), thus it must post-date *Hm* (1969: 151). Similarly, there are overlaps with *Sg*; Dronke believes that *Ghv* is "brighter" and "more sophisticated," thus *Sg* must have borrowed the material from *Ghv* with only modest success. She concludes that it belongs among the latest Eddic poems, like *Am* being from the late 12th century (1969: 154). Jónas Kristjánsson, however, claims that it rather belongs with *Akv* and *Hm* to the earliest layer of Eddic poetry (1997: 65). Like Dronke, von See et al. (2012: 726) date *Ghv* to the 12th century, because they believe that it was influenced by *Vkv* (which they date to the 12th century).

2.2.19 *Hamðismál (Hm)*

Because this poem serves as a source for both *Ghv* and *Akv*, Finnur Jónsson (1920: 320) dates it to the early 10th century, making it one of the oldest poems heroic group. Einar Ól. Sveinsson also considers *Hm* one of the earliest heroic poems, placing it in the 9th century (1962: 406). De Vries dates it even earlier, considering it another "Gothic heroic poem" given the obvious parallels between the poem's characters Jǫrmunrekkr, Svanhildr, Hamðir, and Sǫrli and the historical figures Ermanaric, Sunhilda, Ammius, and Sarus, although de Vries is uncertain how this Gothic poem was transmitted to Scandinavia (1941: 39–41). Recall also that the scribe(s) of CR considered the poem to be ancient, labeling it "Hamðismál in forno" (Einar Ól. Sveinsson 1962: 219).

Dronke quotes earlier scholars' characterizations of *Hm* as "a noble ruin", "badly preserved", "full of weak narrative threads", but in her opinion, it is a well-crafted, albeit spare and allusive, narrative (1969: 168). As for its age, she argues that *Ragnarsdrápa* by Bragi Boddason the Old and *lausavísur* by Torf-Einarr

Rǫgnvaldsson show that a very similar version of the Hamðir/Jǫrmunrekkr story, if not individual stanzas of the extant *Hm*, was known in the 9th century (1969: 214–217). Turville-Petre dates the poem early, like *Akv*, due to its indeterminate meter (1976: xiv). However, von See et al. (2012: 856) consider this a very late poem, as they claim it is influenced by the quite late *Ghv* and *Sg*; the only Eddic poem they feel to have been influenced by *Hm* is *HH I*, which does not help narrow the date.

2.2.20 The Eddic appendix: *Bdr, Rþ, Hdl, Grt*, and *Svm*

We now turn now to the five Eddic poems not found in CR that I have included in my study. Beginning with *Bdr*, Finnur Jónsson (1920: 150–151) considers it to be among the very earliest of all the Eddic poems, earlier than even *Þrk* and possibly composed by the same poet as *Þrk*. De Vries, however, argues that *Bdr* is a late 12th-century re-working of older, genuinely pagan poems; it retells the *Vsp* narrative about Baldr's death without adding any new details (de Vries 1942: 125). Other scholars have considered it a late imitation of earlier Eddic poems (see references in Ulvestad 1954: 60). Einar Ól. Sveinsson notes that dating the poem is difficult but places it in the pagan period (1962: 286). Von See et al. (2000: 390) point out that *Bdr* has among the highest rates of the particle *of/um*, perhaps an indication that it is one of the older poems in the corpus (for discussion of this criterion, see Chapter 3 below). However, they conclude that despite this, *Bdr* is relatively young, seeing the influence of the Baldr account in *Vsp* as well as classical motifs (2000: 395). A possible *terminus ante quem* is 1225, if one considers Snorri to have used it as a source for his *Gylfaginning*; otherwise, it may have been composed as late as the early 14th century (von See et al. 2000: 396).

Finnur Jónsson considers *Rþ* one of the earliest Eddic poems, dating from around 900 based on its historical background and meter (1920: 194), and Einar Ól. Sveinsson similarly claims that the poem is no later than the 10th century (1962: 287). De Vries regards it as a philosophical work of the 12th century and finds support for this dating in a number of lexemes that are late borrowings and in the use of the courtly form of address *ér* (1942: 63–64). Most scholars now seem to view it as a late scholarly endeavor rather than as a reflection of actual pagan beliefs (Turville-Petre 1976: 151). Nevertheless, the debate about its age continues. Dronke agrees that it is "a learned fiction" but believes it was composed in the 11th century (1997: 207). Jónas Kristjánsson would date it as far back as the 10th century based on parallels with *Vsp*; he finds more concrete evidence for an early date, in that *Skjǫldunga saga* (ca. 1200) seems to borrow the figures Rígr, Dana, and Danpr from the poem (1990: 212–213). Von See et al. (2000: 513) argue that *Rþ* dates to the 13th century, being influenced not only by *Vsp* and *Háv* but also by later texts such as *Ynglinga saga, Vǫlsunga saga*, and *Ragnars saga loðbrókar* and containing

vocabulary that is typical of 13th-century prose texts. Hill states: "The great problem of *Rígsþula* scholarship is that while the poem is potentially an extremely important source of social history, this importance is largely vitiated by the absence of any reasonably informed consensus as to its date and provenance" (2002: 238–239).

Hdl is found in the 14th century ms Flateyjarbók, but stanzas 29–44 (the section called *Vǫluspá in skamma*) are quoted by Snorri in his early 13th-century *Prose Edda*. The poem is dated by Finnur Jónsson to roughly 950–975 (1920: 203), except for the *Vǫluspá in skamma* interpolation, which he dates to 1150–1200 (1920: 206), but few other scholars have agreed with such an early date. De Vries sees the components of *Hdl*, like *Bdr* and *Rþ*, as antiquarian products of the 12th century, with the *Vǫluspá in skamma* a clear imitation of *Vsp*. Because Snorri knew the *Vǫluspá in skamma* section but with no connection to the Hyndla narrative, de Vries believes that the extant version of *Hdl* was not assembled until the 13th century (1942: 127). Einar Ól. Sveinsson similarly dates *Hdl* to the late 11th or the 12th century (1962: 351). McKinnell discusses thematic discrepancies in the poem, which can only be explained as a post-conversion poet's attempt to treat pre-Christian traditions (2014: 273). While most scholars find that the genealogies in the first half of the poem have little to do with *Vǫluspá in skamma*, von See et al. note that both halves of the poem are concerned with genealogy (of heroes and mythic beings, respectively), share compositional and stylistic features such as the refrains, and are all related through the figure of Óttarr (von See et al. 2000: 679). Von See et al. conclude that the poem was composed before Snorri used it as a source around 1225, and they dismiss late lexical borrowings as interpolations by a 14th-century scribe (2000: 689).

Like *Hdl*, Finnur Jónsson (1920: 218) considers *Grt* to date from the period 950–975. De Vries regards the theme of *Grt* as quite old but dates the extant poem to the 11th century, as the poem was probably known by the 12th-century skalds Gísl Illugason and Ívarr Ingimundarson (de Vries 1941: 289). Einar Ól. Sveinsson, however, claims that it is from the 9th century or earlier (1962: 229). Von See et al. (2000: 857) allow for a wide range of dates, with a possible 10th-century *terminus post quem* and the *terminus ante quem* being Snorri's use of the poem as a source in his *Skáldskaparmál*.

Finally, *Svipdagsmál* is usually divided into two component poems – *Gróugaldr (Grg)* 'The Spell of Gróa' and *Fjǫlsvinnsmál (Fjm)* 'The Lay of Fjǫlsviðr' – which are united by the character of Svipdagr. Bugge (1861) and other early scholars believed that the poem was pre-conversion, with its negative portrayal of a *kristin dauð kona* 'dead Christian woman.' Finnur Jónsson dates *Fjm* to the 10th century, and believes *Grg* as much as a century later (1920: 223). More recently, however, scholars such as Einar Ól. Sveinsson (1962: 228) and Harris (1985/2005: 98) place it in the 12th or 13th century, seeing in the poem fairy tale motifs, hefty borrowings from the

core Eddic poems (especially *Grm, Skm*, and *Vm*), and misunderstandings of earlier mythological names. De Vries (1942) was especially skeptical, attributing it to the 14th century. This text appears only in late, paper manuscripts, and the scholarly consensus is that this is a late-medieval imitation of Eddic poetry (Larrington 2016: 3). However, Heide (1997: 45–50) dismisses many of the arguments for a late dating of *Fjm* (while acknowledging that *Grg* may be later), noting that fairy tale motifs are also characteristic of Eddic poems that are conventionally considered to be old; he interprets borrowings and 'mistakes' in the mythology as evidence that *Fjm* is from an early tradition, parallel to the mythology represented by the *Poetic Edda*.

2.2.21 Summary of proposed dates

This discussion of the dating of individual poems is summarized in Table 2.1.

There are some key differences between the ranges of proposals offered by these scholars. Note first of all that the dates proposed by Finnur Jónsson are generally earlier than those by more recent scholars, with every poem except *Grp* dated within the Viking Age; Finnur's work comes before the tendency to ascribe Christian and courtly influence to many of the Eddic poems. Secondly, note that Finnur's dating is subjective, based on the influences of the poems on one another, their religious meaning, and their flora and fauna; some of his choices have been criticized as "arbitrary" (Ulvestad 1954: 56). De Vries is more open about his reasoning, but he often draws implausible conclusions (e.g. his proposal for Gothic heroic poetry) or uses his criteria inconsistently (e.g. taking irregular meter sometimes as a sign of antiquity and other times as a marker of late composition). Von See et al. (1997–2019) are explicit about their methods but also very conservative; as a result, they often limit their conclusions to the *terminus ante quem* and rarely propose precise dates. Thirdly, Finnur's dating periods are more fine-grained than those of other scholars; he groups the poems into ten bins, compared to de Vries' six bins. More recent scholars are often hesitant to assign more specific dates, often content to date poems within a range of one or two centuries.

Nevertheless, there are several good reasons to use Finnur Jónsson's dates as a proxy for the received wisdom on the ages of Eddic poems. First, his period of composition is 875–1200, well within the modern consensus on the general age of the Eddic corpus (unlike some of de Vries' implausibly early datings). Secondly, his fine-grained dating bins, although very much subject to debate, offer more specific hypotheses to be tested than the more tentative dates of scholars like Einar Ól. Sveinsson (1962) and von See et al. (1997–2019).

Table 2.1 Some proposals on the dating of Eddic poetry*

Poem	Finnur Jónsson	De Vries	Von See et al.	Other recent work
Háv, 111–37	875–900			Evans: 10th c.
Skm	900	870–1000	1100–1270	Dronke: early; Andersson: late
Þrk	900	1150–1200	< 1270	McKinnell: 12th-c. revision
Vkv	900	before 800	1100–1270	McKinnell, Dronke: 10th–11th c.
Rþ	900	1100–1150	1200's	Jónas K.: 10th c.; Dronke: 11th c.
Bdr	900	1150–1200	< 1225	Einar Ól. Sveinsson: pre-conversion
Háv, rest	900–930	870–1000	< 1200	Evans: < 960; von See: 13th c.
Vm	900–930	870–1000	1200's	Larrington: "among the older poems"
Grm	900–930	870–1000	900–1225	Larrington: "archaic"
Hrbl	900–930	870–1000	< 1225	Einar Ól. S.: pre-conversion
Vsp	935	870–1000	< 1225	Dronke: ca. 1000; Lönnroth: 13th c.
Ls	935	870–1000	< 1225	Andersson: "pagan"; Abram: "late"
Hm	925–950	before 800	1100–1250	Einar Ól. S., Dronke: 9th c.
Gðr II	925–950	1150–1200	< 1250	Harris: 12th–13th c.
HH II	925–950	1000–1100	< 1262	Einar Ól. Sveinsson: 10th c.
Rm	925–950; 950–975	870–1000	1100–1250	Haimerl: 13th-c. compilation
Svm	925–950; 1000–1025	1300–	n/a	Einar Ól. S., Harris: 12–13th c.
Alv	950–975	1150–1200	1100–1270	Acker: ca. 1200
Hdl	950–975	1150–1200	< 1225	McKinnell: post-conversion
Grt	950–975	1000–1100	900–1225	Einar Ól. S.: 9th c. or earlier
HHv	950–975; 975–1000	1100–1150	< 1262	Andersson: ca. 1200
Hym	975–1000	1150–1200	< 1150	Larrington: "relatively late"
Fm	975–1000	870–1000	1050–1200	Haimerl: 13th-c. compilation
Sd	975–1000	870–1000	< 1250	Haimerl: 13th-c. compilation
Br	975–1000	1150–1200	1100–1250	Harris: 12th–13th c.
Gðr I	975–1000	1150–1200	1145–1270	Harris: 12th–13th c.
Gðr III	975–1000	1150–1200	< 1270	Harris: 12th–13th c.
Akv	975–1000	before 800	< 1145	Jónas Kristjánsson: before 870
HH I	1000–1025	1000–1150	1100–1250	Andersson: before *HHv* & *HH II*
Hlr	1000–1025	1150–1200	< 1200	Harris: 12th–13th c.
Od	1000–1025	1150–1200	1100–1250	Harris: 12th–13th c.
Ghv	1000–1025	1150–1200	< 1250	Jónas Kristjánsson: early layer
Sg	1050	1150–1200	< 1250	Andersson: before *Gðr II*
Am	1050	1150–1200	< 1250	Andersson, Larrington: after *Akv*
Grp	1150–1200	1200–1250	< 1250	Gunnell: 13th c.

* Finnur Jónsson's dates are taken from the 2nd edition of his history (1920: 67–68) and supplemented by the summary in Fidjestøl (1999: 106–107). De Vries (1941/1942) is summarized in Fidjestøl (1999: 183–184). Von See et al. do not give precise dates for every poem, so I have extrapolated some of these dates from their relative chronologies.

2.3 Linguistic and metrical methods for dating Old Norse poetry

2.3.1 Why linguistic and metrical criteria?

The previous sections have discussed attempts to date the *Poetic Edda* based mostly on the poems' contents, stylistic characteristics, and relationships to each other, which have proven to be inconclusive. As seen in Table 2.1 above, a poem dated by one literary scholar to the Viking Age may be considered a product of the 13th century by another scholar. Even attempting to establish relative chronology based on the poems' content is problematic. As Schjødt (2016) points out, we should not consider CR to be the complete body of Eddic poetry, because quotations in works such as Snorri's *Prose Edda* imply that there were many more Eddic poems which have been lost to history. Thus if one extant poem seems to rely on another, it is impossible to establish whether there has been direct borrowing between the two poems, or whether both borrow from a source or sources that no longer exist (Schjødt 2016: 137). Moreover, in the case of shared content, it is often impossible to determine the direction of borrowing: for example, Eyvindr's *Hákonarmál* (composed ca. 961) has been argued to quote from *Háv* by some scholars, while other scholars claim that *Háv* relies on *Hákonarmál* (Hallberg 1975: 29).

Linguistic and metrical criteria, on the other hand, do not rely on subjective judgments about the content or style of a poem, but instead involve features that can be quantified. Linguistic and metrical features have been used not only to date Eddic poetry, but also to date skaldic poetry that is anonymous or of disputed authorship. With respect to skaldic verse, Abram claims that linguistic methods "are capable of differentiating a tenth-century poem from one composed in the thirteenth century" (2011: 13). This section surveys some of the linguistic and metrical criteria that have been used to date Eddic and skaldic poetry by previous scholars, work on which I will build in the remainder of the book. In the case of criteria that I will use, a fuller discussion will be presented in subsequent chapters; thus this section is largely devoted to criteria that are less relevant to my study. I will begin by reviewing the six criteria for dating Eddic poetry evaluated by Fidjestøl (1999): the particle *of/um*, alliteration with **vr*- words, contracted (hiatus) forms, syncope, mythological kennings, and Kuhn's laws.

2.3.2 The particle *of/um*

The first criterion treated by Fidjestøl is the so-called expletive particle *of/um*. This is one of the most frequently used criteria for dating Old Norse poetry, since the pioneering study by Kuhn (1929). Because this is also one of my dating criteria, the work on this particle by Kuhn, Fidjestøl, and others will be reviewed in Chapter 3.

2.3.3 Alliteration of **vr-* with *r-*

In some Eddic poems, words like *reiðr* 'angry' (etymologically *vreiðr*) alliterate not with *r-*, but with *v-*. This was noted already by Óláfr hvítaskáld in the *Third Grammatical Treatise* as a kind of poetic license (Fidjestøl 1999: 232). These apparent exceptions have a diachronic explanation, as the result of a sound change in Old West Norse: the consonant cluster *vr-* simplified to *r-*. With this in mind, poems in which **vr-* words alliterate with *v-* may have been composed before the sound change occurred.

Fidjestøl (1999) examines every instance of alliteration with words that began with **vr-* in Proto-Norse. He finds strong evidence for alliteration with *v-* in *Vm, Fm, Sd*, and *Bdr*, and weaker evidence for *v-* in *Þrk. Akv, Ls*, and *Háv* have some words alliterating with *v-* and others with *r-*, which could indicate either that alliteration with *v-* has been used as an archaism, or that there is influence from varieties that preserved *v-* longer (Old Norwegian) or never lost it (East Norse). *Grp, Am, HHv*, and *Alv* have strong evidence for alliteration of **vr-* words with *r-*, while *HH II, Grm*, and *Rþ* have less conclusive evidence for alliteration with *r-*. In skaldic poetry, alliteration of etymological **vr-* with *v-* does not occur after the year 1000, but there is a period of about 100 years when alliteration with both *v-* and *r-* occurs. Fidjestøl tentatively concludes that *Vm, Ls, Akv*, and perhaps *Sd*, the first part of *Háv*, and *Bdr* were composed before 1000, while *Grp, Am, HHv, Alv, Gróugaldr*, and possibly *Grm* were likely composed after 900, with some overlap between the early and late groups (1999: 245). In a similar study, Haukur Þorgeirsson (2016) concludes that *Vm, Ls, Fm, Sd, Akv*, and parts of *Háv* are early, while *Grp* and *Am* are younger. Sävborg (2004) warns that West Norse poets may have been aware that words like *reiðr* begin with a *v-* in East Norse, but Haukur Þorgeirsson (2016: 58) argues that outside the *Third Grammatical Treatise*, there is no evidence that post-10th century Icelandic poets ever tried to alliterate such words with *v-*.

Thorvaldsen suggests that it is possible that even when the manuscripts record *r-*, the pronunciation *vr-* may have been used in recitation to maintain alliteration (2016: 77). Thorvaldsen argues that this alliterative pattern (especially in formulas such as *vreiðr vega* 'to fight in anger') was possibly part of the register of Eddic poetry. If so, the loss of *v-* may indicate that a poem is young, but the preservation of *v-* could be either due to a poem's age or simply continued use of this traditional feature (Thorvaldsen 2016: 78).

Although this dating criterion has shown some promise, I will not include it in my study. Because the number of instances of this type of alliteration per poem is very small, it does not lend itself to a statistical analysis that compares Eddic and skaldic poetry. Nevertheless, because the development from **vr-* to *r-* has an absolute chronology, this change can serve as a check on the dates for Eddic poems that I propose in Chapter 8.

2.3.4 Contracted vs. hiatus forms

Fidjestøl's third linguistic criterion involves words that contained vowels in hiatus in pre-literate Old Norse (e.g. *áa* or *éa*), which undergo contraction to long monophthongs (*áa* > *á*) or to rising diphthongs (*éa* > *já*) (1999: 246). Because hiatus vowels are disyllabic but the resulting contractions are monosyllabic, the difference between the two may be recoverable not only from manuscript spelling, but also from an examination of the metrics. Evidence from skaldic poetry shows that contracted forms first occur in the 10th century, and after several centuries of competition between hiatus and contracted forms, hiatus forms probably disappeared from speech by the early 13th century (Fidjestøl 1999: 249–250). Fidjestøl examines every instance in Eddic poetry of words that were subject to this change; he categorizes each instance as hiatus, contracted, or metrically inconclusive. Given the freer scansion of *ljóðaháttr*, most of the examples in poems from that meter were inconclusive, so he does not report on them. His data are summarized in Table 2.2.

Table 2.2 Hiatus vs. contracted forms in Eddic *fornyrðislag* poems*

Poem	Hiatus forms	Inconclusive	Contracted
Vǫluspá (Vsp)	Háars, velspáa, Gimléi	5 examples	
Hymiskviða (Hym)	sáo, fríi, tváa, (fía), eitrfáan	2 examples	
Þrymskviða (Þrk)	(léa, féar)	1 example	
Vǫlundarkviða (Vkv)	sáuz, (híu, séa,) sáo, (séa)	2 examples	
Helgakviða Hund. I (HH I)	fáa, (séac, séa,) fáa,	8 examples	
Helgakviða Hjǫrvarðs. (HHv)	fáaðr, séir	1 example	
Helgakviða Hund. II (HH II)	gráan, séi, (séa)	6 examples	
Grípisspá (Grp)	séi, séi, séir, náa	4 examples	3 examples
Reginsmál (Rm)	(féar,) tréom	1 example	
Fáfnismál (Fm)	(séa)		1 example
Sigrdrífumál (Sd)	klóom		
Brot af Sigurðarkviðu (Br)	scáa		
Guðrúnarkviða I (Gðr I)	séir, knéom, séi	2 examples	1 example
Sigurðarkv. in skamma (Sg)	(éarn,) séir, féi, (féar,) séi, (éarn)	3 examples	
Helreið Brynhildar (Hlr)			
Guðrúnarkviða II(Gðr II)	Háalfs, (féar,) séir	2 examples	1 example
Guðrúnarkviða III (Gðr III)		1 example	
Oddrúnargrátr (Od)	ósmáar, fimtían		
Atlakviða (Akv)	Kíars, eyrscáan	5 examples	1 example
Atlamál in grœnlenzku (Am)	(féar)	10 examples	
Guðrúnarhvǫt (Ghv)		4 examples	
Hamðismál (Hm)		4 examples	2 examples
Baldrs draumar (Bdr)			
Rígsþula (Rþ)	bláfáan	5 examples	
Hyndluljóð (Hdl)	(séa)	1 example	
Grottasǫngr (Grt)	(gréa, féar)	2 examples	

* My counts are from Fidjestøl's examples (1999: 253–258). Those in parentheses involve the change from falling to rising diphthong, argued by Myrvoll (2014) to have occurred after 1200.

Fidjestøl concludes from this investigation that this is a very poor dating criterion, given the small number of clear examples in each poem (1999: 259). If one were to take these results seriously, they imply two chronological groups. First, those poems with hiatus forms but no contracted forms – *Vsp, Hym, Þrk, Vkv, HH I, HH II, HHv, Rm, Sd, Br, Sg, Od, Am, Rþ, Hdl*, and *Grt* – would seem to be early (1999: 259). Second, those poems with both hiatus and contracted forms would seem to be later: *Grp, Fm, Gðr I, Gðr II*, and *Akv* (1999: 259).

Consider some examples of how the small numbers skew the ability to use this criterion for dating. First, the only poem to contain clearly contracted forms but no clearly hiatus forms is *Hm*, which is nearly universally considered an early work (see 2.2.19 above); we may simply dismiss the fact that no hiatus forms are attested as accidental. Secondly, *Akv* is widely thought of as older than *Am* (see Sections 2.2.16–17), but on this criterion *Am* appears older because its only clear form happens to be a hiatus form.

Gade (2001) concurs that hiatus words are not a reliable dating criterion. This is because she finds that "hiatus words could be reproduced at a time when disyllabicity was no longer productive" (2001: 53). However, the late poets' archaic use of hiatus is different from the genuine use of hiatus words by earlier poets, because in late poetry there are a limited number of contracted words that fill disyllabic positions; thus late poets probably thought of these specific words as exceptional (Gade 2001: 53–54).

Myrvoll, on the other hand, finds that hiatus forms correlate with age in his skaldic corpus: hiatus is most common in poems before 1150, and following a period of variation, after 1200 there are almost only contracted forms (2014: 327–328). The earliest contraction occurred with numbers in *-téan* and participles in *-andi*, followed by syncope of similar vowels (*áa* > *á* and *éi* > *é*), with the last change being the shift to rising diphthongs as in *séa* > *sjá* around 1200 (Myrvoll 2014: 328). If this is true, then hiatus forms like *séa* are found in 12th-century skaldic verse not because they are part of poetic license, but because they were still disyllabic in the speech of the time.

What are we to make of the status of hiatus forms as a criterion for dating Eddic poetry? First, we can discard from Fidjestøl's list of hiatus forms disyllabic forms like *séa*: this is not a very useful criterion, as the change *éa* > *já* occurred around 1200, after most Eddic poems had already been composed. Secondly, the words listed by Gade (2001: 53) as being licensed to fill disyllabic positions in 12th- and 13th-century skaldic poetry (*náar, Háars, bráa, gráum, bláum*) are no longer clear evidence for hiatus in Eddic verse. This greatly reduces the number of unambiguous hiatus forms in Fidjestøl's data and would move several poems out of the group that appear to be early on this criterion: *Þrk, Am, Hdl*, and *Grt*.

Now let us return to the uncontracted forms in Eddic poetry identified by Fidjestøl. One problem with Fidjestøl's analysis is that *Am* appears older than *Akv*;

with the sole hiatus form in *Am* excluded, this is no longer the case. Another problem in this regard is *Grp*, which is considered by many scholars to be the latest Eddic poem, possibly even from the 13th century (2.2.13) but has four uncontracted forms. However, once we have excluded *náa* as a late poetic license, the only hiatus forms are *séi* and *séir*. A glance at Table 2.2 reveals that these two forms occur very often in the heroic Eddic poems (*HHv, HH II, Gðr I, Gðr II*, and *Sg*). So perhaps *séi(r)* should be added to Gade's list of exceptional, stereotyped hiatus forms.

The number of hiatus vs. contracted forms is already too small in Fidjestøl's presentation of the data for any statistical analysis. Once late contractions such as *séa* > *sjá* and the 12th-century exceptional forms are excluded, vanishingly few examples remain. Thus, while this criterion cannot be used by itself to date an individual poem, it can be used as a check on my proposed dates in Chapter 8.

2.3.5 Syncope

As discussed in 2.1.1 above, Bugge claimed that syncope is the *terminus post quem* of extant poetry, because reconstructing *ljóðaháttr* poems to their pre-syncope forms introduces metrical violations (Fidjestøl 1999: 262). Fidjestøl provides a statistical analysis which largely upholds Bugge's hypothesis (1999: 268). This is not a criterion that I will discuss further, given that it is limited to only a subset of Eddic poems and can only prove that such poems were composed after the year 700.

2.3.6 Mythological kennings

Recall from Section 2.1.1 that de Vries (1934) found that kennings involving pagan gods were not used in skaldic poetry between 1000 and 1150, thus the Eddic poetry on mythology was unlikely to have been composed in this period. Fidjestøl conducts a statistical analysis of kennings in skaldic poetry, and shows that rather than an absence of mythological kennings followed by a revival after 1150, there is a steady decline in such kennings; instead of an increase around 1150, Fidjestøl finds only a small uptick in the antiquarian revival of the 13th century (1999: 293). Examining a wider corpus of poetry, Males (2020: 40–41) refines de Vries' hypothesis, finding that "generic mythological references" (mere invocations of a god's name to make a kenning for *man, woman* or *raven*) continue to be used even after conversion, while "specific mythological references" (those that make reference to the details of pagan cosmology, etc) are not found between 995 and 1120.

While I do not use this as a dating criterion for Eddic poems, de Vries' proposal is largely vindicated by my study, *pace* Fidjestøl. As discussed in Chapter 8, Section 8.3.2, nearly all mythological poems were composed before the year 1000 or after 1200.

2.3.7 Kuhn's laws and *Fremdstofflieder* hypothesis

Kuhn (1933) proposes two laws that relate "Betonung" ('stress') to word order in Old Norse poetry. Kuhn's laws have been very influential, but not without controversy, especially because Kuhn suggests that certain violations of his laws result from West Germanic linguistic influence on the heroic poems that treat Continental figures (*Vkv* plus the poems of the Sigurðr-Guðrún-Atli cycle). Both the laws themselves and the critique of them are fairly complex, and as I use one of the laws as a criterion for dating, I will save this discussion for Chapter 5.

2.3.8 Other criteria for dating Eddic poetry

Turning now to criteria not discussed by Fidjestøl (1999), Åkesson (2005) uses the different types of Old Norse negation to date Eddic poems. This will be discussed in Chapter 4. Finally, Sapp (2019b) has proposed that the use of the relative marker *sá* can also be a dating criterion, and this argument will be presented in Chapter 6.

2.3.9 Dating skaldic poetry

Sapp (2000) is an attempt to date the skaldic poem *Ynglingatal*, a genealogical poem of Norwegian kings that Snorri Sturluson used as his source for *Ynglinga saga*. Snorri attributed it to the late-9th-century Norwegian poet Þjóðólfr ór Hvini, but there has been much debate about whether *Ynglingatal* is a genuine product of the 9th century or an antiquarian endeavor of the 12th. The poem is composed in the meter *kviðuháttr*, and Sapp compares this poem to other *kviðuháttr* poems with respect to two features: the particle *of/um*, and the increase in lines of type A at the expense of types B and D. *Ynglingatal* patterns most closely with the 10th-century *kviðuháttr* poems and shows no signs of being late; thus Sapp concludes that it was probably composed in the 9th or 10th century (2000: 95).[20]

Gade (2001) investigates *lausavísur* in the skald sagas. A *lausavísa* is a single stanza not part of a larger poem, which appears as a quotation by a character in a saga. Unlike some other skaldic poetry, the attribution of these stanzas in works such as *Egils saga* and *Kormáks saga* to Viking Age skalds has been called into question. Gade includes two criteria that have been mentioned above: contraction of hiatus forms and the particle *of*. Importantly, she introduces some new criteria, all of which involve the meter *dróttkvætt* and therefore do not apply to Eddic poetry.

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20. Although Sapp (2000) appeared in press before Gade (2001), the methodology that I used in that paper arose out of coursework taken with Prof. Gade and access that she provided to an early version of her article. I am indebted to her for her mentorship.

The first of these is the verse type *brestr erfiði Austra*: this type of line, in which the first dip (here *brestr*) has internal rhyme (*-str-* subsequently occurs in *Austra*), arises in the 11th century. The second criterion involves the placement of a function word in the final, stressed position of type E lines, which was not allowed in skaldic poetry until the 11th century (Gade 2001: 68).[21] Gade's third new criterion involves the replacement of the original preposition *fyr* 'for' by the disyllabic form *fyrir*, which can only be detected in *dróttkvætt* A2k lines. Applying these criteria to stanzas from four skald sagas, Gade (2001) draws two important conclusions. Firstly, although late skalds could imitate archaic constructions, they could not do so consistently and instead followed the conventions of their own time (2001: 71). Secondly, the skaldic stanzas in the four sagas investigated (especially *Kormáks saga* and *Hallfreðar saga*) are consistent with *dróttkvætt* poetry dated to the period before 1014 and are thus unlikely to have been composed by the author of the saga (2001: 73–74). Thus while some of Gade's criteria cannot apply to dating Eddic poetry, she provides strong evidence that linguistic and metrical criteria can be used to distinguish authentically old stanzas from antiquarian imitations.

Building on Gade's criteria as well as those used in earlier research, Myrvoll (2014) offers a comprehensive survey of linguistic and metrical criteria for dating skaldic poetry, using a large corpus of both attributed and anonymous poems from the 9th to the 13th century.[22] Myrvoll examines two linguistic features that have been mentioned above (*of/um* and contracted vs. hiatus forms) as well as four features that involve internal rhyme and six criteria that involve meter.

Internal rhyme is a requirement of some skaldic meters such as *dróttkvætt*. The four features investigated by Myrvoll are rhyme of vowels and consonants of different length, location of internal rhyme, rhyme across word boundaries, and rhyme of *a* with *ǫ*. Myrvoll finds that some of these criteria are more useful than others for dating skaldic poetry (2014: 333). However, these four criteria will not be discussed further, because internal rhyme is not a property of the Eddic meters.

Of Myrvoll's six metrical criteria, two can apply to Eddic poetry and will be treated in Chapter 7 below: variation in line type (as in Sapp 2000) and secondary stress in dips. Four others will not be used. The first of these four is the verse type *brestr erfiði Austra* introduced by Gade (2001). The second feature is resolution, in which two light syllables "resolve" to form a single lift. Myrvoll finds that in odd lines, resolution declines in the 12th century and then rises again in the 13th (2014: 201); because this is a non-linear development, it is not a useful dating

21. Eddic poetry seems to have no restriction on the type of word that can occur in that position, as illustrated by the line *nástrǫndo á* in *Vsp* 38:3 (Gade 2001: 68).

22. Myrvoll includes in his study only skalds represented by 80 or more lines (see 2014: 35–39).

criterion. The trend in even lines is clearer, rising from 2.7% to 6.6% (2014: 203); however, the difference in percentages between the early and later centuries is not large enough to be worth pursuing further. The third metrical criterion that I will not use involves violations of Craigie's Law, which states that if the 4th metrical position is stressed (e.g. in type B or E lines), it may not be occupied by a long nominal syllable; while Myrvoll finds that these violations increase in *dróttkvætt* after 1200, there is no clear development in other meters, including *fornyrðislag* (2014: 279), making a comparison to Eddic poetry invalid. Finally, he employs Gade's (2001) criterion mentioned above involving function words in the fourth position of type E lines, a restriction that does not apply to Eddic verse.

Myrvoll concludes that none of the criteria speak against the traditional dating of the skaldic corpus, because all of the features show gradual change, which speaks to a genuine historical development that would have been difficult for later poets to fabricate (2014: 329). He also finds that the strongest features are the use of resolution, the *brestr erfiði Austra* lines, and two of the internal rhyme features (2014: 332), none of which are applicable to the study of Eddic poetry. However, among the five features that he considers to be good dating criteria are three that I will investigate in this study: type variation, heavy dips, and the particle *of* (Myrvoll 2014: 332–333). The only weak criteria are four that I have chosen not to investigate as they do not apply to the Eddic corpus: two internal rhyme features, violations of Craigie's Law, and function words in Craigie's position (Myrvoll 2014: 333–334).

2.4 My assumptions and methods

2.4.1 Dating the extant poem

Dating a poem that was passed down orally for decades or perhaps centuries before being committed to parchment is not entirely straightforward. Andrews (1927) notes that for each poem, there are three possible dates that one could attempt to establish: the date of the source material, the date of the composition of the poem, and the date at which it was recorded in the manuscript. In light of the oral-formulaic hypothesis, there might not be a single date on which the poem was composed, so in addition to these three dates, Harris suggests that scholars should seek "the probable origin of the oral tradition leading to" the extant version of a particular poem (2016: 43).

In the current study, I will not attempt to date the source material, because, as the above discussion shows, this has been investigated thoroughly by scholars with a more literary focus and has not led to conclusive results. Nor will I attempt to add anything to the manuscript history. As for the choice between the remaining two

possible dates – the date of the extant poem and the date of the oral tradition which led to the extant poem – I will follow the two methodological assumptions laid out by Fidjestøl (1999: 199). First, I will only attempt to date the extant poem; this may be equivalent to the composition, unless there is clear evidence that something has been altered in the transmission. Secondly, I will assume that the extant poem is a unified composition, again unless there is good reason to believe otherwise (as with *Háv*). While these assumptions are not unproblematic, they allow the researcher to try to establish a date for the extant text, rather than dating an editor's (usually controversial) reconstruction of the text.

However, in order for Fidjestøl's first assumption to be valid, dating criteria must be carefully selected. The extant, 13th-century form of the poem is only "the same" as the original composition in certain senses. If the original composition was made in the 9th or 10th century, then clearly the original form and the extant form are no longer phonologically identical, because numerous sound changes occurred during the intervening period (see discussion above on internal rhyme, the loss of *v*-, etc.) Similarly, if a 13th-century scribe misunderstood an archaic lexeme and replaced it with a term that he understood, the two versions of the text cannot be considered the same in terms of word choice. Because replacing an individual lexeme is fairly easy and might be done without altering the meter (and sometimes with only minor effects on the meaning), dating poems on lexical criteria is also problematic (Mundal 2004: 224). Therefore, in this study, I will use criteria that are arguably not as susceptible to language change or scribal emendation: morpho-syntactic and metrical criteria. If these criteria are valid, then the date established based on these criteria in the extant form of a poem is equivalent to the date of the original composition.

A word of caution is in order, given the fact that studies such as Gade (2001) show that skalds were able to employ archaic features. Thorvaldsen warns that the presence of archaisms in poetic register make statistical inferences less secure (2016: 80). However, I believe that we can safely proceed with dating, despite the presence of archaisms, for three reasons. First, as Gade (2001) notes, late skalds largely follow the poetic conventions of their era, reserving archaism for occasional use in stereotyped contexts. Secondly, although features such as *of/um* are mostly limited to the poetic register, they nevertheless show change over time within the register; in other words, archaic features are still more frequent in early poetry than in later poetry and thus can be useful for dating. Thirdly, while we should be careful when dealing with individual dating criteria, if multiple criteria point in the same direction, we can be more certain. As Fulk (2014) argues with regard to *Beowulf*, the greater number of different archaic features a poem has, the more likely it is that the poem is genuinely old.

2.4.2 Selection of my dating features

As mentioned in the previous section, the current study will date Eddic poetry on morpho-syntactic and metrical features. The methodology is similar to that used by Fidjestøl (1999): because much skaldic poetry can be dated with some certainty, we can establish timelines for the diachronic developments of these features. We can then attempt to date an individual Eddic poem by comparing its frequencies of those features to the development in skaldic poetry. However, as Mundal (2004: 224) notes, a poem can seem old by one criterion and young by another. Therefore, some objective method is needed for weighing multiple factors against one another, and the Naïve Bayes Classifier is ideal for this purpose. In using the Naïve Bayes Classifier, my study goes beyond Fidjestøl's work on relative chronology by establishing an absolute chronology.

The dating features used in the current study have been chosen on the following criteria. First, phonological changes (syncope and the development **vr- > r-*) and the use of specific lexemes have not been included, because these affected lexemes do not occur with a high enough frequency in each poem for the kind of Naïve Bayes Classifier used in this study.[23] Secondly, the features must occur in both Eddic and skaldic poetry, ruling out features such as internal rhyme and Craigie's Law that occur only in skaldic poetry. Thirdly, the features must show a clear linear increase or decrease over time in the skaldic corpus; a feature that decreases and later increases in skaldic verse (such as Myrvoll's study of resolution in odd lines) is unhelpful, because a high frequency of that feature in an Eddic poem could be evidence for either an early or a late date. As a result, the following morpho-syntactic and metrical features are the primary features whose use for dating Eddic poetry is investigated in the present study: the decline of the particle *of* (Chapter 3), the change from clitic negation to the negative adverb *eigi* (Chapter 4), the position of verbs in subordinate clauses (Chapter 5), the rise of the relative pronoun *sá* (Chapter 6), and changes in the distribution of metrical types and resolution (Chapter 7). After examining each of these features individually, only three will be chosen for the multifactorial, Bayesian analysis presented in Chapter 8: the particle *of*, the negative adverb *eigi*, and relative *sá*.

23. Lexical items could, however, be investigated in a Bayesian "bag of words" analysis, which estimates differences in vocabulary across texts (Sebastiani 2002: 10).

CHAPTER 3

The particle *of/um*

3.1 Background

3.1.1 Kuhn's (1929) foundational study

The use of the so-called expletive particle *of/um* is one of the oldest linguistic criteria for dating Old Norse poetry, first examined by Kuhn (1929) and Dal (1930).[1] Since then, it has continued to be employed as a dating method in numerous studies of both Eddic and skaldic poetry. In fact, it is one of only two criteria that Fidjestøl (1999) considers reliable for dating Eddic poetry (the other being the infrequent alliteration in words with **vr*-). For Sävborg (2004), it is the only reliable dating method. Because this criterion is so well established for dating Old Norse poetry, it is indispensable for the current study. The point of this chapter is, however, not to offer a new contribution to the understanding of the particle as a dating feature, as Olsen (2019, 2020) has recently done. Instead, the purpose of including the particle in this study is to refine the statistics somewhat and use this criterion as a baseline in the current study against which the criteria in subsequent chapters will be compared.

Kuhn (1929) offers a broad survey of the history of the particle *of/um* in Old Norse. He examines every instance of these particles in Old Norse poetry through the 14th century, as well as in a selection of prose texts and runic inscriptions (Kuhn 1929: 1).[2] These words, which are homophonous with the prepositions *of* 'over' and *um* 'around', are used in poetry as fillers, in which case they are either meaningless or have one of the meanings associated with the perfective/collective prefix *ge*- in the other Germanic languages (1929: 4).

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1. Dal and Kuhn come to very similar conclusions. In the discussion below, I concentrate on Kuhn's study, because subsequent work such as Fidjestøl (1999) and Myrvoll (2014) rely more on Kuhn's counts of the particle.

2. Editors may insert *of* where metrically necessary or leave it out, so editions often differ from the manuscripts (and manuscripts may also differ from each other); in other cases, it is unclear whether the manuscript has *of* or a similar word like *ok, af, at* (Kuhn 1929: 4–6). *Of* is the more common of the two particles before 1250, after which time *um* becomes more frequent (Kuhn 1929: 6).

Kuhn finds 42 instances of the particle *of/um* before nouns (1) or adjectives (2), of which nearly all occur in poetry:

(1) *nær verðr á vegom úti geirs* ***um*** *þǫrf guma.*
when gets on roads out spear PRT need man
'out on the road, when a man might have need of his spear'
(*Háv* 38, cited in Kuhn 1929: 33)

(2) *var=at hann í augo yðr* ***um*** *lícr*
was=NEG he in eye you PRT like
'he was not like you in his eye' (*Sg* 58, cited in Kuhn 1929: 34)

Kuhn finds that these are almost all words that have a prefix in the other Germanic languages (e.g. ON *líkr* 'like', cf. Go *galeiks*, OE *gelic*, OHG *gelihhi*), and so likely had a prefix in proto-Scandinavian, before all such prefixes were lost in pre-Old Norse (1929: 32). The nouns can be classified as sociatives (*beðja* 'bed-fellow,' cf. OE *gebeddea*), collectives (*sinni* 'followers', cf. OHG *gisindi*), or deverbal abstract nouns (*boð* 'message', cf. OHG *gibot*). Of the 42 instances, only one 12th-century example (*svangr* 'hungry') would not have had a prefix in pre-Old Norse (1929: 32).

The particle *of/um* occurs much more frequently before verbs. Kuhn (1929: 34) counts 289 instances before a finite verb (3), 111 particles before an infinitive (4), and 252 before a participle (5):

(3) *at aptr* ***uf*** *heimtir hverr sitt geð gumi.*
that after PRT gets each his mind man
'that afterwards every man gets his mind back.'
(*Háv* 14, cited in Kuhn 1929: 34)

(4) *mun=du aldregi góðs laun* ***um*** *geta*
will=you never good reward PRT get
'you will never get a reward for good' (*Háv* 123, cited in Kuhn 1929: 35)

(5) *Baldrs bróðir var* ***of*** *borinn snemma*
Baldr's brother was PRT born quickly
'Baldr's brother was born quickly' (*Vsp* 32, cited in Kuhn 1929: 36)

Kuhn finds that this particle is avoided before certain verbs that never had prefixes (e.g. *fara* in its basic sense 'travel'), but it is used with verbs that are prefixed in related languages (e.g. *fara* meaning 'destroy', cf. OE *forfaran*); thus as with nouns, he concludes that *of* appears before verbs that have lost their prefixes (1929: 43). Unlike the homophonous prepositions, the particles *of* and *um* are proclitic to the modified noun or verb. Moreover, the particle *of/um* is limited to specific metrical positions: it occurs only in dips and never sentence-initially (Kuhn 1929: 44–45).

Kuhn concludes from this that *of/um* has become a metrical filler that replaces prefixes that were extant in the earliest poetry but have been lost by the time of literary Old Norse.[3] He maintains that for the earliest skald, the 9th-century Bragi, *of* was the last remaining verbal prefix (*uf-*, cf. Go. *uf-*) with a wide range of functions, much like Go. *uf-* and German *ge-* (1929: 69), but later poets use it as a filler, replacing lost prefixes only when metrically needed (1929: 79). On the other hand, both Dal (1930) and Olsen (2020) maintain that *of* is used in prose with the same meaning as in poetry, and thus cannot be a purely metrical filler.[4] Setting this question aside, it is clear that in poetry *of* gradually decreases over time, so that poets at the very end of the period use it only in a few positions, such as before participles (Kuhn 1929: 85), a use that Kuhn claims is merely a stereotyped relic of its earlier perfective use (1929: 103).

In Eddic poetry, Kuhn expects a decline of the particle over time just as in skaldic poetry, but this development is obscured by the fact that most Eddic poetry is less strict with respect to the number of metrical positions than skaldic poetry and that Eddic poems may be influenced by older sources, including West Germanic ones (1929: 85–87). Nevertheless, he finds that two poems with stricter syllable counting, *Vsp* and *Hym*, use the particles at about the same rate as the late 10th-century poet Gísli Súrsson, and that the poems widely considered to be late (*Grp, Am, Rþ*) have very few instances of the particle (1929: 86–88). Despite Kuhn's reservations about dating the Eddic poems, his basic finding that *of/um* declines over time in the skaldic corpus has been crucial for Eddic studies, as this is the inspiration for Fidjestøl's study.

3. Kuhn reconstructs the verbal prefix system of Proto-Norse by examining the use of *of* (1929: 63–65).

4. Kuhn explains away the later use of *of* in prose as "potential *of*": a marker of possibility or irrealis before infinitives. According to Fidjestøl (1999: 208), there is no good way to distinguish potential *of* from expletive *of*, and Olsen (2020: 165–166) argues that purported examples of potential *of* are actually perfective *of*.

3.1.2 Fidjestøl's use of the particle to date Eddic poetry

Fidjestøl (1999) offers a more careful examination of using the expletive particle as a dating criterion for Eddic poetry. He calls his work "a methodological investigation," and indeed he is more concerned with evaluating and refining other scholars' criteria for dating Eddic poems than with establishing definitive dates himself. He finds that "Kuhn's reasoning is basically sound" but criticizes some of Kuhn's methods. First, Kuhn lumps skaldic poetry by century, which can obscure finer diachronic trends; instead, Fidjestøl examines individual skalds, but in order to do so he must exclude minor skalds, i.e. those from whom fewer than 80 lines are attested, and he ranks the skalds by their dates of composition (1999: 213). Secondly, Kuhn counts the number of instances of the particle per 10 edited pages, whereas Fidjestøl counts the number of occurrences of the particle per line by each individual skald and weighs this against the rate of particle per line in the whole corpus (1999: 214). He then uses Spearman's coefficient of correlations (Spearman's ρ) to compare each skald's ranking by date and ranking by use of the particle. The result is a "highly positive correlation between age and frequency of the particle" (1999: 217). However, "the correlation is not perfect, and as far as I can see, this inevitably means that the frequency of the particle cannot be used as a criterion of dating in connection with any one particular poem" (1999: 217). Having evaluated and generally approved of Kuhn's method applied to skaldic poetry, Fidjestøl next turns to the Eddic corpus.

Fidjestøl likewise refines Kuhn's counts for Eddic poetry in a few respects. First, he includes *Háv* and the Helgi poems, which Kuhn excluded as he considered those poems not unified wholes. Fidjestøl addresses the composite nature of *Háv* by dividing it into three poems (stanzas 1–110, 111–137, and 138–164; for more on the sections of *Háv* see Chapter 2, Section 2.2.2), and I follow Fidjestøl's division in my own analysis. Secondly, to control for possible scribal variation in the transmission of the particle, Fidjestøl counts only the Eddic poems that are attested in CR. Third, whereas Kuhn only counted Eddic poems with at least 30 stanzas, Fidjestøl includes all of the CR poems. Finally, rather than determining the frequency of particles per stanza, Fidjestøl counts this per line, as Eddic stanzas can differ somewhat in length. The result is shown in Table 3.1.

Fidjestøl's rankings, even after his methodological refinements, are similar overall to Kuhn's, showing that this criterion is robust enough that similar results obtain even when counting methods differ somewhat. One difference that he notes between the two rankings is that *Alv* is ranked second oldest in his study, but it

Table 3.1 Fidjestøl's counts and "reduced deviation" of the particle *of**

Poem	# lines	# particles observed	# particles expected	Deviation	Reduced deviation
Þrk	258	22	6.7	15.3	5.98
Alv	211	16	5.5	10.5	4.54
Vm	331	21	8.6	12.4	4.28
Od	250	12	6.5	5.5	2.18
Háv 1–110	682	24	17.8	6.2	1.49
Sd	255	10	6.7	3.3	1.3
Háv 138–164	182	7	4.7	2.3	1.07
Gðr I	216	8	5	2.4	1.02
Hm	222	8	5.8	2.2	0.93
Grm	360	12	9.4	2.6	0.86
Ls	396	13	10.3	2.7	0.85
Vsp	538	17	14	3.0	0.81
Vkv	318	10	8.3	1.7	0.60
Br	150	5	3.9	1.1	0.56
Ghv	174	5	4.5	0.5	0.24
Sg	565	14	14.7	−0.7	−0.18
Hym	304	7	7.9	−0.9	−0.32
Skm	263	6	6.9	−0.9	−0.35
Hlr	108	2	2.8	−0.8	−0.48
Rm	176	3	4.6	−1.6	−0.76
Gðr III	80	1	2.1	−1.1	−0.77
Gðr II	350	6	9.1	−3.1	−1.04
Akv	351	6	9.2	−3.2	−1.07
Fm	277	4	7.2	−3.2	−1.21
Hrbl	257	3	6.7	−3.7	−1.45
Háv 111–37	222	2	5.8	−3.8	−1.60
HHv	318	3	8.3	−5.3	−1.86
Grp	424	3	11.1	−8.1	−2.47
HH I	456	3	11.9	−8.9	−2.61
HH II	434	2	11.3	−9.3	−2.8
Am	763	3	19.9	−16.9	−3.84
Total	**9891**	**258**	**0.026 / line**		

* The data come from Fidjestøl's Table 8 (1999: 220), except that I have them ordered by the deviation. The number of "particles expected" in a given poem equals the number of lines in that poem times the frequency of particles in the whole CR (0.026 particles per line). The "deviation" is the number of observed particles minus the number of expected particles. The "reduced deviation" is an attempt by Fidjestøl to norm the deviation by the length of the poem; the methodological problem of this method will be discussed in Section 3.2.1 below.

is ranked 14th by Kuhn. This is because Kuhn only counts one instance of the repeated-half stanza in *Alv*, which first occurs in stanza 9 (6a) and repeats verbatim as the first half of stanzas 11, 13 (6b), 15, 17, 19, 21, 23, 25, 27, 29, 31, and 33:

(6) a. *Seg=ðu mér þat, Alvíss – ǫll of rǫc fira*
say=you me that A. all PRT fate men
voro=mc, dvergr, at vitir –
suspect=REFL dwarf that know
hvé sú iǫrð heitir, er liggr fyr alda sonom,
how the earth calls REL lies before men's sons
heimi hveriom í.
world each in
'Tell me, All-wise – I suspect, dwarf, that you know all the fates of men – what the earth, which lies in front of the sons of men, is called in each world.' (*Alv* 9)

b. *Seg=ðu mér þat, Alvíss – ǫll of rǫc fira*
say=you me that A. all PRT fate men
voro=mc, dvergr, at vitir –
suspect=REFL dwarf that know
hverso máni heitir sá er men siá
how moon calls that REL men see
heimi hveriom í.
world each in
'Tell me, All-wise – I suspect, dwarf, that you know all the fates of men – what the moon that men see is called in each world.' (*Alv* 13)

Excluding these twelve repetitions dramatically reduces the count of the particle in *Alv*. Fidjestøl goes further than Kuhn, however, excluding several additional repeated lines from *Vm, Grm, Skm, Ls, Þrk, Vkv*, and *Sg* (1999: 222, fn. 13). The closest pattern to that in *Alv* is found in *Vm* 20 (7a), 22 (7b), 24, 26, 30, 36, 38, in which Óðinn repeatedly asks the giant Vafðrúðnir about the origin of various parts of the cosmos:

(7) a. *Seg=ðu þat eina, ef þitt æði dugir*
say=you that one if your knowledge suffices
oc þú, Vafðrúðnir, vitir,
and you V. know
hvaðan iǫrð um kom eða uphiminn,
whence earth PRT came and heaven
fyrst, inn fróði iǫtunn.
first the wise giant
'Tell this first, if knowledge suffices you, and you know, Vafðrúðnir, whence earth and heaven first came, O wise giant.' (*Vm* 20)

b. *Seg=ðu þat annat, allz þic svinnan qveða*
say=you that second as you smart say-PL
oc þú, Vafðrúðnir, vitir,
and you V. know
hvaðan dagr um kom, sá er ferr drott yfir,
whence day PRT came that REL travels people over
eða nótt með niðom.
and night with waning-moon
'Tell this secondly, as they say you are smart, and you know, Vafðrúðnir, whence came the day that travels over people, and the night with the moon.'
(*Vm* 22)

Interestingly, seven of these contain *of* followed by a monosyllabic word. In one case, however, there is no particle, because the formula contains a trisyllabic word (*hvaðan Aurgelmir kom* 'whence Aurgelmir came' in *Vm* 30), confirming that the use of the particle is partially constrained by requirements of the meter.[5]

A final correction made by Fidjestøl is to change the line counts, excluding not only these repetitions but all repetitions that he identifies in all Eddic poems (see his Table 13, 1999: 229–30). He concedes that this reduction of lines is not unproblematic, as it is easy to overlook repetitions and difficult to judge whether minor variations should count as repetitions (1999: 223). His counts for the number of non-repeated lines, non-repeated particles, revised deviations, and revised rankings are shown in Table 3.2.

Table 3.2 Fidjestøl's counts and "reduced deviation" of the particle *of* excluding repetitions*

Poem	# lines	# particles observed	# particles expected	Deviation	Reduced deviation	Ranking
Þrk	218	15	5.1	9.9	4.41	1
Od	250	12	5.9	6.1	2.55	2
Vm	274	12	6.4	5.6	2.22	3
Háv 1–110	662	24	15.6	8.4	2.16	4
Sd	255	10	6	4.0	1.65	5
Gðr I	201	8	4.7	3.3	1.52	6
Vsp	503	17	5	11.8	1.52	7
Háv 138–164	182	7	4.3	2.7	1.33	8
Hm	218	8	5.1	2.9	1.29	9

(*continued*)

5. I thank a reviewer for pointing out the implications of the latter example. The reviewer also notes that *Hrbl* has very loose meter, so perhaps its low frequency of the particle is due to the relaxation of metrical constraints. Clearly, there is an interplay between the decline of the use of the particle (a genuine diachronic development) and the fact that it can fill in a metrically needed position; this calls for further exploration but is beyond the scope of the current study.

Table 3.2 (*continued*)

Poem	# lines	# particles observed	# particles expected	Deviation	Reduced deviation	Ranking
Ls	368	12	8.6	3.4	1.15	10
Br	150	5	3.5	1.5	0.79	11
Grm	336	10	7.9	2.1	0.76	12
Vkv	286	8	6.7	1.3	0.50	13
Ghv	174	5	4.1	0.9	0.46	14
Sg	558	13	13.1	−0.1	−0.03	15
Alv	174	4	4.1	−0.1	−0.04	16
Hym	304	7	7.1	−0.1	−0.05	17
Skm	246	5	5.8	−0.8	−0.33	18
Hlr	108	2	2.5	−0.5	−0.34	19
Rm	175	3	4.1	−1.1	−0.56	20
Gðr III	80	1	1.9	−0.9	−0.65	21
Háv 111–137	146	2	3.4	−1.4	−0.78	22
Gðr II	350	6	8.2	−2.2	−0.78	23
Akv	351	6	8.2	−2.2	−0.79	24
Fm	269	4	6.3	−2.3	−0.93	25
Hrbl	251	3	5.9	−2.9	−1.21	26
HHv	318	3	7.5	−4.5	−1.65	27
Grp	418	3	9.8	−6.8	−2.20	28
HH I	454	3	10.7	−7.7	−2.37	29
HH II	426	2	10	−8.0	−2.56	30
Am	761	3	17.9	−14.9	−3.56	31
Total	**9,466**	**223**	**0.024 / line**			

* Data from Fidjestøl's Table 10 (1999: 224).

The main result of excluding repetitions in Fidjestøl's manner is the ranking of *Alv*, which drops from 2nd place in Table 3.1 (implying that it is one of the most ancient poems in the corpus) to 16th here (implying that it is of average age). The rankings of the other poems are virtually unaffected: no poem other than *Alv* and *Vsp* changes its rank by more than 3 positions, and *Vsp* only changes rank from 12th place to 7th (moderately old by either counting method).

Fidjestøl's ultimate evaluation is that this method has a restricted use in dating poetry; although it cannot be used to date an individual poem, it can "serve as a kind of control for a more comprehensive hypothesis bearing on the chronology of the totality or large part of Eddic poetry" (1999: 225). A similar point is made by Sävborg (2004: 84). Fidjestøl then uses the method to just that end, to evaluate the comprehensive dating schemes by Finnur Jónsson (1920) and Sonderegger (1964), concluding that "Finnur Jónsson's dating as a whole is nearer the mark than Sonderegger's" (1999: 228).

Finally, Fidjestøl considers whether the particle *of/um* might be used consciously by later poets as part of poetic diction; a high frequency could thus indicate either a poem's genuinely old age or a later, archaizing poet. But he warns against explaining away what is otherwise an objective criterion: "[i]f archaization is intended, there ought to be other signs of archaization as well" (Fidjestøl 1999: 228). Although Thorvaldsen (2016) criticizes Fidjestøl for not taking style seriously enough, I believe that Fidjestøl's point is correct. As shown in the next section, when some 13th-century skalds consciously employ *of*, they do so in stereotyped contexts (e.g. before participles), a clear sign of archaization; however, as shown in Section 3.2.1 below, I have detected no such archaizing use of the particle. Moreover, we can control for the possibility that an Eddic poem has archaizing *of* by comparing it with other dating features (taken up in Chapter 8). According to Males, although archaization is frequently invoked as a warning against using grammatical features to date poetry, there is little evidence for this in the poetic corpora: "While relatively crude metrical and advanced stylistic archaization may be found, instances of morphological or phonological archaization have either been rejected or have yet to be found" (2020: 215). Without other archaisms, Fidjestøl's admonition to take the use of the particle at face value is more faithful to the extant forms of the poems than if one were to dismiss individual instances of the particle, opening one to the charge of cherry-picking the data.

3.1.3 Recent work on the particle in skaldic poetry

In the last decades, several studies have applied Kuhn's basic findings about the use of the particle *of/um* to date specific skaldic poems. Sapp (2000) examines three diachronic changes to the use of the particle in *kviðuháttr* poetry. First, the overall frequency of the particle declines sharply in these poems: the purportedly 9th-century *Ynglingatal* has 27 instances of the particle in 360 half-lines, i.e. *of* occurs in 7.5% of lines, even more frequently than in Egill Skallagrímsson's two 10th-century *kviðuháttr* poems (5.7%). The 12th-century *Nóregs Konungatal*, on the other hand, contains no examples of the particle, and the 13th-century *Hákonarkviða* has only three instances, representing less than 1% of the poem's lines (Sapp 2000: 90). Secondly, in Egill's poems the particle can appear before both nouns and verbs, and in *Ynglingatal* it occurs with various verb forms, but the three instances in *Hákonarkviða* are grammatically identical, occurring before participles; this suggests non-productive use: *of tekit hafði* '(*of*) had taken', *of samit hafði* '(*of*) had waged', and *of skipat hafði* '(*of*) had brought' (Sapp 2000: 91). Thirdly, in *Ynglingatal* and Egill's poems, *of* occurs in lines of types A, B, and C2, but in

Hákonarkviða all three instances occur in C2 (Sapp 2000: 93). Thus the earlier poems use *of* productively, in varying linguistic and metrical contexts, while its use in the 13th-century *Hákonarkviða* is restricted to one stereotyped grammatical form in a stereotyped metrical position.

In her study of *lausavísur* in the skald sagas, Gade (2001) makes similar findings. Because of the very strict metrical requirements of *dróttkvætt*, the particle *of* occurs in that meter only in certain types of lines, and over time its use becomes even more restricted. In most line types, the use of the particle becomes very infrequent after the 11th century, appearing only in certain types (E4 and certain sub-types of A) and then only in stereotyped contexts or as deliberate imitations of earlier work (2001: 65). On the other hand, later poetry, especially 12th-century religious poetry, introduces new uses of the particle that would have been considered metrical violations in earlier centuries (2001: 65). Hallmarks of late use of the particle, then, include not only a low frequency, but also its use in limited, stereotyped contexts and perhaps also innovative contexts.

Myrvoll's (2014) comprehensive survey of dating skaldic poetry uses the *of/um* as just one of many methods. He examines a similar group of skalds to Fidjestøl (1999), namely skalds who have more than 80 attested lines. Unlike Fidjestøl, however, Myrvoll excludes *Háttalykill*, because as a *clavis metricae* it is a scholarly rather than artistic endeavor. Moreover, he analyzes each meter separately. Beginning with *dróttkvætt*, Myrvoll confirms that there is a statistically significant correlation between the date of a skald and the frequency of his use of the particle; he thus concludes like Fidjestøl that this can be used for dating skaldic poetry, in combination with other criteria (2014: 303). In the meter *hrynhent*, there are very few examples of the particle, but these mostly occur in older poetry (Myrvoll 2014: 303). As for *kviðuháttr*, Myrvoll considers more poems than Sapp (2000) but reaches the same conclusion: *Ynglingatal* and Egill frequently have *of*, but in later poems it is extremely rare and stereotyped (Myrvoll 2014: 305–306). Most relevant to the current study are Myrvoll's findings for skaldic poems in the meters that also occur in Eddic poetry, namely *fornyrðislag* and *málaháttr*: there is a correlation between age and frequency of the particle, but this correlation is not as strong as in other meters (2014: 307). Myrvoll notes that Egill's use of the particle is about twice as frequent in his *fornyrðislag* poem *Hǫfuðlausn* as in his *dróttkvætt* poetry; while this could indicate that the *dróttkvætt* stanzas attributed to Egill in his saga are inauthentic, there could also be stylistic reasons (2014: 307). Thus Myrvoll confirms that there is a clear correlation between a poem's age and its frequency of the particle, but with some difference by meter (strongest correlation in *kviðuháttr*, weaker in *fornyrðislag/málaháttr*). The dividing line seems to be the year 1030; before 1030

poems tend to have *of* in at least 1% of lines, and thereafter any uses of the particle could be due to archaizing (Myrvoll 2014: 308).[6]

Olsen (2019, 2020), offers a detailed re-examination of the particle in Eddic poetry and its use as a dating criterion.[7] He examines each instance of the particle in the Eddic poems of CR, and nearly all of these correspond to the functions of a Germanic prefix: before a participle, before perfective verbs in various forms, etc. (2020: 168–9). He finds just seven instances that are more difficult to explain as remnants of prefixes (2020: 170); notably, six of these involve the verb *kveða*, which could be interpreted as inchoative or as a formula: *orð … um kvað* 'said words' (*Hym* 32:5, *Sg* 51:4, *Od* 15:4) or *alls fyrst um kvað* 'as first said' (*Br* 5:4, *Od* 3:10, and *Þrk* 2:2 with three repetitions). Contrary to Kuhn, Olsen argues that the particle nearly always maintains its meaning in both poetry and prose, thus it is not merely an expletive used to fill unstressed metrical positions. If, as Olsen argues, the decline of the particle is a natural linguistic development, it is a much more reliable dating criterion than if it is merely a relic in the poetic register (2020: 191). Using the frequency of the particle (rather than Fidjestøl's ranking by Reduced deviation), Olsen notes that the average rate of all the CR poems is 2.4%, so that as a group they are most similar to the skaldic poems of the 9th and 10th centuries; while this does not mean that all of the poems of CR are this old, it implies that the bulk of them are (2020: 182). As for dating individual Eddic poems, Olsen feels most confident about poems with more than 300 lines. The youngest layer are those with *of* in fewer than 0.9% of lines – *Grp, Am*, and the three *Helgi* poems; these date to the 11th century or later (Olsen 2020: 183). In a middle layer are poems with 1.2–2.3% of the particle – including the longer poems *Sg, Hym, Gðr II*, and *Akv* – corresponding to skaldic poetry of the 10th and early 11th centuries (Olsen 2020: 184). The oldest poems must include *Háv I, Vsp, Ls*, and *Grm* with the particle in more than 3% of lines; no skald from after the year 980 uses the particle that frequently, so these poems likely date to the 9th or 10th centuries (Olsen 2020: 184). Finally, Olsen briefly compares this dating criterion to several linguistic criteria (most of which are discussed in Chapter 2 above), finding that they largely confirm his three layers of composition on the basis of the particle (2020: 191).

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6. Myrvoll notes that he did not exclude "potential *of*," which is mostly a 12th-century phenomenon. If potential *of* had been excluded, the distinction between early and late poems would have been even sharper (Myrvoll 2014: 308).

7. Olsen counts 225 instances of the particle in the Eddic poems of CR (two more than identified by Fidjestøl). However, in his discussion of the rates of the particle, Olsen uses Fidjestøl's counts (excluding repetitions) rather than his own.

3.2 The particle *of/um* in my Eddic corpus

3.2.1 Selection of data

I began by adopting Fidjestøl's counts of the particle *of/um*, excluding repetitions (see Table 3.2 above). Additionally, I have added two examples identified by Olsen (2019) that are not counted by Fidjestøl – one each from *Grm* and *Hym*. Because Fidjestøl only examines the Eddic poems of CR, I also counted by hand instances of the particle in the five non-CR poems *Bdr, Rþ, Grt, Hdl*, and *Svm*. (For the list of examples, see Appendix 3.) Note that I follow Fidjestøl's division of *Háv* into three parts.[8] However, my method of estimating the frequency of the particle in each poem differs from Fidjestøl's in two ways. First of all, Fidjestøl ranks the poems by the deviation between the observed number and expected number of particles. However, the Naïve Bayes analysis in Chapter 8 will examine several linguistic and metrical features, which need to be in comparable formats. The frequency of most features will be calculated as a percentage, but calculating the percentage of the particle is not practical. To do so, one would have to calculate the number of occurrences of the particle against the number of environments in which it could have occurred but did not – this would require examining each verb in the corpus and deciding whether that verb should be reconstructed with a prefix in Proto-Germanic. Instead, I need to calculate the frequency of the particle in a way that is similar to a percentage but does not require determining the number of potential particles in the corpus.

To that end, I follow Fidjestøl in counting the number of particles per line.[9] This allows for a direct comparison between Eddic and skaldic poetry, whereas Kuhn counted the number of particles per 10 *stanzas* in Eddic poetry and per 10 *pages* of skaldic verse. However, the particle is very rare, so the rate per line is an extremely low number (e.g. ranging from 0.005 to 0.085 in Eddic poetry). Therefore, I re-scale this data by multiplying by 10: the resulting "particles per 10 lines" ranges from 0.05 to 0.85 in Eddic poems and from 0 to 0.72 among the skalds. These values,

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8. As noted by a reviewer, different manuscripts (as well as post-medieval editions) have different rates of the particle *of*. A comparison of these variants might tell us how various copyists perceived of the particle's functions; see e.g. Haukur Þorgeirsson's (2015) study of a 17th-century edition of *Hávamál*. However, as the purpose of this chapter is not to offer a new analysis of the particle's use, but rather to offer a baseline for other dating criteria, a detailed discussion of variation is outside the scope of this study.

9. This method of calculating the rate of the particle is not without its own problems, given the fact that the different meters have quite different line lengths, as Fidjestøl notes (1999: 219). Nevertheless, the regression analyses in Section 3.2.2 and 3.3.3 below find no significant distinction between the meters of Eddic poetry, or between skaldic poetry (largely composed in *dróttkvætt*) and Eddic poems.

on a scale of 0 to 0.85, are thus easily comparable to the percentages of the other linguistic features described in subsequent chapters.

As Fidjestøl noted, one can arrive at quite different rankings of the frequency of the particle depending on the way one handles repetitions. One could even quibble with some of Fidjestøl's choices, e.g. treating *þó ec einn um komc* (*Skm* 18:4) as a repetition of *hví þú einn um komt* (*Skm* 17:4), but excluding such questionable cases at least prevents one from overestimating the age of the poem, and so I will simply adopt his counts in this case. Excluding repeated lines (without the particle) is even more subjective, as Fidjestøl concedes. Without a more principled way to determine repetitions, I will simply adopt Fidjestøl's reduced line counts for the poems of the *CR*, and for poems of the Eddic appendix I have made my own count of repeated lines.[10]

Table 3.3 compares the rankings based on Fidjestøl's reduced deviation (1999: 222) with my rankings based on the rate of the particle per line. Despite the different methods of calculating the ranks, my ranking is remarkably similar to Fidjestøl's. There are just a few differences. First, I have included my numbers for the non-CR poems *Bdr, Rþ, Grt, Hdl*, and the two components of *Svm*. Secondly, the first part of *Háv* is ranked 5th by Fidjestøl's method but only the 9th in my ranking (8th if one sets aside my addition of *Bdr*). This discrepancy is due to the "Reduced deviation" correction that Fidjestøl uses: occurrences of the particle are given more weight in longer poems, thus the first part of *Háv* is dated by Fidjestøl's method as quite old, not because of a particularly high rate of the particle but merely because it is so much longer than most other poems.[11] In sum, my method of calculating the frequency of particle per line produces nearly the same ranking as Fidjestøl's, but without overestimating the age ranking of the longest poems.

A final issue is the possibility is that the occurrence of the particle *of* in an Eddic poem might be not necessarily a sign of its age, but rather an archaism by an astute, late poet. As discussed in Section 3.1.3 above, late skalds who employ *of* tend to do so in stereotyped contexts, such as the 13th-century Sturla Þórðarson's use of the particle before participles in C2 lines. To see if this might be the case in

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10. Excluded repetitions are *Bdr* 10:1–4 and 12:1–4 (repeating 8:1–4), the first line of *Svm/Grg* stanzas 7–14 (repeating 6:1), and the following 64 lines from *Svm/Fjm*: 8:4–6 (repeats 7:4–6), lines 1–3 of stanzas 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, and 41 (repeating 7:1–3), 11:5–6 (repeats 10:5–6), 18:3 (repeats 14:3), 18:6 (repeats 17:6), 21:5–6 (repeats 20:5–6), 28:2–3 (repeats 27:5–6), and 42:2–3 (repeats 41:5–6).

11. Fidjestøl's "Reduced deviation" is a laudable attempt to ensure that a few occurrences of the particle in a very short poem do not skew the results. However, in a posthumous note on Fidjestøl's work, statistician Håkon K. Gjessing argues that this method should not have been used, because it conflates the weight of the evidence with the age ranking (Fidjestøl 1999: 328). Moreover, none of the Eddic poems is so short that there is danger of skewed results; this is confirmed by the fact that there is little difference between Fidjestøl's corrected rankings and my uncorrected rankings.

Table 3.3 My rankings vs. Fidjestøl's, excluding repetitions of the particle *of**

Poem	Reduced # lines	Fidjestøl's ranking	My # particles	Rate per line * 10, excluding repetitions	My revised ranking
Þrk	218	1	15	0.688	1
Od	250	2	12	0.480	2
Bdr	108	N/A	5	0.463	3
Vm	274	3	12	0.438	4
Háv 1–110	662	4	24	0.363	9
Sd	255	5	10	0.392	6
Gðr I	201	6	8	0.398	5
Vsp	503	7	17	0.338	10
Háv 138–164	182	8	7	0.385	7
Hm	218	9	8	0.367	8
Ls	368	10	12	0.326	13
Br	150	11	5	0.333	11
Grm	336	12	11	0.327	12
Vkv	286	13	8	0.280	15
Ghv	174	14	5	0.287	14
Svm/Fjm	236	N/A	6	0.254	17
Sg	558	15	13	0.233	18
Alv	174	16	4	0.230	19
Hym	304	17	8	0.263	16
Svm/Grg	89	N/A	2	0.225	20
Skm	246	18	5	0.203	21
Hlr	108	19	2	0.185	22
Rm	175	20	3	0.1714	23
Gðr III	80	21	1	0.125	28
Háv 111–137	146	22	2	0.137	27
Gðr II	350	23	6	0.1714	23
Akv	351	24	6	0.1709	25
Fm	269	25	4	0.149	26
Hrbl	251	26	3	0.120	29
Hdl	390	N/A	4	0.103	30
HHv	318	27	3	0.094	31
Rþ	366	N/A	3	0.082	32
Grp	418	28	3	0.072	33
HH I	454	29	3	0.066	34
Grt	182	N/A	1	0.055	35
HH II	426	30	2	0.047	36
Am	761	31	3	0.039	37
Total	**10,837**		**246**		

* Fidjestøl's revised number of lines and number of particles excluding repetitions, and the resulting revised rankings by reduced deviation, are taken from Table 3.2 above. My rates of the particle are essentially the same as found by Olsen (2020: 180–1), except that Olsen has rounded up. Note that because of the tie for 23rd place (*Rm* and *Gðr II*), there is no poem ranked 24th.

Eddic poetry, I examine the eight poems likely to be youngest, i.e. those with the lowest frequency of the particle, which are the five from Olsen's (2020) youngest group (*Grp, Am*, and the Helgi poems) and three poems from the Eddic appendix (*Hdl, Rþ*, and *Grt*). None of the particles in these poems occurs in a C2 line, and the particles occur before a wide variety of verbal forms, with only *Hdl* 19:8 involving a participle (*Álfr um getinn*). Only *Grp* has an example that appears formulaic, occurring as *þvíat þú fram um sér* in 20:3 and *þvíat þú ǫll um sér* in 28:7. Thus it appears that even in this group of poems, the particle is mostly used productively. While we cannot totally rule out the archaic deployment of this particle in Eddic poetry, there is no compelling evidence for it in the purportedly youngest poems.

To conclude this section, my method of calculating the frequency of particle per line produces rankings quite similar to Fidjestøl's, which proves the validity of the decision to rank the poems by their (uncorrected) rates of the particle. Moreover, the resulting frequencies are easily compared to the frequencies in skaldic poetry (see Section 3.3) and with the dating criteria that will be applied in each subsequent chapter.

3.2.2 Effect of independent variables

The previous section gives the rate of the particle *of* in each poem. In this section, we will see how that rate varies by the different factors. The statistical analyses in this section, and throughout the rest of the book, were conducted with the programming language *R* (R Core Team 2020).[12]

Let us begin with the variable Date. Of course, the dates of the Eddic poems are not known, and I will not propose dates for them until I have examined all dating criteria together in Chapter 8. However, it would be good to see whether the rate of the particle is lower in poems that are traditionally considered older or in those traditionally considered more recent. As a representative of the traditional dates of the Eddic poems, I will use the dates ascribed to the poems by Finnur Jónsson (1920). As discussed in Chapter 2, Section 2.2.21, two caveats are in order about Finnur's dates: his dates are based on his intuitions about the poems, and they are often one to two centuries earlier than dates proposed by other scholars. Nevertheless, I use his dates as a proxy for the relative ages of Eddic poems to each other, because he proposes a relatively large number of time periods, each of which covers no more than 50 years. While one should not take Finnur's absolute dates of the individual poems as definitive, they represent traditional ideas about the relative datings of the poems of the Eddic group.

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12. *R* packages used in subsequent analyses include `effects` (Fox & Hong 2009) for linear regression and `lme4` (Bates et al. 2015) for mixed effects modelling.

Looking first at the total rate of the particle per Finnur's time periods in Table 3.4, the earlier periods have somewhat higher rates of *of* than his later periods.[13]

Table 3.4 Rate of the particle *of* in Eddic poems, according to Finnur Jónsson's time periods

Date	# lines	# particles	Rate per line * 10
875–900 (*Bdr, Háv* 111–137, *Rþ, Skm, Þrk, Vkv*)	1,370	38	0.277
900–930 (*Grm, Hrbl, Háv* rest, *Vm*)	1,705	57	0.334
935 (*Ls, Vsp*)	871	29	0.334
925–975 (*Alv, Grt, Gðr II, Hm, HH II, Hdl, Rm, Svm/Fjm*)	2,151	34	0.158
975–1000 (*Akv, Br, Fm, Gðr I & III, HHv, Hym, Sd*)	1,928	45	0.233
1000–1025 (*Ghv, HH I, Hlr, Od, Svm/Grg*)	1,075	24	0.223
1050 (*Am, Sg*)	1,319	16	0.121
1150–1200 (*Grp*)	418	3	0.071
Total	**10,837**	**246**	**0.227**

Within each of these periods, though, there is a great deal of variation, as shown in the scatterplot in Figure 3.1.

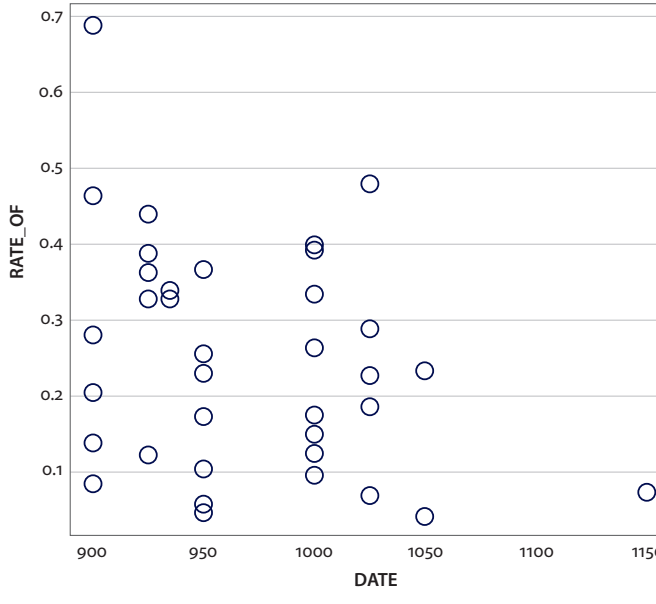

Figure 3.1 Rate of the particle *of* in the Eddic poems, by Finnur Jónsson's dates

13. In these and similar tables throughout the book, some of Finnur Jónsson's (1920) dates have been combined. See Table 2.1 for his original periods. The totals in this table are slightly lower than those in Table 3.2, because 36 repeated half-lines in *Alv* containing 12 instances of the particle have been excluded.

Despite this variation, the scatterplot suggests that there is some diachronic development. The highest rates of the particle are found in texts dated by Finnur before 930, while few texts from the middle period have such high rates, and the latest text (*Grp*) has among the lowest rates of the particle.

I tested this statistically by a linear regression model ($F(1, 35) = 3.41$, $p = 0.073$, $R^2 = 0.089$). Although not statistically significant, the regression line does slope downward, indicating that the particle's occurrence decreases (by 0.0009) with each subsequent year, shown in Figure 3.2.[14]

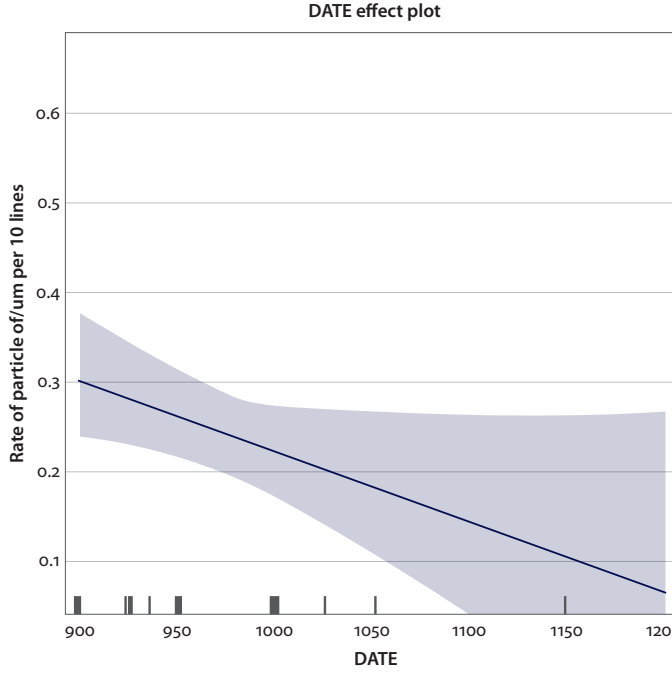

Figure 3.2 Regression line of the particle *of* in the Eddic poems, by Finnur Jónsson's dates

Because Finnur's dates cannot be considered precise, the statistics presented here are not intended to prove a definite effect of date on the rate of the particle. Instead, the statistics are merely taken to suggest that there might be a diachronic trend in the Eddic corpus that is worth examining further.

Secondly, let us consider Kuhn's hypothesis that some heroic poems (the *Fremdstofflieder*) are translations of West Germanic verse. I have operationalized this as a factor Stoff, assigning each poem to one of three levels, following Kuhn's

14. Because three analyses are conducted on the Eddic data (checking the significance of Date, Stoff, and Meter), I apply the Bonferroni correction to the threshold for statistical significance. With three analyses, the corrected threshold is $p < 0.017$.

classification: *Fremdstoff* 'foreign matter' (*Akv, Am, Br, Fm, Grp, Ghv, Gðr I–III, Hm, Hlr, Od, Rm, Sg, Sd*, and *Vkv*), native (*Bdr, Grt, HHv, HH I–II, Hym, Hdl, Rþ, Þrk, Vsp*), and *ljóðaháttr* (*Alv, Grm, Hrbl, Háv, Ls, Skm, Vm*). There is no great difference in the rate of the particle across Kuhn's three groups, shown in Table 3.5.

Table 3.5 Rate of the particle *of* in Eddic poems, according to Kuhn's classification

Kuhn's groups	# lines	# particles	Rate per line * 10
Foreign-matter *fornyrðislag* poems	4,604	97	0.211
Native *fornyrðislag* poems	3,269	61	0.187
Ljóðaháttr poems	2,964	88	0.297
Total	**10,837**	**246**	**0.227**

Visualizing this as a boxplot in Figure 3.3, it is clear that all three groups have similar distributions of the particle. (The boxes represent the interquartile range, i.e. the data between the 25th and 75th percentiles.) The interquartile ranges for the supposedly foreign poems and for the *ljóðaháttr* group are contained within the range of the native group.

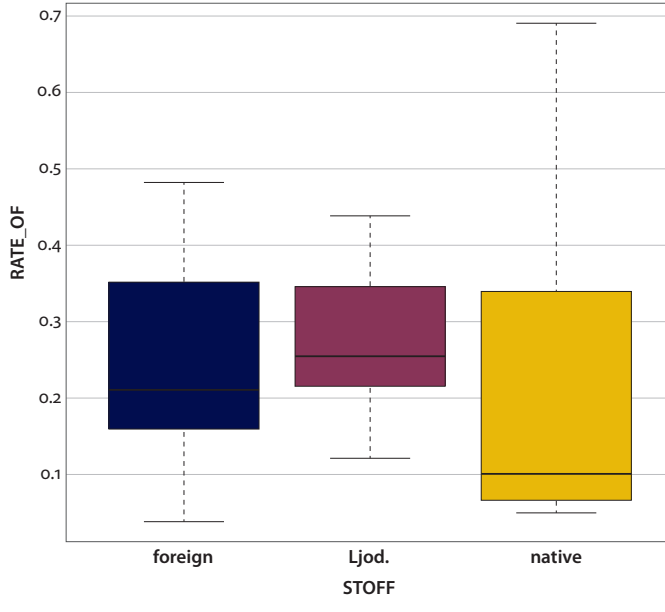

Figure 3.3 Distribution of the particle *of* in the Eddic poems, by Kuhn's classifications

Not surprisingly, then, a linear regression model finds no significant difference between the three groups ($F(2, 34) = 0.342$, $p = 0.713$, $R^2 = 0.020$).

A third factor to be considered is Meter. I have assigned each poem to one of three meters, based on the majority of its stanzas (see Table 1.1 in Chapter 1).[15] Note that in this analysis, *málaháttr* is represented by just two poems, *Akv* and *Am*. Table 3.6 shows very little difference between the most common meters *fornyrðislag* and *ljóðaháttr*, while the two *málaháttr* poems have a much lower rate of the particle.

Table 3.6 Rate of the particle *of* in Eddic poems, according to meter

Meter	# half-lines	# particles	Rate per line * 10
Poems mostly in *ljóðaháttr*	3,412	102	0.299
Poems mostly in *fornyrðislag*	6,313	135	0.214
Poems mostly in *málaháttr*	1,112	9	0.081
Total	**10,837**	**246**	**0.227**

This is confirmed visually in the boxplot in Figure 3.4, which shows that the interquartile ranges of *fornyrðislag* and *ljóðaháttr* overlap to a great degree. While the particle is less frequent in *málaháttr* poems, its distribution in *málaháttr* largely overlaps that of the *fornyrðislag* poems.

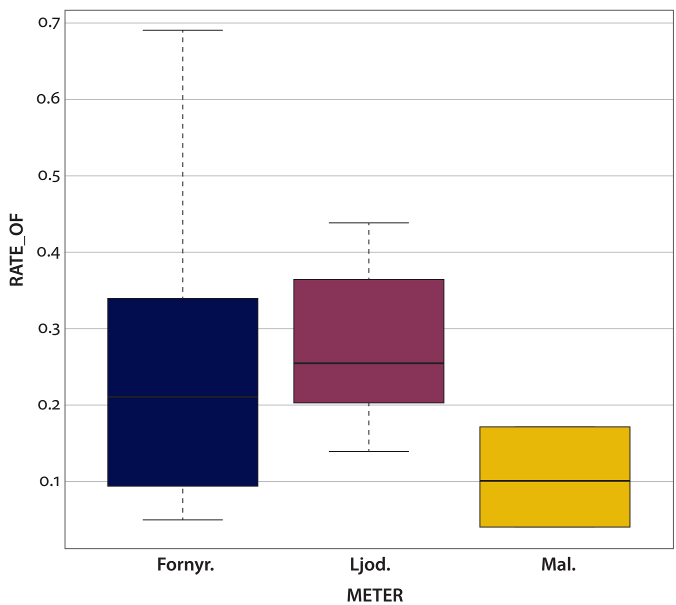

Figure 3.4 Distribution of the particle *of* in the Eddic poems, by meter

15. Note, because Kuhn considered *Fm, Rm*, and *Sd* to be foreign matter poems, in the analysis for Stoff they are classified in that group; however, in the Meter analysis I have placed them in the *ljóðaháttr* level. Similarly, Kuhn places *Hrbl* in his *ljóðaháttr* group, and in the Stoff analysis I follow him, but in the Meter analysis I classify *Hrbl* as *fornyrðislag*, although the poem is so irregular that some stanzas border on *málaháttr* or even unmetricality (Kari Ellen Gade, p.c.).

With distributions of the particle in the three meters overlapping to such an extent, and such a small data set for *málaháttr*, the linear regression model shows no significant effect of Meter on the rate of the particle ($F(2, 34) = 1.239$, $p = 0.303$, $R^2 = 0.068$).

In conclusion, there seems to be some effect of Date (by Finnur Jónsson's dating proposals) on the particle *of*, such that poems conventionally considered to be older have higher frequencies of the particle; however, this effect is not statistically significant. Moreover, poems do not differ significantly in their rates of the particle by Stoff (Kuhn's native/foreign distinction) or Meter.

3.3 The particle *of/um* in my skaldic corpus

3.3.1 Selection of data

The skalds analyzed in this chapter were selected by the criteria outlined in Chapter 1 (more than 80 lines, attested in vols. 1–3 and 7 of *SkP*) and are summarized in Table 1.2 in that chapter. I conducted my own search for the particle in the *Lexicon Poeticum* search engine of *SkP*. The particle is lemmatized as "of (particle) (before verb)", while prepositional *of* is lemmatized separately. For some skalds, my initial counts were lower than reported in Fidjestøl and Myrvoll, so I looked up the additional examples reported in the footnote in Fidjestøl (1999: 212–213) and added these to my data. The counts for the number of half-lines are reported as in Fidjestøl, minus lines that are repeated as part of a refrain.[16]

As I did with Eddic poetry, the rate of the particle *of* was calculated by dividing the number of particles by the number of lines (i.e., "short" or "half" lines) attested for a particular skald. The data were then scaled by multiplying this rate by 10, yielding the frequency of the particle per 10 lines. The results are presented in Table 3.7.

16. The question of repeated lines is a much smaller issue in skaldic poetry than in the Eddic poems, given that skaldic poetry is less formulaic, and the variety of topics is much greater. However, some longer poems contain a refrain called a *stef*, which can be from 1 to 4 lines long. The only poem in which the *stef* contains the particle *of* is Bjbp's *Jóms* (15:5 repeats in 19:5, 23:5, 27:5, 31:5, and 37:5), and I follow Myrvoll in counting this as a single instance of the particle. In terms of the total line counts, I exclude the following *stef*: Esk *Geisl* (18:5–8 repeats nine additional times), Gamlkan *Harm* (20:5–8 repeats in 25 and 30), and Bjbp *Jóms* (stanza 15 lines 5 and 8 repeat five more times, with variation in lines 6–7). However, I have not excluded shorter repetitions (such as the one-line *stef* in HSt *Rst* 9:8, 10:8, and 11:8) or infrequent repetitions (Bragi *Rdr* 7:3–4 repeats only once in 12:3–4), as these reduce the skalds' line counts by so little that the rate of the particle is virtually unchanged.

Table 3.7 The particle *of* in my skaldic database

Skald	Date of last poem	# lines	# particles	Rate per line * 10
Bragi	825	146	8	0.548
Þjóð	850	569	41	0.721
Þhorn	900	244	2	0.082
Glúmr	970	100	4	0.400
Eyv	985	344	14	0.407
Eskál	986	268	11	0.410
Tindr	987	96	1	0.104
Eil	1000	168	3	0.179
Hfr	1001	294	6	0.204
ÞKolb	1014	126	3	0.238
Óhelg	1025	92	0	0.000
Ótt	1026	263	7	0.266
Þloft	1032	138	1	0.072
Sigv	1040	1,246	16	0.128
Þfagr	1051	90	2	0.222
Hharð	1054	125	1	0.080
ÞjóðA	1066	615	7	0.114
Arn	1070	581	6	0.103
Steinn	1070	192	0	0.000
Gísl	1104	168	0	0.000
Mark	1106	218	1	0.046
Ív	1140	324	0	0.000
Rv	1154	260	0	0.000
ESk	1159	979	6	0.061
Gamlkan	1180	544	7	0.129
HSt	1200	298	3	0.101
GunnL	1218	1,498	4	0.027
Bjbp	1223	314	4	0.127
Total		**10,300**	**158**	**0.153**

3.3.2 Effect of independent variables

The previous section gives the rate of *of/um* for each poem. This section confirms that the rate of the particle decreases over time, and that the decrease is statistically significant. Looking back at Table 3.7, one can see that the 9th century skalds have much higher rates than subsequent poets. Already in the 10th century there is much variation, ranging from 0.08 particles per 10 lines in Þhorn to 0.41 particles per 10 lines in Eskál. This variation continues, but there is an overall downward trend.[17] This is visualized in the scatterplot in Figure 3.5.

17. Olsen (2020: 177) shows that when the data are limited to skalds with 300 or more attested lines, there is a very clear downward curve.

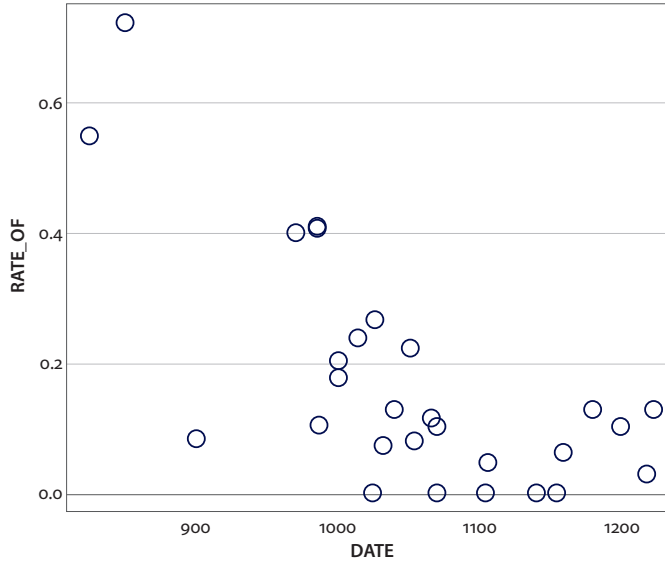

Figure 3.5 Rate of the particle *of* in skaldic poems by Date

To test for the significance of Date, a linear regression model was created. The regression line in Figure 3.6 shows the decrease in *of* very clearly.

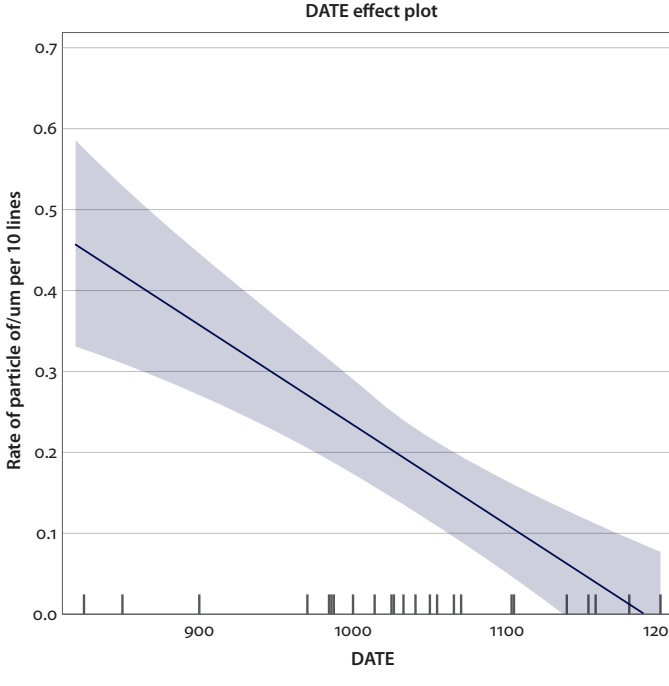

Figure 3.6 Regression line of the particle *of* in skaldic poems by Date

The effect of Date on the rate of the particle in skaldic poetry is extremely significant ($F(1, 26) = 24.7$, $p < 0.001$, $R^2 = 0.487$).

3.3.3 Combining the two genres

Let us see what kind of model we get when we combine skaldic poetry (with a clear, significant drop in the frequency of the particle) and Eddic poetry (with a less clear drop and much less secure dates). The scatterplot in Figure 3.7 shows a similar pattern to the one for skaldic poetry, although now of course with more data points.

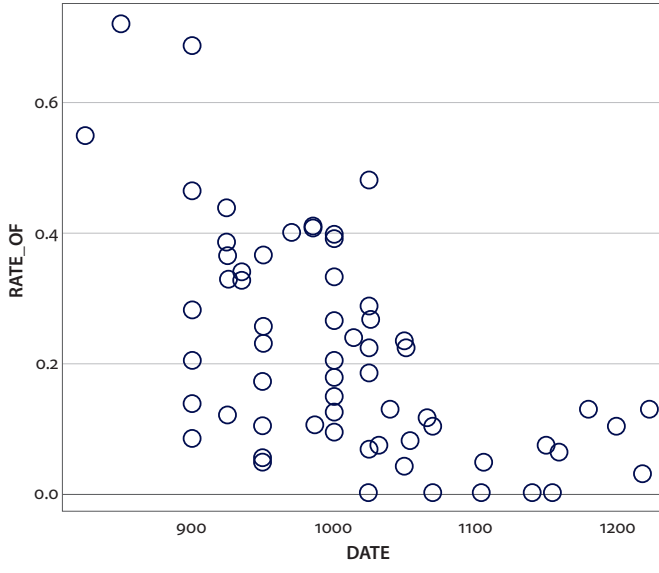

Figure 3.7 Rate of the particle *of* in Eddic and skaldic poems by Date

The overall impression is that the oldest skaldic and purportedly oldest Eddic poems show the greatest variability in the frequency of the particle, while later poetry of both genres has relatively low rates of the particle.

The distinction between Eddic and skaldic poetry is operationalized as the factor Genre. The regression model shows no significant interaction between Date and Genre ($p = 0.355$) and no significance of Genre as a main effect ($p = 0.678$). Date, on the other hand, is statistically significant ($F(1, 63) = 29.99$, $p < 0.001$, $R^2 = 0.326$), confirming that the particle decreases over time in Old Norse poetry, as seen in Figure 3.8. The fact that there is no significant effect of Genre indicates that the use of the particle in Eddic poetry, despite being somewhat more frequent, is not qualitatively different from that in skaldic poetry. The lack of interaction between Date and Genre indicates that the decline in the particle in this combined analysis cannot be attributed solely to behavior of skaldic poetry.

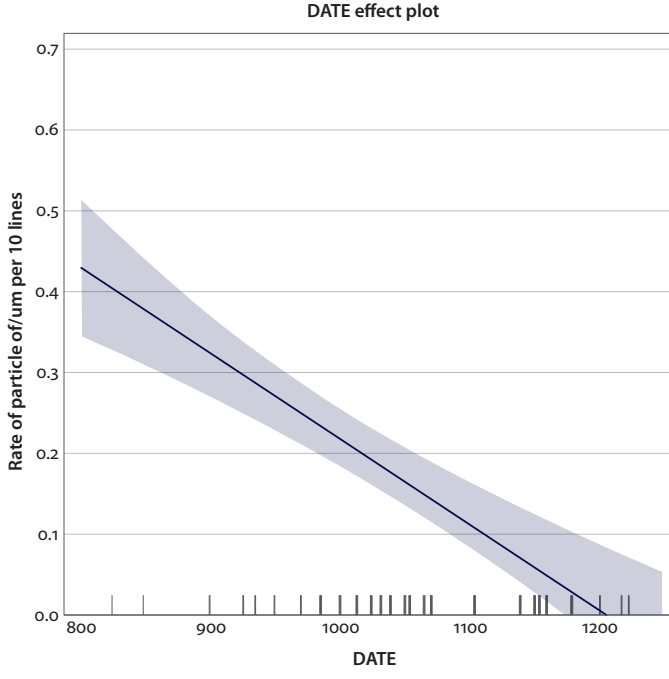

Figure 3.8 Regression line of the particle *of* in Eddic and skaldic poems by Date

3.4 Discussion

This chapter has re-examined what is often considered the most reliable method for dating Old Norse poetry. My analysis of skaldic poetry, which is the first to use a linear regression model, confirms that the decline of the particle *of* is statistically significant. In Eddic poetry, the effect is less clear, and the linear regression model failed to achieve statistical significance. This is could be because the dates assigned to each poem are based on Finnur Jónsson's conjectures, and because there is a great deal of variability within each of his time periods.

Nevertheless, when the Eddic and skaldic corpora are analyzed together, the two genres behave similarly: there is no significant difference between the two genres, and the whole corpus shows a statistically significant decline in the relative particle. Thus it is reasonable to assume that Kuhn's initial hypothesis (that *of* decreases over time in the Eddic corpus) is correct, and that the enterprise of dating Eddic poems by comparing their rates of linguistic features with those in skaldic poems (pioneered by Fidjestøl and extended in the subsequent chapters of this work) is worth pursuing further.

In conclusion, I agree with Fidjestøl that the frequency of the particle *of* alone does not definitively establish the date of any individual Eddic poem. However, as this is so far the best-established linguistic criterion for dating Eddic poetry, we can evaluate other dating methods against this one, which will be done in subsequent chapters. Furthermore, the frequency of the particle can be used in conjunction with the other dating criteria to assign an absolute chronology to Eddic poems based on multiple factors, as will be done in Chapter 8.

CHAPTER 4

Change in negation markers

4.1 Background

4.1.1 Negation types in Old Norse

Old Norse displays a number of negation markers, which differ in their morpho-syntax and in their diachronic distribution. The oldest is the common Germanic negator *ne*, which is attached to finite verbs as a clitic. Þórhallur Eyþórsson (2002) notes *ne* is already limited in early Old Norse poetry and does not occur at all in post-1100 prose. Because its position is metrically restricted in the earliest poems, *ne* is already an archaism at this stage: *ne* is not possible line initially, and it most often occurs with a line-final verb, as in (1) (Kuhn 1936: 431; Þórhallur Eyþórsson 2002: 193). In addition to *ne*, there is a conjunction *né* 'nor', which can appear in line-initial position and is not a verbal clitic (2); otherwise *ne* and *né* can be difficult to distinguish (Þórhallur Eyþórsson 1995).[1]

(1) *at þú eið* ***ne*** *sverir*
that you oath NEG swear
'that you not swear an oath' (*Sd* 23, cited in Þórhallur 2002: 193)

(2) *Þó hann æva hendr* ***né*** *hǫfuð kemði*
washed he never hands nor head combed
'He never washed his hands nor combed his hair' (*Vsp* 33)

Another negator *-at* (also spelled *-a, -að, -t*, or *-ð*), which occurs only in Old Norse, is also a clitic on finite verbs (3). This enclitic can be also be combined with the proclitic *ne* (4), and there seems to be no semantic difference between negation in *ne* alone and that in *ne …-at* (Þórhallur Eyþórsson 2002: 194).[2]

(3) *Byrði betri berr=****at*** *maðr brauto at*
burden better carries=NEG man road on
'One does not carry a better burden on the road'
(*Háv* 10, cited in Þórhallur 2002: 195)

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1. For more on the conjunction *né*, see Neckel (1913: 8ff).

2. Neckel (1913: 16) claims that *-a* has a separate etymological source from *-(a)t*, but by the time of Eddic poetry *-a* had come to be seen as a variant form of *-at*.

(4) *ef Gunnarr* ***ne*** *kømr=**að***
if G. NEG comes=NEG
'if Gunnarr does not come' (*Akv* 11, cited in Þórhallur 2002: 194)

Unlike *ne* and *ne …-at*, the use of *-at* alone is productive in Old Norse poetry and even occurs in early prose (Þórhallur 2002: 194). Finally, there is a new negative adverb *eigi*. Þórhallur maintains that at the stage represented by Eddic poetry, *-at* is used to negate finite verbs, while non-finite verbs are negated by *eigi* (2002: 195):

(5) *Enn Atli qvaðz* ***eigi*** *vilia*
but Atli said-REFL NEG want-INF
'But Atli said that he did not want …' (*Od* 22, cited in Þórhallur 2002: 195)

Neckel, on the other hand, claims that *eigi* is distinct from clitic negation not only in its metrics and syntax, but also in meaning: he argues that in the stage of the language represented by Eddic poetry, *eigi* is emphatic negation, used for forbidding, strongly rejecting, etc. (1913: 20–21). Eventually by the 14th century, *eigi* becomes the primary negator, extending its use to finite verbs as well, and *-at* falls out of use (Þórhallur 2002: 195). The pronoun *ekki* (originally 'nothing') comes to be equivalent to *eigi* (Faarlund 2004: 225) and gradually replaces it by Modern Icelandic.

In addition to these main negation types, Åkesson (2005) mentions the conjunction *nema* 'except, unless' and also treats the negative suffix *-gi*. In addition to giving rise to the negative adverb *eigi* by cliticization to the adverb *ei* 'ever' (Åkesson 2005: 242), *-gi* could attach to nouns and pronouns, yielding negative forms such as *engi* 'none' (from *einn+gi* 'not one'), *vættki* 'nothing' (*vættr* 'being' *+gi*), and *mangi* 'no man' > 'no one' (Åkesson 2005: 241). These minor negators will not be treated further in the current study.

4.1.2 Negation as a dating criterion

In addition to the metrical and syntactic differences between *eigi* and clitic negation, Neckel (1913: 21–22) notes a diachronic development. He finds that *eigi* is not used in *Br, Akv, Hm, Vsp*, and *Hym* due either to age (most clearly with *Vsp*) or archaism (in *Hym*). *Eigi* is more frequent in later poems, but even in some of these (*Gðr II, Od, Am*) it still distinguishes itself in meaning as more emphatic than the neutral *-at*. Using skaldic poetry, Neckel (1913: 22–23) is able to establish an absolute chronology: *eigi* is scarce in older poems, and when it occurs it has its original meaning 'never'. Neckel argues that beginning in the 11th century *eigi* is used for emphatic negation, and it replaces clitic negation by 1150 (about two centuries earlier than claimed by Þórhallur Eyþórsson 2002).

Rather than a purely diachronic development, Kuhn (1936) sees the difference in some negation types as a result of West Germanic influence. Recall that Kuhn

divides the Old Norse poetic corpus into domestic poetry, *Fremdstofflieder* 'foreign matter poems,' and poetry in the meter *ljóðaháttr* (Kuhn 1933: 37). Kuhn argues that continental Germanic influence explains the different behavior of these groups of poetry in three aspects: the interaction of stress and word order (Kuhn 1933), to which we return in Chapter 5, certain minor metrical patterns (Kuhn 1939) which will not be discussed further, and negation (Kuhn 1936). Kuhn's first claim about negation in these groupings of poems is that, with only a handful of exceptions, *ne* does not occur in domestic *fornyrðislag* poetry or in skaldic poetry prior to 1200 (1936: 432–433). Secondly, he claims that *-at* originally attaches only to finite verbs in main clauses, which is consistently maintained in domestic *fornyrðislag* poetry but less so in skaldic verse (1936: 435–436). In contrast, in both the supposedly foreign-matter poems and in *ljóðaháttr*, there are many verbs in bound clauses (i.e. clauses introduced by a coordinating or subordinating conjunction) that are negated with *-at* (1936: 436–437).[3] The higher use of *ne* can plausibly be explained as influence from languages like Old Saxon and Old English that have the same pre-verbal negator, but it is more difficult to explain how these languages affected the use of *-at* when they themselves have no such enclitic.[4]

In his study of the syntax of the verb in Eddic poetry, Þórhallur Eyþórsson (2009) discusses the negator *ne* as an archaism in Eddic poetry. Þórhallur points out that *ne* shares a restriction with the particle *of*: both are prohibited from occurring in clause-initial position and instead tend to occur before a line-final verb (2009: 65). He argues that clause-initial *ne* was lost along with the unstressed verbal prefixes at some point before the composition of the earliest Eddic poems (Þórhallur 2009: 65).[5] Line-internally, however, *ne* continued to be used during the period of composition of the Eddic poems, but only in "certain types of poetry" (Þórhallur 2009: 65, based on Kuhn 1936). He takes this to indicate, not foreign influence as Kuhn assumed, but rather a diachronic difference within Eddic poetry, a possibility that he does not investigate further.

Åkesson (2005) offers the most detailed analysis to date of the various negation types in the Eddic poems of CR. She assumes, following Þórhallur Eyþórsson

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3. There is a further, minor difference in the way *-at* functions: in the domestic poems, *-at* may cliticize only to one- or two-syllable verb forms, yielding negated forms with no more than two syllables (e.g. *var-a* 'was not', *vildi-t* 'did not want'). On the other hand, in *Fremdstofflieder* and the *ljóðaháttr* poems, there are eight instances in which the clitic results in a tri-syllabic form (e.g. *kallar-at* 'does not call') (Kuhn 1936: 437–438.)

4. Further criticism of Kuhn's *Fremdstofflieder* hypothesis will be presented in Chapter 5, Section 5.1.2.

5. Another possibility is not discussed by Þórhallur Eyþórsson: perhaps the oldest sources of some of the Eddic poems had clause-initial *ne* and *of*, but these were lost in transmission as the rules governing anacrusis became stricter in Old Norse.

(1995), that the syntax of these poems is a good representation of pre-Norse syntax. Because some of the poems show negation types that do not occur in prose (which is all from the 12th century or later), Åkesson proposes that the use of the different negators can be used to distinguish earlier poems from later ones.

Åkesson classifies the negative markers in Eddic poetry into four types: *-at* and its spelling variants, *ne/né* (which she does not attempt to distinguish), *nema*, and various words with the enclitic *-gi* (2005: 243). Her total counts are reproduced in Table 4.1.

Table 4.1 Åkesson's counts of negation types in Eddic poems*

Poem	# *-at*	# *né*	# *nema*	# *-gi*	# *ne …-at*	Total	# stanzas
Vsp	1	11	–	5	–	17	66
Háv	39	20	10	50	1	120	164
Vm	3	1	1	3	0	8	55
Grm	2	3	1	3	1	10	54
Skm	4	6	1	7	0	18	42
Hrbl	7	1	3	6	0	17	60
Hym	5	1	1	2	1	10	39
Ls	19	9	3	17	5	53	65
Þrk	1	2	3	4	0	10	32
Vkv	10	5	2	2	0	19	41
Alv	4	0	0	2	0	6	35
HH I	6	1	3	4	0	14	56
HHv	6	3	1	8	0	18	43
HH II	14	4	4	4	0	26	51
Grp	11	4	1	7	0	23	53
Rm	7	0	0	1	0	8	26
Fm	8	1	1	3	1	14	44
Sd	10	2	2	4	0	18	37
Br	2	0	0	0	0	2	19
Gðr I	2	1	1	6	0	10	27
Sg	19	2	2	17	2	42	71
Hlr	1	0	0	2	0	3	14
Gðr II	8	12	1	5	3	29	44
Gðr III	6	1	1	2	0	10	11
Od	5	3	3	10	0	21	34
Akv	6	1	1	8	1	17	43
Am	20	2	2	24	2	50	105
Ghv	4	0	0	1	1	6	21
Hm	5	0	0	3	2	10	31
Total	**235**	**96**	**48**	**210**	**20**	**609**	**1383**

* Counts are reproduced from Åkesson's Table 2 (2005: 246). There are a small number of errors in Åkesson's totals; therefore, the totals are my own.

The most frequent type of negation in Eddic poetry turns out to be the enclitic *-at*, accounting for 40.6% of the negators in her corpus (Åkesson 2005: 256). Surprisingly from the standpoint of Old Icelandic prose, in which the most common negator is *ekki/eigi*, in Eddic poetry words in *-gi* are only 36.3% of the examples of negation. Åkesson attributes the relatively low frequency of *-gi* to the fact that it cannot cliticize to the verb, thus at this stage it represents only constituent negation and not sentential negation (2005: 257). The form *ne* or *né* occurs 16.6% of the time, and to this can be added the 3.5% of the occurrences of *ne …-at*. Finally, *nema* 'unless' is infrequent, which should not be surprising given its specific meaning; this marker will not be discussed further in the present study.

Because her *-gi* category includes a large number of words, not all of which are sentential negation, Åkesson divides the *-gi* category into smaller groups. The most relevant one is her *eigi*-type, which includes not only *eigi* but also *ei* (a shortened form of *eigi* that is homophonous with *ei* 'always') and *aldri/aldrigi* 'never', but excluding the similar *ekki* as it derives from a pronoun. She then lists the poems by their ratio of *eigi*-type negation vs. negation in *ne, -at*, and *ne …-at* and claims that this ranking correlates to the poems' ages; these data are reproduced in Table 4.2.

Table 4.2 Åkesson's proportion of the *eigi*-type vis-à-vis *ne* and/or *-at* *

Poem	# *eigi*-group	% *eigi*-group
Reginsmál	0	0%
Brot af Sigurðarkviðu	0	0%
Guðrúnarkviða I	0	0%
Hamðismál	0	0%
Fáfnismál	1	9%
Vǫlundarkviða	2	12%
Guðrúnarkviða III	1	13%
Hymiskviða	1	13%
Vǫluspá	2	14%
Sigrdrífumál	2	14%
Helgakviða Hund. II	3	14%
Guðrúnarhvǫt	1	17%
Guðrúnarkviða II	5	18%
Alvíssmál	1	20%
Atlakviða	2	20%
Grípisspá	4	21%
Helgakviða Hund. I	2	22%
Lokasenna	10	23%
Þrymskviða	1	25%
Sigurðarkv. in skamma	8	26%
Hávamál	39	27%
Atlamál	10	29%

(*continued*)

Table 4.2 (*continued*)

Poem	# *eigi*-group	% *eigi*-group
Skírnismál	5	33%
Grímnismál	3	33%
Vafþrúðnismál	2	33%
Hárbarðsljóð	4	33%
Helgakviða Hjǫrvarðs.	7	44%
Oddrúnargrátr	7	47%
Helreið Brynhildar	2	67%

* The counts are taken from Åkesson's Table 4 (2005: 249) and the percentages from her Table 5 (2005: 251).

Unfortunately, the way Åkesson categorizes the various negative words ending in *-gi* means that her numbers for *eigi* in these tables do not represent only sentential negation and also leave out some cases of sentential negation. Once the counts for *eigi/ekki* are restricted to sentential negation, there are far fewer examples of this innovative adverbial pattern of negation in the Eddic corpus (see my own counts in 4.2.1 below). Similarly, Åkesson has probably overestimated the number of negations in *ne* by failing to distinguish the pre-verbal clitic *ne* from the conjunction *né*.

Nevertheless, the age ranking that Åkesson derives from comparing clitic negation with her *eigi* group is largely in accordance with the general rankings by Hallberg (1962), Jónas Kristjánsson (1997), and Finnur Jónsson (1920), although with some differences in individual poems (Åkesson 2005: 250). In general, the poems considered to be early by the literary scholars (*Vsp, Hym, Vkv, Ghv*, and *Gðr III*) have low rates of the negator *eigi*. Poems that are probably later (*Grm, Vm, Hlr*, and *Od*) have among the highest rates of *eigi*. Åkesson notes a few instances where her rankings are completely at odds with the literary histories: *Skm* is often considered old but has high rates of *eigi*, while *Fm* and *Sd* are supposedly late but have very low rates of *eigi* (2005: 251). Oddly, Åkesson does not mention *Grp*, which is considered by most scholars to be the youngest poem of CR *but* falls in the middle of her ranking.

Åkesson concludes from this that negation can be just one line of argument in the dating of Eddic poetry (2005: 251). She notes that all of the long poems and most of the medium-length ones have all four main negation types (*-at, ne, nema*, and *-gi*); even the poems that are assumed to be the youngest (*Grp, Sd*, and *Od*) contain all four, which suggests that some of these uses are archaisms (2005: 253–254). Thus, Åkesson suggests that the genre of Eddic poetry preserved some of the old negators as part of poetic diction, and the enclitic types *-at* and *-gi* were particularly preferred because these unstressed suffixes would have had less effect on the meter than free-standing *eigi* (2005: 256).

Although Åkesson's (2005) attempt to date poems based on the frequency of *eigi* is a promising technique, there are several methodological shortcomings of her study. First, the number of negatives in *ne* needs to be re-calculated to exclude the

conjunction *né*, and the number of negatives with *eigi/ekki* needs to be re-counted entirely. Second, she uses the literary histories in her discussion of the ages of the poems, but as we have seen in Chapter 2 literary criteria are probably not reliable points of comparison. Third, Åkesson claims that negation should just be one of several dating criteria, but she does not attempt to compare the poems' rankings by negation to their rankings by other linguistic features. Fourth, her method allows for relative rankings only. Similarly, Þórhallur Eyþórsson (2009) suggests that the high frequency of *ne* in a given poem may suggest that the poem has earlier origins, but he does not pursue this line of research.

Much more methodological sound is Haukur Þorgeirsson's (2019) study of negation. Haukur looks specifically at *ne* and clitic *-at* versus *eigi*. As expected, he finds that older poems (as determined by high rates of the particle *of*) have more negation in *ne* and *-at*, while younger poems (i.e. those with infrequent *of*) have more negation with *eigi*. Interestingly, he finds that in the older group, most instances of *eigi* alliterate, while in the younger group *eigi* rarely alliterates. Haukur explains this as an example of the cycle of negation first discussed by Jespersen (1917): originally, *eigi* was stressed (perhaps because it was emphatic), but as it becomes the most frequent negator, it loses its stress.

Building on the findings by Åkesson, Þórhallur Eyþórsson, and Haukur Þorgeirsson, I maintain that negation type can be a useful feature for dating, because *-at* and *eigi* should behave differently with respect to metrics, so if a poem is archaic, *-at* might tend to be preserved. In my study, I will attempt to address some of the shortcomings mentioned above by: (a) re-counting the various negation types in the Eddic corpus, (b) establishing an absolute chronology of the changing negation types in skaldic poetry to use as a basis for establishing absolute dates of Eddic poetry, and (c) examining the correlation between negation and other dating criteria.

4.2 Negation in my Eddic corpus

4.2.1 Selection of data

All counts for negators in the current study, in both Eddic and skaldic poetry, are my own. Negators in Eddic poems were obtained by searching for all possible spellings of these words in the Eddic poems on *Bragi* (Haukur Þorgeirsson, ed.), verifying each example in Neckel/Kuhn (1983), and entering the relevant results into a spreadsheet. I have included all instances of negation that appear in a manuscript variant. I also compared my counts to those of Kuhn (1936) and Haukur Þorgeirsson (p.c.) to ensure that I had not overlooked any instances. Examples from the five poems of the Eddic appendix were collected by hand from the editions by Neckel/Kuhn and Bugge, respectively. The forms that I searched for are as follows:

1. *-a, -at*, and *-t* to find the various forms of the enclitic negator *-at*.[6]
2. *ne* (spelled *né* on *Bragi*). Because this is ambiguously either a negative proclitic or a conjunction, I only counted instances in which *ne/né* immediately precedes a finite verb. That rules out most of the instances in which *né* is a conjunction but leaves open the possibility that a few instances included in my counts are conjunctions rather than verbal negation.[7]
3. *ne …-at* was not searched for separately, because the examples were found through the previous two searches.
4. *eigi* and *ekki*.[8] The examples were verified in context to ensure that no result for *eigi* is a form of the verb *eiga* 'to own'. Each instance of *ekki* was scrutinized to be sure that it represents sentential negation rather than an argument of the verb (i.e., 'nothing'), and only three genuine instances of *ekki* as a sentential negator were found (*HHv* 10:8, *Am* 48:6, and *Hm* 29:1). To make a fair comparison with *-at* (which can only negate finite verbs), the use of *eigi/ekki* as constituent negation or with non-finite verbs is excluded from the counts. This limits my counts of *eigi* to its novel use as a sentential negator, competing with and eventually replacing the other negation patterns. However, I have made no attempt to distinguish Neckel's 'emphatic negation' from non-emphatic sentential negation, as this distinction seems largely subjective.[9]

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6. My counts for this item mostly agree with Åkesson's, although sometimes I have fewer instances. I suspect that this is because she includes all manuscript variants in her counts, which are also based on Neckel/Kuhn. For example, Åkesson finds 5 instances of *-at* in *Hym*. I count only 3 in this poem in the main text of Neckel/Kuhn, but there are two further instances where Neckel/Kuhn indicates a manuscript variant (*mynit* in stanza 18) or an editor's emendation (*Fórot* in stanza 35).

7. Still, this is an improvement over Åkesson, who simply includes all instances of *ne/né* without excluding even the most obvious conjunctions.

8. The largest difference between Åkesson's numbers and mine are in this category, as her *eigi* group excludes *ekki* but includes negators like *ey*. This difference can be seen by comparing my counts ("# *eigi/ekki*") in Table 4.3 with Åkesson's counts of her "*eigi*-group" in Table 4.2.

9. Kari Ellen Gade (p.c.) points out that the possibility that *eigi* can represent emphatic negation weakens *eigi/ekki* as a dating criterion. This is true if one were to try to use an individual instance of *eigi/ekki* as evidence for a late date. However, by looking at *eigi/ekki* as a proportion of total negation mitigates this. While an individual instance of *eigi* could be explained away as emphasis, if a poem has a high proportion of *eigi* vis-à-vis other negators, it seems more likely that this is a later composition than that this poem has a large number of emphatic negations. Moreover, as Haukur Þorgeirsson (2019) shows, even taking into account alliterating vs. non-alliterating *eigi* (perhaps a proxy for emphatic vs. non-emphatic *eigi*), the proportion of non-alliterating *eigi* is still higher in later poetry.

The results of these searches are listed in Appendix 4 and summarized in Table 4.3, sorted from lowest to highest frequency of the innovative negator *eigi*.

Table 4.3 Negation types in my Eddic database

Poem	# *-at*	# *ne*	# *ne …-at*	# *eigi/ekki*	Total negs	% *eigi*
Vsp	1	5			6	0%
Háv 1–110	23	2			25	0%
Háv 138–164	6				6	0%
Grm	1	1	1		3	0%
Vm	3	1			4	0%
Skm	4	1			5	0%
Hym	4				4	0%
Þrk	1				1	0%
Alv	4				4	0%
Rm	7				7	0%
Br	2				2	0%
Gðr I	2				2	0%
Gðr III	5				5	0%
Akv	5		1		6	0%
Bdr	6				6	0%
Svm/Grg	3				3	0%
Svm/Fjm	4				4	0%
Ls	14	5	2	1	22	4.5%
Háv 111–137	8	4		1	13	7.7%
Sd	11	1		1	13	7.7%
Fm	8	2	1	1	12	8.3%
Hm	5	2	2	1	10	10%
Vkv	8			1	9	11.1%
Od	6		1	1	8	12.5%
Am	31		3	5	39	12.8%
Hrbl	6			1	7	14.3%
Ghv	4	1		1	6	16.7%
Sg	16	1		4	21	19.0%
Grt	4			1	5	20%
Grp	11	1		3	15	20%
HH II	12			4	16	25%
HH I	5			2	7	28.6%
Gðr II	7	1	2	4	14	28.6%
HHv	8	1		6	15	40%
Hlr	1			2	3	66.7%
Hdl				2	2	100%
Rþ						N/A
Total	**246**	**29**	**13**	**42**	**330**	**12.7%**

It is striking that almost all poems have at least one instance of negation in *-at*, except *Hdl* (which only has two negators) and *Rþ* (which contains no negation). This contrasts with *eigi*, which does not occur in twelve poems and occurs less than 10% of the time in another four poems. Whether the relatively infrequent vs. frequent use of *eigi* corresponds to a poem's age will be explored in the next two sections.

4.2.2 Comparison of rankings

I will use two statistical tests to determine whether the diachronic trend proposed by Åkesson (2005) is genuine, considering my more restrictive selection of the various negators. First, I employ a method introduced by Haukur Þorgeirsson (2012): he tests whether a given feature changes over time by correlating it to the feature considered the most reliable dating method yet, namely the decreasing frequency of the particle *of* (see Chapter 5, Section 5.1.5 for details of Haukur's study). Here, I analyze the correlation between the rankings of poems by the frequency of the particle and their rankings by the type of negation. The change in negation type is operationalized as the percentage of adverbial negation with *eigi* (the innovative type) vis-à-vis clitic negation (*ne, -at*, and *ne …-at*). The data are in Table 4.4, which is sorted by the poems' rankings of the particle.

Comparing the two rankings, one can see the pattern that Åkesson (2005) first noted. Of the 21 poems with the highest frequency of the particle, 14 have no instances of *eigi*, and 6 have just one instance, with only *Sg* as an outlier. The poems in which *of* is very infrequent (0.103 or lower) all have some instances of *eigi* (except *Rþ*, which lacks negation altogether), and some of these have among the highest rates of *eigi* (particularly *Hdl* and *HHv*).

The statistical test to compare these rankings is Kendall's τ, which measures the correlation between two ranks (i.e. a non-parametric analysis).[10] Kendall's τ is a number between −1 (a strong negative correlation) and 1 (a strong positive correlation) with a number close to 0 indicating no correlation. The Kendall's correlation of ranks confirms that there is a statistically significant correlation between these two factors ($\tau = -0.396$, $p < 0.001$). This moderate, negative correlation between the rank of the particle and the rank of *eigi* indicates that poems with higher rankings of the particle (supposedly older) are less likely to have negation in *eigi*. These two factors are not linguistically related, so the fact that they correlate is likely due to the fact that both *of* and clitic negation are characteristic of older texts.

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10. Kendall's τ is preferrable to Spearman's ρ when the data are non-linear and there are a large number of tied rankings (Levishina 2015: 132–133). Here there are many ties in the rankings for *eigi*. Throughout this book, the strength of a correlation will be interpreted as follows: τ or $\rho < .1$ is a negligible correlation; 0.1–0.2 is a weak correlation, 0.2–0.4 is a moderate correlation, and 0.4–1.0 is a strong correlation.

Table 4.4 Comparison of ranking by the particle *of* with the ranking by *eigi* *

Poem	Reduced # of lines	# particle *of*	Rate *of* per line * 10	Ranking by *of*	% *eigi*	Ranking by *eigi*
Þrk	218	15	0.688	1	0%	last
Od	250	12	0.480	2	12.5%	13
Bdr	108	5	0.463	3	0%	last
Vm	274	12	0.438	4	0%	last
Gðr I	201	8	0.398	5	0%	last
Sd	255	10	0.392	6	7.7%	17
Háv 138–164	182	7	0.385	7	0%	last
Hm	218	8	0.367	8	10%	15
Háv 1–110	662	24	0.363	9	0%	last
Vsp	503	17	0.338	10	0%	last
Br	150	5	0.333	11	0%	last
Grm	336	11	0.327	12	0%	last
Ls	368	12	0.326	13	4.5%	19
Ghv	174	5	0.287	14	16.7%	10
Vkv	286	8	0.280	15	11.1%	14
Hym	304	8	0.263	16	0%	last
Svm/Fjm	236	6	0.254	17	0%	last
Sg	558	13	0.233	18	19.0%	9
Alv	174	4	0.230	19	0%	last
Svm/Grg	89	2	0.225	20	0%	last
Skm	246	5	0.203	21	0%	last
Hlr	108	2	0.185	22	66.7%	2
Gðr II	350	6	0.1714	23	28.6%	4
Rm	175	3	0.1714	23	0%	last
Akv	351	6	0.1709	25	0%	last
Fm	269	4	0.149	26	8.3%	16
Háv 111–137	146	2	0.137	27	7.7%	17
Gðr III	80	1	0.125	28	0%	last
Hrbl	251	3	0.120	29	14.3%	11
Hdl	390	4	0.103	30	100.0%	1
HHv	318	3	0.094	31	40%	3
Rþ	366	3	0.082	32	N/A	N/A
Grp	418	3	0.072	33	20%	7
HH I	454	3	0.066	34	28.6%	4
Grt	182	1	0.055	35	20%	7
HH II	426	2	0.047	36	25%	6
Am	761	3	0.039	37	12.8%	12

* Counts and statistics for *of* are taken from Table 3.3 in Chapter 3. In the ranking by percentage of *eigi*, because of a tie for 4th place, no poem is shown here ranked as 5th. The ties for 7th and 17th places treated likewise. The poems with no instances of *eigi* are indicated as ranked "last" rather than "20" to make them easier to identify in the Table.

4.2.3 Effect of date

Having shown indirectly (by means of the particle *of*) that negation in *eigi* increases over time, this section shows the effect of time on negation based on Finnur Jónsson's datings of the Eddic poems. As seen in Table 4.5, the earliest poems (on Finnur's impressionistic dating) have relatively low rates of the innovative negator *eigi* (10.5% or less), while poems dated later by him have somewhat higher rates.

Table 4.5 Negation types in Eddic poems, according to Finnur Jónsson's time periods

Date	# *ne/at/ne …at*	% *ne/at/ne …at*	# *eigi*	% *eigi*	Total
875–900 (*Bdr, Háv* 111–137, *Rþ, Skm, Þrk, Vkv*)	32	94.1%	2	5.9%	34
900–930 (*Grm, Hrbl, Háv* rest, *Vm*)	44	97.8%	1	2.2%	45
935 (*Ls, Vsp*)	27	96.4%	1	3.6%	28
925–975 (*Alv, Grt, Gðr II, Hm, HH II, Hdl, Rm, Svm/Fjm*)	50	80.6%	12	19.4%	62
975–1000 (*Akv, Br, Fm, Gðr I, III, HHv, Hym, Sd*)	51	86.4%	8	13.6%	59
1000–1025 (*Ghv, HH I, Hlr, Od, Svm/Grg*)	21	77.8%	6	22.2%	27
1050 (*Am, Sg*)	51	85%	9	15%	60
1150–1200 (*Grp*)	12	80%	3	20%	15
Total	**288**	**87.3%**	**42**	**12.7%**	**330**

However, within each of Finnur's dates, poems can vary a good deal in their use of *eigi*, as shown in the scatterplot in Figure 4.1. The outlier in the 925–975 group is *Hdl*, with both of its attested negators being *eigi*. If one excludes this as an anomaly (given *Hdl*'s low total negation), there appears to be a general upward trend from 900 to 1050.

A logistic regression analysis confirms that the actual trend is an increase over time.[11] The regression model shows a small but statistically significant increase in the probability of *eigi* with each passing year (coefficient = 0.0056, z = 2.22, $p = 0.026$). The regression line in Figure 4.2 illustrates this increase and confirms that early poems with a few instances of *eigi* are indeed outliers. The wide confidence band for the 12th century reflects the fact that all data come from a single text, *Grp*.

11. In the analyses for *of* in Chapter 3, linear regression was used because the dependent variable was continuous (the rate of the particle per 10 lines). In this and subsequent analyses, logistic regression is used because the dependent variables are categorical (here, negation with *eigi* vs. other negators).

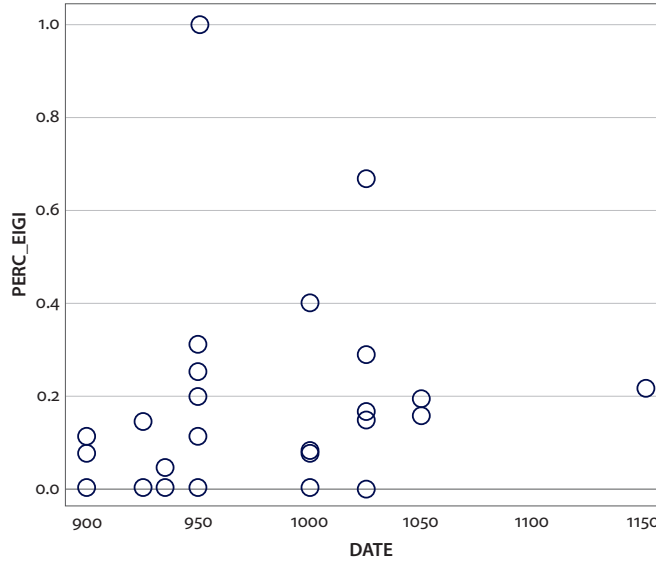

Figure 4.1 Percentage of *eigi* in the Eddic poems, by Date

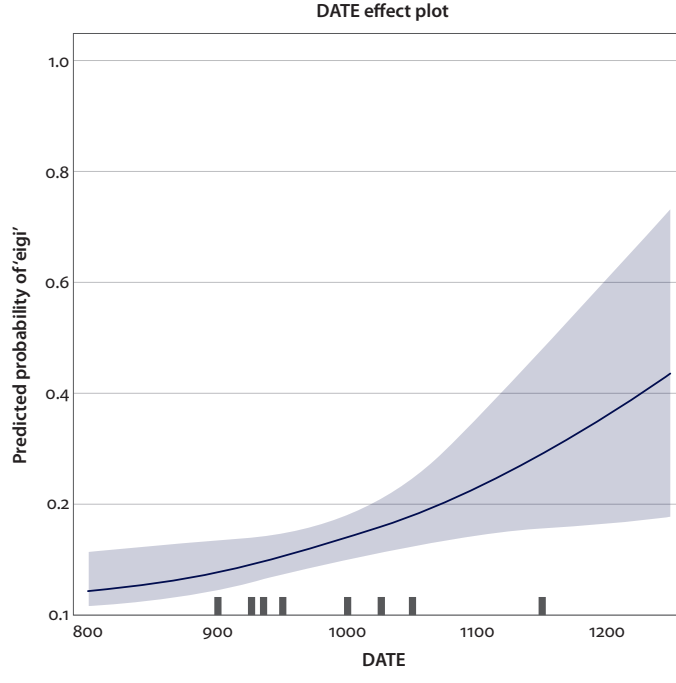

Figure 4.2 Regression line of *eigi* in the Eddic poems, by Date

4.3 Negation in my skaldic corpus

4.3.1 Selection of data

For the skaldic poetry, I searched poems by the skalds listed in Chapter 1. Using the Skaldic Project's (*SkP*) search function, I searched for the following negators:

1. *%a, %at*, and *%t* (where "%" is a wildcard searching for any string of letters) to find the various forms of the enclitic negator *-at*. Because this resulted in a large number of results (e.g. the many participles ending in *-at*), only those glossed as negative in *SkP* were included in the database.
2. *ne/né*. To rule out the conjunction, I excluded all instances in which this was glossed in *SkP* as 'nor' and verified the remainder by hand to ensure that *ne* negates a finite verb. (Because of the free word order of skaldic poetry, whether *ne* immediately precedes a finite verb is irrelevant, although in most cases the editors of *SkP* place *ne* before the verb in their prose rendering.)
3. *ne…-at* was not searched for separately, but was identified by inspecting all *ne* results for the presence of *-at* on the finite verb.
4. *eigi* and *ekki*. The negator *eigi* is lemmatized in *SkP* as "eigi (adv.) 'not'", so there was no danger of confusion with a form of the verb *eiga*. The lemma *ekki* in *SkP* includes its use as a sentential negator and as the pronoun 'nothing', so all instances glossed as 'nothing' by *SkP* were excluded from my database. Instances of constituent negation and negation of a non-finite verb were excluded too, as *-at* cannot be used in these contexts. However, no attempt was made to distinguish emphatic from non-emphatic *eigi*.

The results of this search are summarized in Table 4.6. Clearly, *eigi* is infrequently used by skalds before the year 1025. Thereafter, *eigi* makes up a substantial proportion of the negators for all skalds with at least two attested examples of negation. Skalds from the 13th century show especially high rates of *eigi*.

Table 4.6 Negation types in my skaldic database

Skald	Date of last poem	# *-at*	# *ne*	# *ne …-at*	# *eigi/ekki*	Total negs	% *eigi*
Bragi	825	4				4	0%
Þjóð	850	6				6	0%
Þhorn	900		1			1	0%
Glúmr	970	1				1	0%
Eyv	985	3				3	0%
Eskál	986	8	3		1	12	8.3%
Tindr	987					0	N/A

Table 4.6 (*continued*)

Skald	Date of last poem	# *-at*	# *ne*	# *ne …-at*	# *eigi/ekki*	Total negs	% *eigi*
Eil	1000	1	1			2	0%
Hfr	1001	5	1			6	0%
ÞKolb	1014		1			1	0%
Óhelg	1025					0	N/A
Ótt	1026	3		1	2	6	33.3%
Þloft	1032					0	N/A
Sigv	1040	9	6		8	23	34.8%
Þfagr	1051	1				1	0%
Hharð	1054	2			1	3	33.3%
ÞjóðA	1066	7			1	8	12.5%
Arn	1070	8		1	5	14	35.7%
Steinn	1070	2			4	6	66.7%
Gísl	1104					0	N/A
Mark	1106	2			1	3	33.3%
Ív	1140					0	N/A
Rv	1154	3			5	8	62.5%
ESk	1159	9	3		3	15	20%
Gamlkan	1180	5			5	10	50%
HSt	1200		1		1	2	50%
GunnL	1218	6			6	12	50%
Bjbp	1223	1			3	4	75%
Total		**86**	**17**	**2**	**46**	**151**	**30.1%**

4.3.2 Effect of date

The previous section showed that there seems to be an increase in negation with *eigi* after the year 1000. The data are somewhat uneven, but there seems to be an overall upward trend, as shown in the scatterplot in Figure 4.3.

Despite this unevenness, the logistic regression model, illustrated in Figure 4.4, shows a clear and statistically significant increase in the probability of *eigi* with each additional year (coefficient = 0.0086, z = 6.13, $p < 0.001$).

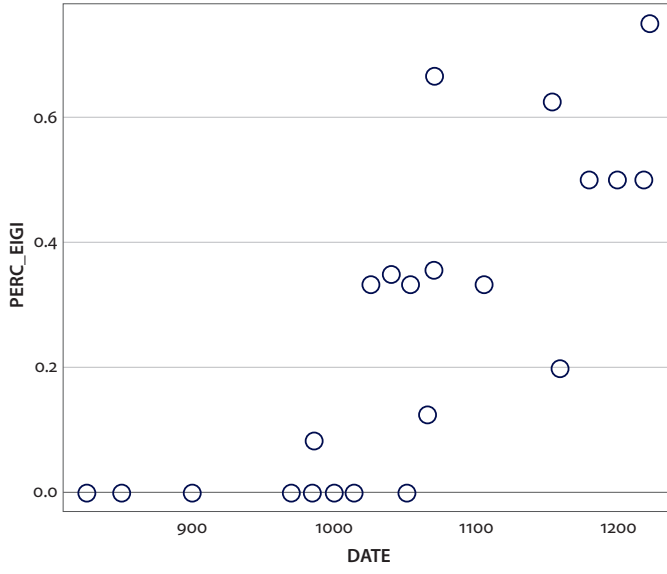

Figure 4.3 Percentage of *eigi* in the skaldic poems

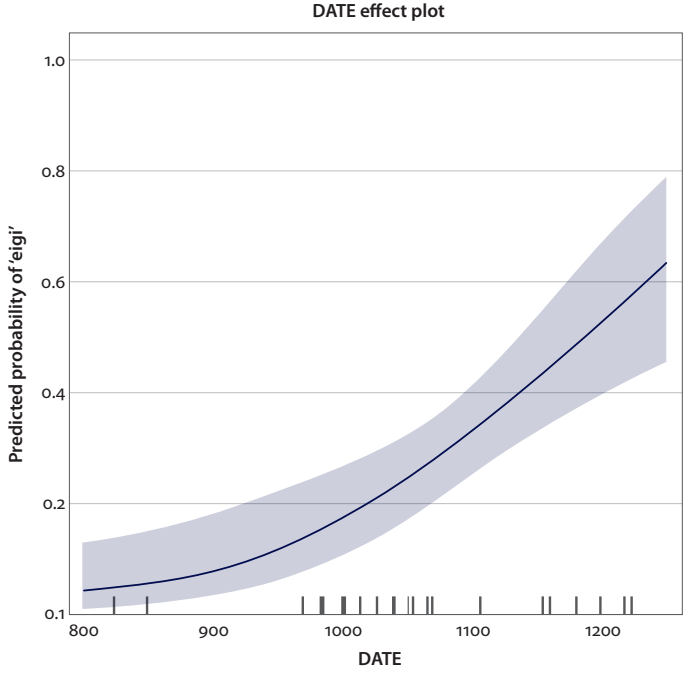

Figure 4.4 Regression line of *eigi* in the skaldic poems

4.3.3 Combining the two genres

Because Eddic poetry seems to show a similar increase over time (by Finnur Jónsson's datings) as dated skaldic poetry, the next analysis looks at both databases together. First, consider the similarities between the Tables 4.3 and 4.6: in both, a large number of poems (the early skaldic poems and many presumably early Eddic ones) have no instances of *eigi*, another large group of Eddic and skaldic poems have low rates of *eigi*, and only two Eddic poems are like the 13th century skalds with rates of *eigi* over 50%. This distribution of *eigi* in the combined corpus is visualized in the scatterplot in Figure 4.5. Most poems cluster along an upward-sloping line, and recall that the 100% of *eigi* in *Hdl* represents only two instances of negation:

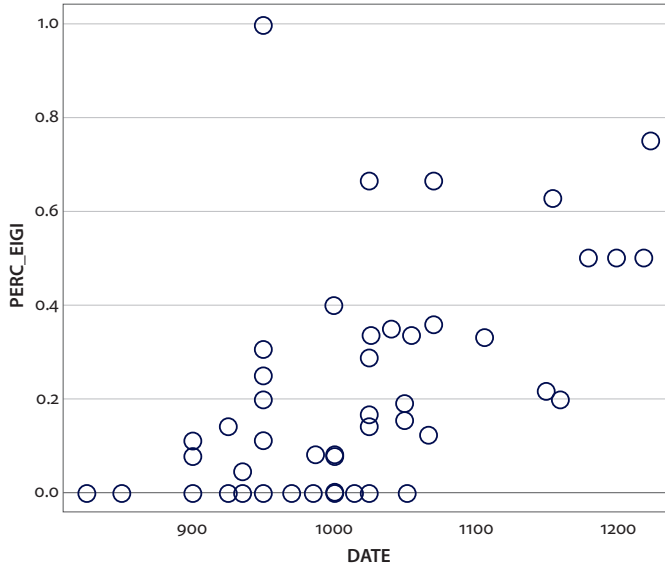

Figure 4.5 Percentage of *eigi* in the Eddic and skaldic poems combined

A logistic regression model with the independent variables Date and Genre (i.e. Eddic vs. skaldic) shows no statistically significant effect of Genre ($p = 0.426$) or of an interaction between the two variables ($p = 0.358$). This is perhaps surprising, because *eigi* is about twice as frequent overall in skaldic poetry as in the *Edda*. The lack of significance for both Genre and the interaction suggests that this difference in frequency is a not result of some stylistic difference between Eddic and skaldic poetry but instead is entirely the effect of Date: no Eddic poetry dates to the late 12th or to the 13th century, when *eigi* became especially frequent among the skalds. Indeed, the best statistical model is one in which only Date has a significant effect

on the type of negator (coefficient = 0.0086, z = 6.13, $p < 0.001$). Similar to the regression lines for the separate analyses of Eddic and skaldic poetry, in the combined model illustrated in Figure 4.6, we find a clear rise in the probability of *eigi*.

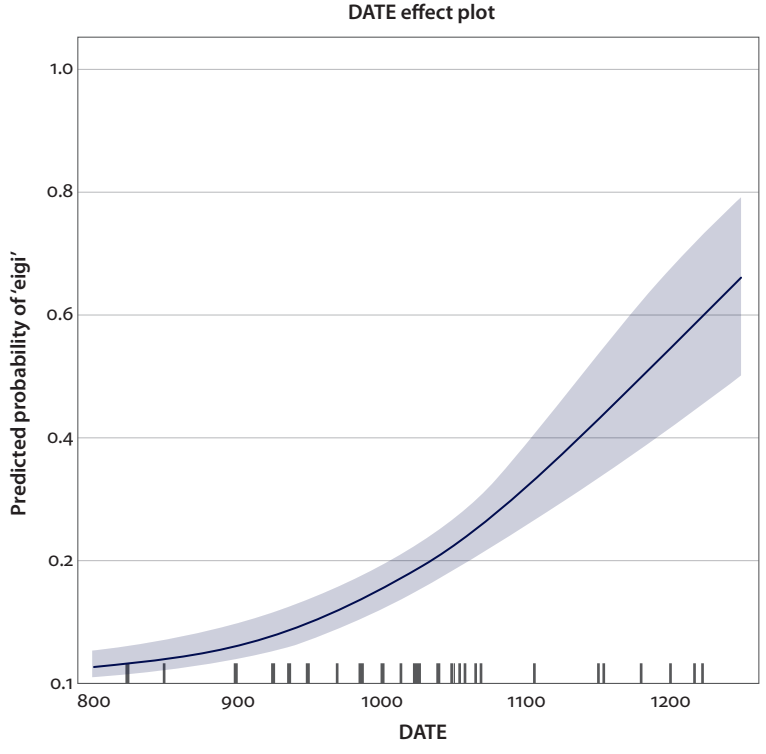

Figure 4.6 Regression line of *eigi* in the Eddic and skaldic poems combined

To sum up this section, both Eddic poetry and skaldic poetry show an increase in the negation type with *eigi* over time. Although Finnur Jónsson's dates are not precise, the fact that Eddic and skaldic poetry show quite similar trends suggests that I can continue to use Finnur's dates as a proxy until my own dates are proposed in Chapter 8. Moreover, because there is no statistically significant difference between the rate of *eigi* in Eddic and skaldic poetry, the development of *eigi* in skaldic poetry can be used to help date Eddic poems, despite the fact that this negator is more frequent overall in skaldic verse.

4.4 Discussion

This chapter has explored the use of different negation types to date Eddic poetry, an idea first proposed by Åkesson (2005). I have refined Åkesson's method in several respects. First, I have re-calculated the rate of the negator *ne*, excluding it when it is the conjunction 'nor,' and I have included only sentential negation (*eigi* and to a lesser extent *ekki*) rather than all negators ending in the morpheme *-gi*. Secondly, rather than relying solely only on the literary histories such as Finnur Jónsson's, I have correlated the rise of *eigi* in Eddic poetry to two linguistic phenomena: the decrease in the particle *of* in Eddic poetry and the rise of *eigi* in skaldic poetry.

Nevertheless, the skaldic data show that even within a given century, the rate of *eigi* can vary wildly. Therefore, as I concluded in Chapter 3 regarding the use of the particle *of/um*, one should not attempt to definitively date a particular Eddic poem based solely on its frequency of *eigi*. Instead, the dating of individual poems will need to take multiple criteria into account. This chapter has demonstrated that negation is a strong criterion for the multi-factorial Naïve Bayes Classifier that will be employed in Chapter 8.

CHAPTER 5

Verb placement in subordinate clauses

5.1 Background

5.1.1 Old Norse word order in prose and poetry

Old Norse as attested in prose is a consistently verb-second (V2) language (Faarlund 2004: 191). In V2 languages, the finite verb is the second constituent in the clause. In the following example, the sentence contains a topicalized direct object NP as the first constituent, so the verb in the second position of the clause precedes the subject *hann*:

(1) *Ásu dóttur sína* ***gipti*** *hann Guðrøði konungi.*
Á. daughter his married he G.-DAT king-DAT
'He gave his daughter Ása in marriage to King Guðrøðr.'
(*Ynglinga saga* 43, cited in Þórhallur 2009: 68)

Note that in V2 languages, clauses may under certain conditions have the finite verb as the first constituent (V1). As in other Germanic V2 languages, V1 occurs in Old Norse imperatives, questions, and conditionals (Kristján Árnason 2002: 211). In Old Norse in particular, an additional type of V1 clause is Narrative Inversion:

(2) ***sá*** *þá Egill konungr engan annan sinn kost …*
saw then E. king no other his choice
'King Egill then saw no other choice …'
(*Ynglinga saga* 30, cited in Þórhallur 2009: 69)

In contrast to V2 languages such as Modern German and the modern mainland Scandinavian languages, in Old Norse prose texts (as in Modern Icelandic) there is no main/subordinate clause asymmetry: both types of clauses have V2 word order (Faarlund 2004: 191). However, the V2 properties of the two clause types are quite different. In main clauses, any constituent may precede the finite verb, but in subordinate clauses, a subject must appear between the subordinating conjunction and the finite verb (Faarlund 2004: 250):

(3) *þvíat* ***þeir*** *høfðu ekki komit til Færeyja*
because they had not come to Faroes
'because they had not come to the Faroes'
(*Heimskringla* II.279, cited in Faarlund 2004: 251)

Only if the subject is absent may another constituent appear before the finite verb of a subordinate clause, a structure called "stylistic fronting" (Faarlund 2004: 251):

(4) *sú sveit, er* ***honum*** *hafði fylgt*
that troop REL him had followed
'that troop which had followed him'
(*Heimskringla* II.80, cited in Faarlund 2004: 251)

Unlike the fixed position of finite verbs near the front of the clause, the position of non-finite verbs can vary. A non-finite verb may precede or follow its object, i.e. both OV and VO orders are frequent (see e.g. Eiríkur Rögnvaldsson 1995 or Faarlund 2004). In addition, a non-finite verb may be moved to the clause-initial position via stylistic fronting, so that it is immediately followed by the finite verb (Eiríkur Rögnvaldsson 1995). Þórhallur Eyþórsson (2009: 72) cites the following Modern Icelandic example:

(5) ***Lesið var*** *úr nýjum bókum í útvarpinu.* (ModIce)
read was from new books in radio-the
'They read from new books on radio.'

Unlike e.g. Modern German, however, neither Modern Icelandic nor prose Old Icelandic allows fronting of the entire VP (Þórhallur 2009: 72–73).

In addition to variation in the position of verbs, Old Norse prose has a great deal of freedom in other aspects of word order, a fact which must contribute to the considerable flexibility of word order in the poetic genres. Three areas of word order variability are noted by Kristján Árnason (2002). First, nouns can either precede (6a) or follow (6b) their modifiers:

(6) a. *Skalla-Grímr var* ***járnsmiðr mikill****…*
S. was blacksmith great
'Skalla-Grímr was a great blacksmith'
b. *Eru þar* ***smáir sandar*** *allt með sæ*
are there small beaches all along sea
'There are small beaches there all along the sea'
(*Egils saga* 78, in Kristján 2002: 209)

Secondly, nouns and their modifiers can be discontinuous:

(7) ***góðan*** *eigu vér* ***konung***
good have we king
'We have a good king.' (*Heimskringla* II.464, cited in Kristján 2002: 210)

Thirdly, prepositional phrases can also be discontinuous:

(8) *ok mun vér* ***frá*** *hverfa* ***ánni***
and will we from turn river
'and we will turn away from the river'
(*Laxdœla saga* 41, cited in Kristján 2002: 210)

Turning now to verse, it should not be surprising that Old Norse poetry, like prose, shows a great deal of variability in word order. Although constrained by metrical considerations, Old Norse poetry in fact shows even more variation than prose texts, for example allowing violations of V2. Although it was once considered to have completely flexible word order (especially in skaldic poetry), Old Norse poetry is now understood to follow certain grammatical principles, based on work by many scholars such as Kuhn (1933), to be discussed below. Kristján Árnason (2002: 216–224) and Þórhallur Eyþórsson (2009: 63–64) each summarize some of the constraints on word order in skaldic poetry (much of which applies to Eddic poetry as well). Those that are relevant for the current study include the following. First, since Kuhn (1933) it has been understood that the relevant distinction between clause types in Germanic poetry is not main vs. subordinate clauses, but "independent" vs. "bound" clauses. Independent clauses are main clauses that are not introduced by a conjunction, while the category of bound clauses subsumes not only subordinate clauses but also main clauses introduced by a conjunction.[1] Secondly, sentences map onto metrical structure in a patterned way in skaldic poetry: while a 4-line *helmingr*, i.e. half-stanza, may contain one or more clauses, clauses do not span the boundary between the two *helmingar*. Thirdly, the position and metrical stress of finite verbs is different in independent vs. bound clauses (as will be shown in the next section), whereas there is no main/subordinate clause asymmetry in Old Icelandic prose. Fourth, conjunctions occur at the beginning of their clauses (as we will see with the relative markers discussed in Chapter 6). Finally, fronting of VPs is allowed in Old Norse poetry in the meter *ljóðaháttr* (see Section 5.1.4 below).

5.1.2 Kuhn's laws and Old Norse word order

In an influential article, Kuhn (1933) investigates the relationship between word order and stress in Old English, Old High German, Old Norse, and Old Saxon poetry. Kuhn's study has come under much criticism from both metricists and syntacticians (see the overview in Stockwell & Minkova 1994); nevertheless, his claims about the effect of meter on word order have been the basis for a great deal of subsequent research. He formulates his findings as two "laws", now known as "Kuhn's laws." Kuhn's First Law is the *Satzpartikelgesetz*:[2]

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1. The idea that second-conjunct main clauses pattern with subordinate clauses is surprising considering the modern Germanic languages. It is an open question whether this independent/bound distinction was ever a feature of colloquial language or simply a part of poetic diction. Þórhallur Eyþórsson (2009: 67) suggests that at some stage prior to Old Icelandic it may have been a feature of "natural language."

2. There are two types of exceptions to the *Satzpartikelgesetz*. First, a clause particle can appear later in a clause after an "interruption" or "loosening" of the sentence structure (e.g. after a vocative or apposition), in which case the particle will appear in the first dip of the line in which

(9) *Satzpartikelgesetz* ('Law of clause particles'): clause particles occur in the first dip of the clause, proclitic to either the first or second stressed word.
(Kuhn 1933: 8)[3]

Kuhn defines "clause particles" as unstressed or weakly stressed words that are constituents of the clause, i.e. pronouns, adverbs, conjunctions, finite Vs, and vocatives. The following stanza illustrates this; in the first clause, a finite verb (*svalg*) occupies the first dip, and in the second clause, the conjunction *ok* occupies the first dip:

(10) ***Svalg*** *hvert hús* *heitum munni*
swallowed every house hot mouth
viðar hundr *Verma bygðar,*
wood's dog V.'s settlement
ok *svipkárr* *selju rakki*
and fierce willow's dog
of garðshlið *grenjandi* ***fór***.
over gates howling went
'The dog of wood [i.e. fire] swallowed every house in Vermir's settlement with his hot mouth, and the fierce dog of the willow [i.e. fire] went howling over the gates.' (*Hákonarkviða* 9, cited in Haukur 2012: 236)

The major consequence of this law for verbal syntax is that it rules out V2 in subordinate clauses: because the conjunction occupies the first dip, the finite verb cannot appear in that position. Instead, in bound clauses finite verbs are stressed and appear as a lift later in the clause, such as the finite verb *fór* in (10) above.

In Old Norse poetry, however, the degree to which the *Satzpartikelgesetz* is followed depends on genre and meter. Recall from Chapter 4 that Kuhn divides the poetic corpus into three groups: "domestic poetry," which includes all skaldic poetry and some Eddic poetry in *fornyrðislag, Fremdstofflieder* 'foreign matter poems' in *fornyrðislag* dealing with continental heroic figures, and poems in *ljóðaháttr* (Kuhn 1933: 37).[4] In the "domestic" poems of CR, the law is followed consistently, so that in subordinate clauses, the conjunction occurs in the first dip, and finite verbs (as

it occurs, rather than the first dip of the clause (1933: 9). Second, occasionally a clause particle such as a finite V can be stressed, in which case it occurs in a lift rather than a dip, and a second clause particle can appear in the dip following it (1933: 10). Kuhn gives several examples of this occurring in *Beowulf* (1933: 11).

3. My translation of Kuhn: "Die satzpartikeln stehen in der ersten senkung des satzes, in der proklise entweder zu seinem ersten oder zweiten betonten worte." I adopt Suzuki's (2014) translations of 'clause particle' for *Satzpartikel* and 'phrase particle' for *Satzteilpartikel*.

4. Kuhn includes *Hrbl* in the *ljóðaháttr* category, despite the fact that most of its stanzas are in *fornyrðislag/málaháttr*. On the other hand, he characterizes *Fm, Rm*, and *Sg* as *Fremdstofflieder* despite being nearly entirely in *ljóðaháttr*.

clause particles) appear in a stressed position. But in the "foreign" poems, there are many violations of the law (1933: 37); here, I will only discuss the types of violations that are relevant for the current study. Kuhn finds nine examples of the following type: the *Satzpartikelgesetz* is violated because the finite verb *kom* (a clause particle) is not in the first dip, that position being occupied by another particle, in this case the preposition *at* 'to':

(11) ***at*** *gǫrðom* ***kom*** *hann Giúca*
to courts came he G.'s
'he came to the courts of Giuki' (*Akv* 1, cited in Kuhn 1933: 37)

In addition, there are 13 violations of the *Satzpartikelgesetz* like the following, in which a finite verb (*sat*) appears in a dip in a later line or half-line instead of the first dip of the clause, that position being filled by a conjunction (Kuhn 1933: 38–39):

(12) ***Enn*** *einn Vǫlundr* ***sat*** *í Úlfdǫlom*
but alone V. sat in U.
'But Vǫlundr sat alone in Wolfdales.' (*Vkv* 5, cited in Kuhn 1933: 38)

Finally, poems in the meter *ljóðaháttr* do not follow the *Satzpartikelgesetz* at all (Kuhn 1933: 40). According to Kuhn, one of the characteristics of this meter is the placement of the most "betont" (probably best understood as 'emphasized' in this context) word in the first line of the sentence. Because of this fronting, the emphasized word is often represented again later in the sentence by a pronoun or other anaphoric element, resulting in later placement of clause particles.

Kuhn's second law is the *Satzspitzengesetz*:

(13) *Satzspitzengesetz* ('Law of sentence beginnings'): If a sentence begins with an unstressed word, that word must be a sentence particle [i.e. clause particle]. (Kuhn 1933: 43)[5]

This law excludes the possibility of having a *Satzteilpartikel* 'phrase particle' alone in the sentence-initial position, with a clause particle in a later dip. Whereas clause particles are constituents of the clause, Kuhn's phrase particles (articles, adjectives, pronouns, adverbs, and prepositions) are part of another constituent. What is allowed is the occurrence of a clause particle and a phrase particle together in the first dip (Kuhn 1933: 43). This law is followed very consistently in most skaldic poetry and in the domestic group of Eddic poems (Kuhn 1933: 46). The purportedly foreign poems are less consistent, with nine violations identified by Kuhn, mostly involving a preposition in the first dip (11). As with the first law, poems in *ljóðaháttr* are remarkable in having numerous violations of this law, by Kuhn's count 52 examples (1933: 47).

5. Fidjestøl's (1999: 296) translation of Kuhn's "Im satzauftakt müssen satzpartikeln stehen."

In the second part of his study, Kuhn focuses specifically on the relationship between stress and the placement of the verb. Kuhn maintains that placement of the finite verb is closely related to the two laws discussed above: if the verb is unstressed, it will follow the *Satzpartikelgesetz* and *Satzspitzengesetz*. However, if the finite verb is stressed, these laws do not apply to it. The question for Kuhn, then, is when are verbs stressed and when are they unstressed (1933: 50). Kuhn first addresses the metrical placement of verbs (lift vs. dip) before moving to word order more broadly (early vs. late placement within the clause).

As mentioned above, Kuhn claims that the main distinction in ancient Germanic poetry, especially Old Norse poetry, is not between main and subordinate clauses, but between *selbständig* 'independent' clauses and *gebunden* 'bound' clauses, defined as clauses introduced by any conjunction (1933: 50). With this distinction in mind, Kuhn proposes that verbs in independent clauses are unstressed and thus generally clause particles, while those in bound clauses are stressed and thus occur later in the sentence (1933: 52).[6] Unlike lexical verbs, however, auxiliary verbs are usually in dips, thus unstressed regardless of clause type (1933: 52).

Kuhn finds the strongest lift/dip asymmetry between independent and bound clauses in the domestic Eddic poems: roughly half of finite lexical verbs in independent clauses are dips, but all finite lexical verbs in bound clauses are lifts (1933: 54). He argues that such a clear distinction can only be explained if the non-poetic vernacular language also had this characteristic (1933: 54). In skaldic poetry in *dróttkvætt*, there are also stress differences by clause type, although these differences are not as sharp as in Eddic poetry: in *dróttkvætt* poems, 30% of verbs in independent clauses occur in dips, but only 10% of verbs in bound clauses occur in dips (Kuhn 1933: 55). Eddic poems with supposedly foreign material have even more examples of bound-clause verbs in dips, with 18 such violations, Example (11)–(12) above (Kuhn 1933: 55). Again, *ljóðaháttr* is an outlier, with lexical verbs frequently occurring in dips regardless of clause type.

Turning now to word order, recall that Old Norse prose is strictly V2 in both main and subordinate clauses (and likewise there is no independent vs. bound distinction in prose). In poetry, *dróttkvætt* independent clauses have the finite verb no later than the V2 position, and the choice between V1 and V2 can be explained by Kuhn's *Satzpartikelgesetz* and *Satzspitzengesetz* (1933: 58). But in bound

6. As Kuhn notes, the relationship between stress and verb placement had already been established for Sanskrit. In Sanskrit, as apparently in Old Norse poetry, finite verbs in main clauses are typically unstressed, while those in subordinate clauses are stressed. What Kuhn does not mention, however, is that in Sanskrit the relationship between stress and word order seems to be the opposite of his findings: in Sanskrit, unstressed finite verbs are clause-final, while stressed verbs are fronted (Delbrück 1900).

clauses, the verb can appear anywhere in the sentence, and especially in the earliest poetry it tends to occur relatively late in the clause. In the *dróttkvætt* stanzas of Bragi Boddason, 7 of the 19 verbs in bound clauses (37%) are clause-final (Kuhn 1933: 59). This decreases somewhat in the later poetry: in Einarr skálaglamm's late 10th-century poem *Vellekla*, 9 of 35 bound-clause verbs are sentence-final (26%), the early 11th-century poet Hallfreðr has verb-final 10 of 66 times (15%), and the 13th-century Sturla Þórðarson has just 4 final verbs in 19 bound clauses (21%) (Kuhn 1933: 60). By the latest centuries, Kuhn argues that just as in prose, V1/V2 must be the rule in poetry, and any instances of verb-final must be a poetic device. The effect of clause type is even stronger in *kviðuháttr*: in *Ynglingatal*, 58 of 78 bound clauses (74%) have clause-final placement of the verb (Kuhn 1933: 61). In *ljóðaháttr*, however, the main/bound clause distinction is obscured due to the meter (1933: 61).

In *fornyrðislag* poems (here Kuhn does not specify whether this is Eddic poetry only, but it seems so from his examples), independent clauses strongly tend to have early placement of the verb; there are only 63 counter-examples of late placement out of 3,360 lines, and this is slightly more frequent in the "foreign matter" poems than in the domestic ones.[7] Kuhn notes that this is in sharp contrast to the bound clauses, in which later placement of the verb is normal (1933: 62). Unfortunately, he does not provide any numbers here or distinguish clause-late in general from clause-final. The closest that he comes to this is in his earlier discussion of metrics: he finds that that there are no instances of "full verbs" (i.e. lexical verbs) in dips in bound clauses of the domestic Eddic poems (1933: 54) and only 18 such cases in his foreign group (1933: 55). Because the V1 and V2 positions are typically dips but can also be lifts, a prohibition on lexical verbs in bound-clause dips does not exactly equate to a prohibition on lexical verbs in the V1 or V2 positions in bound clauses.

5.1.3 Evaluations of Kuhn's hypotheses

Stockwell & Minkova (1994) survey several works by other scholars that are critical of Kuhn's *Satzpartikelgesetz* and *Satzspitzengesetz*, some of whom claim that these supposed laws are unnecessary as they fall out from other metrical or syntactic principles (1994: 213–214). A full treatment of this scholarship here would require an exposition of alternative metrical theories as well as details about Old English syntax, both of which go beyond the scope of the current study. Therefore, I will

7. Kuhn does not specify whether the *fornyrðislag* lines counted here are from Eddic poems only, or also skaldic poetry composed in that meter. I suspect the former based on Kuhn's examples, and the fact that he counts only 3,360 lines. According to Suzuki's counts (2014: 2), there are 6550 half-lines in the *fornyrðislag* and *málaháttr* poems of CR, which would equal 3,275 long lines.

limit my discussion to Stockwell & Minkova's main observations. One key point that they make is that some metrical mechanism is required to explain why verbs in the V1 or V2 positions are unstressed (1994: 218). Syntactic theory can explain the difference between verb-early and verb-late clauses: V1/V2 involves movement of the finite verb to a clause-initial position, while verb-final reflects the verb remaining in its underlying position (Stockwell & Minkova 1994: 226–227). Stockwell & Minkova conclude that a syntactic account allows for the various positions of the verbs that Kuhn noted, but the motivation for those positions (at least in *Beowulf*, where there is no clear independent/bound clause asymmetry in word order) appears to be purely metrical (1994: 228).

In another article, Stockwell & Minkova (1997) rightly criticize concepts of a "metrical grammar" that conflate metrics with morphosyntax. They trace this confusion back to Kuhn (1933), namely to the *Satzpartikelgesetz* itself; they point out "Sentences do not have dips, which are defined only within a theory of meter" (Stockwell & Minkova 1997: 247). Equally problematic is Kuhn's term *Auftakt*, which he uses in both a metrical sense (the first unstressed syllable in a line) and a syntactic one (the initial string of words in a clause) (Stockwell & Minkova 1997: 247–248). In the end, Stockwell & Minkova find that Kuhn's laws have little independent value, because his observations fall out from morpho-syntactic rules that are also known from prose (e.g. V2) and from the prosodic patterns of poetry (1997: 251).

Fidjestøl (1999) closely examines one of the broad implications of Kuhn's work for Old Norse poetry, namely his *Fremdstofflieder* hypothesis. To make Kuhn's claims easier to quantify, Fidjestøl reformulates Kuhn's ideas as seven rules: (1) the *Satzpartikelgesetz*, (2) the *Satzspitzengesetz*, (3) verbs in bound clauses cannot appear in a dip, (4) verbs in independent clauses must be in the V1 or V2 position, (5–6) the negator *-a/at/t* originally attached to verbs in independent clauses and only to 1–2 syllable verbs, and (7) deviations from rules 5 and 6 are found in poems that also have the negators *ne* and *gi* (1999: 296–298). Fidjestøl then attempts to tally the examples cited by Kuhn of violations of these rules in each Eddic poem, with numbers from the *eddica minora, ljóðaháttr* poetry, and skaldic poetry for comparison (1999: 300–301).

Fidjestøl notes that at first, the resulting tables look "rather impressive" for the *Fremdstofflieder* hypothesis, with over three times as many total violations of Kuhn's rules in the foreign group than in the domestic group (1999: 302).[8] However, he points out that this picture only results from Kuhn's *a priori* classification of the poems about Continental legends as one group; if one looks at individual poems, no one poem has many violations, and several poems have no violations (Fidjestøl

8. In the foreign group, there are 240 violations in 2,236 lines, i.e. 0.11 violations per line. The domestic poems (including the *eddica minora* and skaldic poetry) have just 75 violations in ca. 3,380 lines, or .02 violations per line.

1999: 302). At the level of individual poems, Fidjestøl doubts "that the category 'foreign' poems could have been inferred from the observance or non-observance of these rules alone" (1999: 302). What is worse for Kuhn's analysis is that some aspects of the supposed West Germanic influence on the foreign group are counterintuitive; I will point out that the poems in this group have more violations of the rule that verbs in bound clauses are clause-late, but I would expect West Germanic influence to result in more clause-late verbs. Similarly, Kuhn wants the use of the negative proclitic *ne-* to be a result of translation from a West Germanic language, where this type of negation was frequent, but this can hardly explain why such poems also contain the enclitic *-gi*, which is not found in West Germanic (Fidjestøl 1999: 305). Fidjestøl concludes: "I do not believe that Kuhn's arguments for influence from West-Germanic via some sort of translation … is convincing. … Most of the linguistic phenomena in question are extremely rare, … so low that no particular explanation is called for" (1999: 308). Fidjestøl's arguments are devastating; as Harris (2016: 244) notes, "relatively little survives Fidjestøl's critique" of the arguments in Kuhn (1933) and Kuhn (1936) for the foreign matter hypothesis.[9]

Suzuki (2014), however, believes that Fidjestøl's rejection of the *Fremdstofflieder* theory is too strong. Suzuki claims that "The overall distribution of violations to the set of rules is indisputably of statistical significance" (2014: 8), but it is not clear whether Suzuki performed significance tests on the data in Fidjestøl's tables. I suspect that what Suzuki finds "indisputable" is the obvious difference between the foreign poems as a group (0.11 violations per line) and the domestic ones as a group (0.02 violations per line). Indeed, the difference is extremely significant.[10] However, when the rates of violations in individual poems are observed, the threshold for significance is not met.[11] Another of Suzuki's criticisms is that "Membership of a

9. However, Harris (2016) does see some value in Kuhn (1939), which argues that certain metrical patterns involving tri-syllabic words (*svarað, konungi*) are avoided in domestic poetry but frequent in the *Fremdstofflieder* under the influence of the looser West Germanic meter as attested in *Beowulf* and *Hêliand*. Indeed, this seems to be the most plausible of Kuhn's proposed continental influences, but as my corpora are not coded for the syllable structure of words, this will not be investigated further.

10. I performed a chi-square test using GraphPad. This test compares the number of observed vs. expected violations in the foreign group (240 observed, vs. 125.48 expected violations, if the violations had been distributed evenly between the two groups) to the number in the domestic group (75 observed vs. 189.52 expected). The result is $p < 0.001$ ($x^2 = 175.405$, df = 1).

11. From Fidjestøl's table (1999: 300–301), I calculated the rate of violations per line in each poem (treating the poems of the *eddica minora* together and the skaldic poems together) and conducted a t-test using GraphPad. Treated this way, the mean number of violations per line of the supposedly foreign poems is 0.065, while that of the domestic poems is 0.007. The difference between the two groups is insignificant at $p = 0.0812$ (t = 1.8026, df = 31, standard error of difference = 0.032).

group does not necessarily entail that each member should also share other attributes than the defining feature(s)" (2014: 8). Suzuki is correct about this in general, but the problem comes in identifying the defining feature(s) of the supposedly foreign poetry. Because several of the "foreign" poems contain no violations at all, the defining feature of this group cannot be a linguistic feature, but must simply be Kuhn's identification of them as containing Continental content, which is exactly the point of Fidjestøl's criticism. I strongly disagree, then, with Suzuki's conclusion that "Kuhn's dichotomy of eddic poetry in *fornyrðislag* provides a well-founded conceptual framework…" (2014: 8).

Kristján Árnason (2002) re-examines Kuhn's laws in the light of modern phonological theory. Kristján explains the somewhat nebulous distinction between Kuhn's *Satzpartikeln* ('clause particles') and *Satzteilpartikeln* ('phrase particles', or perhaps 'clitics') in terms of the "prosodic hierarchy" (2002: 203). He proposes that the following prosodic hierarchy of Modern Icelandic also holds for Old Norse poetry, so that nouns are more likely to be assigned stress than verbs, verbs more so than prepositions, etc.:

(14) nouns > verbs > prepositions > personal pronouns (Kristján 2002: 226)

This hierarchy, essentially the same one assumed by Sievers (1893) in his five-type system, helps explain why in Old Norse poetry, nouns are always in lifts, verbs can be in lifts or dips depending on their position in the clause, prepositions are unstressed when proclitic to a noun but can be stressed when postposed, etc. (Kristján 2002: 227). Another important assumption is that Old Icelandic had a preference for alternating strong and weak accents (Kristján 2002: 229).

With that background, Kristján explains Kuhn's laws as follows. First, Kuhn's "clause particles," being lower on the prosodic hierarchy, occur either before or after the first stressed word of the sentence; thus the *Satzpartikelgesetz* is a natural consequence of the prosodic hierarchy and the preference for alternating stress (Kristján 2002: 231). Secondly, Kristján explains the *Satzspitzengesetz* in terms of sentence stress vs. word stress: a "clause particle" counts as a weakly stressed word for the purposes of sentence stress, and thus can fill the clause's first weak position, but a "phrase particle" or clitic does not participate in sentence stress, but instead forms a phonological word with its host (2002: 231).

Turning now to the position of finite verbs in independent vs. bound clauses, while Stockwell & Minkova (1994) consider the phenomena in question to be essentially syntactic (movement vs. non-movement of the finite verb) with phonological implications, Kristján sees the relationship between metrics and word order in Old Norse poetry as phonologically motivated. First, he points out that a purely syntactic account cannot explain an additional restriction on verb placement in *dróttkvætt*: finite verbs can appear at the end of bound clauses in that meter only if they contain

a heavy syllable (Kristján 2002: 233). Thus, he argues, prosodic phonology is necessary to fully explain the positioning of verbs in Old Norse poetry. With finite verbs being lower on the prosodic hierarchy than nouns and tending to precede their complements in Old Norse, they naturally occur following the first stressed position in the independent clause, yielding both V2 and the *Satzpartikelgesetz* (Kristján 2002: 234). In bound clauses, however, it is the conjunction that occupies that weak position, which "somehow breaks the rhythmic relation between the subject and the verb" (Kristján 2002: 236). The verb thus becomes stressed and is eligible to occur clause-finally. Importantly, Kristján demonstrates that verbs are not the only words to have this property: prepositions are normally proclitic to a noun, but a preposition displaced from its noun becomes stressed and can appear clause finally (2002: 227). For Kristján, this explanation is not a mere artifact of poetry but is intended to explain V2 in prose Old Icelandic as well (2002: 239). Even if one is not completely convinced by Kristján's prosodic account for clausal word order in natural language, he makes a plausible case that Kuhn's laws may not be simply artifacts of the poetic corpus, but might reflect general phonological principles.

5.1.4 Word order in specific meters

Gade (1995) offers a detailed analysis of the metrical and linguistic properties of *dróttkvætt* poetry. The following discussion includes only those points that are relevant for comparing this kind of skaldic poetry with Eddic poems. Gade (1995) confirms many of Kuhn's (1933) basic findings about word order differences between independent and bound clauses, but she goes into much greater depth about how these differences play out in the meter, e.g. in odd vs. even lines and into exactly which metrical positions the stressed verbs may fall. Gade confirms that independent clauses have the finite verb in the first or second metrical position of the line, i.e. V1 or V2 (1995: 174). In bound clauses, however, the finite verb is not restricted to these positions, and in about half of the cases the verb is "suspended" to the next line or even later (1995: 177–178).[12]

Although Gade's (1995) main concern is skaldic poetry in *dróttkvætt*, she does point out that Eddic poems in *fornyrðislag* behave similarly. The main difference, already noted by Kuhn, is that in independent clauses, finite verbs usually occur in V1 or V2 but sometimes appear later (Gade 1995: 182). In bound clauses, finite verbs appear in positions later than V1/V2, as in *dróttkvætt*, but the details differ

12. Specifically, "If the bound clause is introduced in an odd line, slightly less than 50 percent of those lines contain the finite verb…" the remainder occurring in the following even line (suspended from line 1 to 2 or from line 3 to 4) or suspended from line 1 to 4 (Gade 1995: 178). Typically, even lines do not introduce new clauses (Gade 1995: 210).

given the fact that lines are short in *fornyrðislag*. Specifically, in *fornyrðislag* bound clauses, verbs appear in positions 3 or 4 of the same line as the conjunction (15) or in the following line (16) (Gade 1995: 183).[13]

(15) *unz þríar* ***qvómo*** *þursa meyjar*,
until three came ogres' girls
'until three ogre-girls came' (*Vsp* 8, cited in Gade 1995: 183)

(16) *er Gullveigo geirom* ***studdo***
when G. spears stuck-PL
'when they stuck Gullveig with spears' (*Vsp* 21, cited in Gade 1995: 183)

In another paper, Gade (2005) undertakes a similar investigation of the syntax of poems in the meter *kviðuháttr*. She finds that finite verbs in bound clauses can occur clause-late in *kviðuháttr*, just as in other types of Old Norse poetry. This is true even in the late *Hákonarkviða*. Recall that in Old Norse poetry, clauses introduced by demonstratives and adverbs are part of the class of bound clauses. However, by the time of *Hákonarkviða*, this is only true for the adverb *þar*: "The construction is clearly no longer productive and has been reduced to a mere syntactic metric stereotype" (Gade 2005: 177).

Finally, recall that Kuhn (1933) found that poems in the meter *ljóðaháttr* do not obey many of the rules that other Old Norse genres follow, and he explained this in terms of the unique style of this particular meter. Specifically, the style of the poems in *ljóðaháttr* is to begin a sentence (half-stanza) with an emphasized phrase, so that the rest of the half-stanza offers a comment on that. Moreover, unlike in other genres, there is no independent vs. bound-clause asymmetry. Þórhallur Eyþórsson (2009) offers a linguistic explanation of this stylistic tendency, and once that is understood, many of the violations to the norms of Old Norse poetic word order can be accounted for. According to Þórhallur (2009: 74), the placement of an emphasized phrase at the beginning of *ljóðaháttr* stanzas involves the syntactic structure known as "topicalization." He provides the following examples of a topicalized direct object (17a) and PP (17b) in Eddic poetry, structures which also occur in other V2 languages:

(17) a. ***Byrði betri*** *berr=at maðr brauto at*
burden better carries=NEG man road on
'One does not carry a better burden on the road'
(*Háv* 10, cited in Þórhallur 2009: 74)

13. There are, of course, other syntactic differences. "Eddic poetry contains few parenthetic clauses. Because the sentence boundaries in fornyrðislag tend to coincide with the metrical caesura, there are no sectional clauses, and the parenthetic asides occupy the full half-line…" (Gade 1995: 190).

b. ***Með þursi þríhǫfðuðom*** *þú skalt æ nara*
with ogre three-headed you shall ever live
'With a three-headed ogre you shall always live'
(*Skm* 31, cited in Þórhallur 2009: 74)

Moreover, Þórhallur finds about twenty instances in Eddic *ljóðaháttr* poems of a fronted verb and its complement:

(18) ***hǫfuð hǫggva*** *ec mun þér hálsi af*
head cut I will you neck off
'I will cut the head off your neck' (*Skm* 23, cited in Þórhallur 2009)

Þórhallur treats this construction as VP-topicalization (2009: 74), a structure that is otherwise unattested in Old Norse (see 5.1.1 above). For Þórhallur, the presence of such a structure confirms that syntactic investigations of poetry can reveal properties of a language (in this case, the possibility of VP-topicalization, however marginal) that would otherwise be undetected in the prose corpus. For my study, the relevance is that the syntax of *ljóðaháttr* poetry is perhaps not as anomalous as would first appear. Once the initial line is understood to be a constituent, these examples turn out to be compatible with a V2 analysis: in the three examples above, the finite verb is in a line-initial dip, either immediately following the topicalized constituent or immediately following a light subject pronoun. It would be interesting to know how many of the violations of Kuhn's laws could be similarly accounted for. If most of the violations can be explained as V2 after a topicalized phrase in the first line, *ljóðaháttr* poetry might not be as syntactically deviant as Kuhn would lead us to believe.

5.1.5 An alternative to the *Fremdstofflieder* hypothesis

Haukur Þorgeirsson (2012) offers another criticism of Kuhn's theory, focusing on the violations of what Fidjestøl calls rule 4, i.e. that finite verbs in main clauses should occur in the first dip of the sentence (a natural consequence of the *Satzpartikelgesetz*).[14] Unlike the features that I criticized above as counterintuitive, the attribution of this feature in purportedly foreign poetry to West Germanic influence makes sense in light of the fact that verb-late main clauses can occur in West Germanic alliterative poetry. However, Haukur convincingly argues that one should not attribute this to West Germanic influence. First, he points out that violations of this law occur even in domestic-matter poems like *Vsp* (2012: 241).

14. Haukur Þorgeirsson (2012) calls these "V2 violations", although he seems to mean clauses in which the verb is neither the first nor second constituent, so I will report them as "V1/V2 violations."

Secondly, Kuhn's *Fremdstofflieder* theory sees a German origin for most of the poems in his foreign group, but in fact there are few extant alliterative German poems (Haukur 2012: 241).

For Haukur Þorgeirsson's investigation, he re-examines the Eddic poems of CR composed in *fornyrðislag* (including those like *Akv* that show some features of *málaháttr*) but excluding poems with fewer than 75 lines. In these poems, he identifies all violations of V1/V2 in independent clauses, except those that involve formulaic repetitions of entire lines. He finds a small difference between the "foreign" poems (4.5 violations per 100 lines of poetry) and the native ones (2.6 violations per 100 lines), which would seem to confirm Kuhn's theory (Haukur 2012: 256). However, some individual native poems have higher rates than the average for the foreign group, so Haukur finds that Kuhn's explanation "has little explanatory power" (2012: 256). He also examines the poems of the Eddic appendix, as well as some non-Eddic poems such as *Víkarsbálkr* and *Merlínusspá*; these poems as a group have a lower overall rate of violations (possibly because many of them are later than the core Eddic poems preserved in CR), but two poems, *Grt* and *Víkarsbálkr*, have rates approaching the supposedly foreign poems of CR (Haukur 2012: 260).

Having dispensed with Kuhn's theory, Haukur Þorgeirsson proposes that instances of verb-late in independent clauses, just like verb-late in bound clauses, are not due to West Germanic influence, but are archaisms, reflecting an earlier stage of the language with verb-final grammar (2012: 261). That Proto-Norse had verb-final main clauses can be seen in the runic inscription on the Gallehus horn (19), and this same sentence structure appears in some Eddic stanzas (20):

(19) *Ek Hlewagastiz Holtijaz horna tawido.*
I H. H. horn made
'I, Hlewagastiz Holtijaz, made the horn.'
(Gallehus horn, cited in Haukur 2012: 261)

(20) *Brynhildr í búri borða racþi.*
B. in bower border embroidered
'Brynhildr embroidered a border in the bower.'
(*Od* 17, cited in Haukur 2012: 262)

If correct, one would expect the oldest Eddic poems to show the most instances of verb-late. To test this, Haukur examines the correlation between violations of the V1/V2 rule and the most reliable method for dating Eddic poetry, namely the rate of the particle *of/um*. He uses Fidjestøl's counts of the particle for the Eddic poems and makes his own counts for the non-Eddic ones. Haukur analyzes the correlation between the two rankings using Spearman's ρ. The two factors, although not related linguistically, are strongly correlated ($\rho = 0.81$, $p < 0.001$): the poems with

the highest frequencies of V1/V2 violations are among those with the highest frequency of the particle, while those with few violations have few particles (Haukur 2012: 264–265).

Haukur Þorgeirsson's (2012) contribution is a valuable one, in that it shows that word order can be used successfully as a dating criterion for Eddic poetry. However, recall that *dróttkvætt* poetry allows very few violations of V1/V2 in independent clauses, which means that this criterion is irrelevant in the largest sample of skaldic poetry. Because my dating method involves comparing features in Eddic poems with diachronic trends in the skaldic corpus, I will not be able to use verb order in independent clauses to help establish an absolute chronology (but it will be used as a check on my chronology in Chapter 8, section 8.3.2). Unlike independent clauses, though, Kuhn shows that late placement of the finite verb in bound clauses decreases over time in *dróttkvætt* (1933: 60), and he also claims that bound clauses in Eddic poems allow late finite verbs (1933: 62). Thus the remainder of this chapter explores whether word order in bound clauses can serve as a dating criterion for Eddic poetry.

5.2 Verb order in my Eddic corpus

5.2.1 Selection of data

All counts in this section are my own and were obtained by the following method. I searched the CR texts on *Bragi* (Haukur Þorgeirsson, ed.) for the following frequent subordinating conjunctions: *sem, er* (and its variant *-s*), *at, unz, áðr*, and *ef*.[15] The five non-CR poems were searched by hand in the relevant editions. Each example was entered into a spreadsheet and tagged for the following features: poem, stanza, date and genre of poem, meter of the poem, meter of the stanza, conjunction, and position of the finite verb. Verb position was tagged as V1 (verb immediately following conjunction), V2, line final (verb neither V1, V2, nor clause-final, but clause-medial at the end of a line), clause late (clause medial but not at the end of a line; sometimes in the middle of the initial line, sometimes line-initial in a later

15. Searching for *er* yielded both relative *er* and adverbial *er*. Each example was examined in context to exclude e.g. instances of the 3sg.pres. verb *er* 'is.' Examples of *áðr* were likewise examined to ensure that they are subordinating conjunctions rather than adverbs. I did not attempt to include coordinating conjunctions such as *ok* 'and' and *en* 'and/but' because this would have yielded an impractically high number of false positives (e.g. coordinated nouns). Because clauses beginning with coordinating conjunctions are excluded, my study examines subordinate clauses rather than Kuhn's category of bound clauses.

line of the clause), clause final, or one of several ambiguous types (V2/clause final, V2/line final, etc.). Lines with only one constituent other than the conjunction were not counted. Examples of most types are given in (21):

(21) a. *er* ***unnu*** *born* *Giúca* (V1)
REL won children G.GEN
'that the children of Gjúki achieved' (*Am* 52)

b. *ef ec* ***ec*** *með þér* *í iotunheima.* (V2)
if I drive with you to giant-homes
'if I drive with you to the realm of giants' (*Þrk* 13)

c. *unz þríar* ***qvómo*** *þursa meyjar* (V2/line-final)
until three came ogres' girls (= 15)

d. *er hann* ***vaknaði*** (V2/clause-final)
when he awoke
'when he awoke' (*Þrk* 1)

e. *er ec bjorno* ***tóc*** *í Bragalundi* (line-final)
where I bears took in B.
'where I hunted bears in Bragalund' (*HH II* 8)

f. *svá at þeim Sigurðr* ***reið*** *í sinni* (clause-late)
so that them S. rode in company
'so that Sigurðr rode in company with them' (*Sg* 3)

g. *er Gullveigo geirom* ***studdo*** (clause final)
when G. spears stuck (=14)

h. *hverr er* ***kunni*** (two-word clause; excluded)
who REL knew (*Hlr* 7:4)
'who knew me'

For the purposes of verb position, the proclitics *of* and *né* and the enclitics *at* and *ek* were not counted as separate constituents but as part of the verb. Because of Kuhn's claim that *ljóðaháttr* poetry fails to show bound/independent clause asymmetry, stanzas are tagged for meter in the spreadsheet.[16] Finally, two poems that are entirely in *ljóðaháttr* have been excluded from this analysis altogether: *Háv* because it is very long, and *Svm* because it was added to the corpus after this analysis was complete. Even without these poems, there are nearly 1,000 subordinate clauses beginning with one of the targeted conjunctions in the database.

16. I relied on Neckel/Kuhn's layout of the stanzas as a quick guide to whether each stanza is in *fornyrðislag* or *ljóðaháttr*. However, I have simply tagged all clauses in *Am* and *Akv* as *málaháttr*, even though *Akv* lines can differ in the number of syllables, often appearing to be *fornyrðislag*. In addition, the items are tagged for the meter in which the majority of the stanzas of the poem are composed.

The results of these searches are listed in Appendix 5 and summarized in Table 5.1. Note that the majority of non-V1/V2 clauses have the verb in the clause-final position, with much smaller numbers for line-final and clause-late placement of the verb. The largest category consists of ambiguous clauses, which in this table include both kinds of ambiguity (21c)–(d).

Table 5.1 Verb position in subordinate clauses in Eddic poems

Poem	V1	V2	Clause final	Clause late	Line final	Ambig.	Total
Alv	7	2	1	0	2	7	19
Akv	0	0	7	0	6	18	31
Am	24	17	44	0	0	27	112
Bdr	2	1	0	0	0	5	8
Br	0	0	8	1	3	3	15
Fm	5	6	13	1	6	15	46
Grm	8	6	7	2	3	13	39
Grp	0	5	16	0	2	13	36
Grt	2	1	7	1	0	2	13
Gðr I	1	2	5	1	1	5	15
Gðr II	3	5	9	1	2	10	30
Gðr III	0	0	5	1	1	2	9
Ghv	2	3	9	2	1	4	21
Hm	1	4	4	0	3	7	19
Hrbl	3	15	12	0	0	14	44
HHv	2	10	15	1	3	11	42
HH I	1	1	8	0	0	23	33
HH II	1	5	18	1	2	19	46
Hlr	1	1	7	1	0	2	12
Hym	0	0	6	2	2	18	28
Hdl	1	2	3	0	2	5	13
Ls	4	17	16	5	7	14	63
Od	1	5	12	0	3	9	30
Rm	1	8	2	0	2	13	26
Rþ	0	0	0	0	0	3	3
Sg	2	4	18	5	1	16	46
Sd	8	10	5	2	4	10	39
Skm	2	10	10	1	4	4	31
Þrk	0	1	3	1	1	8	14
Vm	14	4	2	1	0	12	33
Vkv	2	3	14	1	1	14	35
Vsp	0	0	9	0	1	18	28
Total	**98**	**148**	**295**	**31**	**63**	**344**	**979**
	(10.0%)	**(15.1%)**	**(30.1%)**	**(3.2%)**	**(6.4%)**	**(35.1%)**	

However, we should not discount all instances of ambiguity. Clauses like (21d) are truly ambiguous between verb-early and verb-late interpretations, by the mere fact that the clauses do not contain enough constituents. On the other hand, the ambiguity in (21c) is between V2 and line-final, but there is no reason to believe that such a clause is verb-late. Because such clauses do not violate the V2 constraint, I conflate them with V1 and V2 in the subsequent tables and analyses. The counts and percentages for V1/V2 vis-à-vis unambiguous verb-late clauses are presented in Table 5.2.

Table 5.2 Verb position in subordinate clauses in Eddic poems, V1/V2 vs. V-late

Poem	# V1/V2/ambig.	% V1/V2/ambig.	# unambig. V-late	Total
Alv	11	78.6%	3	14
Akv	5	27.8%	13	18
Am	42	48.8%	44	86
Bdr	5	100%	0	5
Br	2	14.3%	12	14
Fm	15	42.9%	20	35
Grm	23	65.7%	12	35
Grp	10	35.7%	18	28
Grt	4	33.3%	8	12
Gðr I	7	50.0%	7	14
Gðr II	13	52.0%	12	25
Gðr III	0	0%	7	7
Ghv	8	40.0%	12	20
Hm	7	50.0%	7	14
Hrbl	21	63.6%	12	33
HHv	17	47.2%	19	36
HH I	15	65.2%	8	23
HH II	14	40.0%	21	35
Hlr	2	20.0%	8	10
Hym	9	47.4%	10	19
Hdl	5	50.0%	5	10
Ls	23	45.1%	28	51
Od	10	40.0%	15	25
Rm	12	75.0%	4	16
Rþ	1	100%	0	1
Sg	17	41.5%	24	41
Sd	21	65.6%	11	32
Skm	16	51.6%	15	31
Þrk	7	58.3%	5	12
Vm	23	88.5%	3	26
Vkv	7	30.4%	16	23
Vsp	6	37.5%	10	16
Total	**378**	**49.3%**	**389**	**767**

Because it is not clear from examining this table that the position of verbs in subordinate clauses changes over time within Eddic poetry, it is first necessary to establish whether this is the case. To that end, I present two analyses in this chapter: first, comparisons of the rankings of the Eddic poems by verb order with the rankings by the particle *of* and by *eigi*, and second, logistic regression. Neither of these analyses can establish a linear diachronic development in Eddic poetry, and so this section will also examine whether the varying rates of V1/V2 in the Eddic poems can be explained by other factors. However, because there is no diachronic development in the Eddic corpus, no comparison with skaldic poetry will ultimately be necessary.

5.2.2 Comparison of rankings

First, following Haukur Þorgeirsson's (2012) method, I explore the correlation between the ranking of poems by frequency of V1/V2 in subordinate clauses with their frequencies of the particle *of/um*. My study is different from Haukur's in three ways. First, he analyzed the frequencies of verb position in main clauses, while I look at those in subordinate clauses. Secondly, his selection of texts is somewhat different, having included some skaldic poetry and excluded Eddic poetry in *ljóðaháttr*, whereas I look exclusively at Eddic poetry and conduct analyses both with and without *ljóðaháttr* stanzas. Thirdly, having established the usefulness of negation type as a dating criterion in Chapter 4, I also test the correlation between the rankings of verb order and the rankings of negation type. In each analysis, verb order is operationalized by conflating V1, V2, and the ambiguous V2/line-final clauses against unambiguously V-late clauses as in Table 5.2 above. Frequencies and rankings of the particle and negation type are as reported in Chapters 3 and 4.

As a first analysis, let us consider the entire Eddic database (excluding *Háv* and *Svm* but including the *ljóðaháttr* stanzas of other poems). Note that *Rþ* is marked as N/A because it has no unambiguous instances of V1/V2 or V-late. The results are presented in Table 5.3, sorted by the ranking of the particle.

Comparing the two rankings, it is very difficult to see any pattern. Some poems that would appear to be early on the criterion of the particle have the highest rankings of V1/V2 (*Vm, Bdr*), while others have relatively low frequency of V1/V2 (*Od, Gðr I, Hm*). This lack of a correlation is confirmed by the Spearman's ρ correlation of ranks analysis ($\rho = 0.178$, $p = 0.329$). Although there is a weak positive correlation between the frequency of the particle and its rate of V1/V2 (i.e. the older the poem, the more likely V1/V2 is to occur), this is not statistically significant.[17]

17. I follow Haukur Þorgeirsson (2012) in using Spearman's correlation here, because there are not many ties in the data. Kendall's τ yields similar results ($\tau = 0.116$, $p = 0.177$).

Table 5.3 Comparison of ranking by the particle *of* with the ranking by V1/V2

Poem	# of lines	# particle *of*	Rate *of* per line * 10	Ranking by *of*	% V1/V2	Ranking by V1/V2
Þrk	218	15	0.688	1	58.3%	10
Od	250	12	0.480	2	40.0%	22
Bdr	108	5	0.463	3	100.0%	1
Vm	274	12	0.438	4	88.5%	3
Gðr I	201	8	0.398	5	50.0%	13
Sd	255	10	0.392	6	65.6%	7
Hm	218	8	0.367	8	50.0%	13
Vsp	503	17	0.338	10	37.5%	25
Br	150	5	0.333	11	14.3%	31
Grm	336	11	0.327	12	65.7%	6
Ls	368	12	0.326	13	45.1%	19
Ghv	174	5	0.287	14	40.0%	22
Vkv	286	8	0.280	15	30.4%	28
Hym	304	8	0.263	16	47.4%	17
Sg	558	13	0.233	18	41.5%	21
Alv	174	4	0.230	19	78.6%	4
Skm	246	5	0.203	21	51.6%	12
Hlr	108	2	0.185	22	20.0%	30
Gðr II	350	6	0.1714	23	52.0%	11
Rm	175	3	0.1714	23	75.0%	5
Akv	351	6	0.1709	25	27.8%	29
Fm	269	4	0.149	26	42.9%	20
Gðr III	80	1	0.125	28	0%	32
Hrbl	251	3	0.120	29	63.6%	9
Hdl	390	4	0.103	30	50.0%	13
HHv	318	3	0.094	31	47.2%	18
Rþ	366	3	0.082	32	100.0%	1
Grp	418	3	0.072	33	35.7%	26
HH I	454	3	0.066	34	65.2%	8
Grt	182	1	0.055	35	33.3%	27
HH II	426	2	0.047	36	40.0%	22
Am	761	3	0.039	37	48.8%	16

Because Kuhn claims that in *ljóðaháttr*, there is no word-order distinction between independent and bound clauses, in the next analysis I exclude the poems that are primarily composed in this meter (*Alv, Fm, Grm, HHv, Ls, Rm, Sd, Skm*, and *Vm*).[18]

18. I have left *Hrbl* in the analysis (only 11 of its 44 subordinate clauses are in a *ljóðaháttr* stanza) but excluded *HHv* (22 out of 42 subordinate clauses are in a *ljóðaháttr* stanza), *Fm* (37 out of 46), *Rm* (19 of 26), and *Sg* (37 of 39). One could also test this by excluding the poems that Kuhn classifies as *ljóðaháttr* poetry, which is not entirely based on meter: Kuhn considers *Hrbl* to

This excludes the troublesome case of *Vm*, but the result is actually a bit worse than the analysis of the complete database, with ρ even closer to 0 and no statistical significance ($\rho = -0.053$, $p = 0.810$).

It is possible that the failure of verb order in subordinate clauses to correlate with *of/um* has to do with the wide variation in rates of the particle among poems of purportedly similar age. Because changes to the type of negation proved to be statistically significant in Chapter 4, let us now test if there is any correlation between the rankings of subordinate-clause verb order and those of negation type. Table 5.4 is sorted by the percentage of the innovative negator *eigi*, from least frequent (presumably oldest on this criterion) to the most frequent.

Table 5.4 Comparison of ranking by the negator *eigi* with the ranking by V1/V2

Poem	Total negs	% *eigi*	Ranking by *eigi*	% V1/V2	Ranking by V1/V2
Alv	4	0%	last	78.6%	4
Akv	6	0%	last	27.8%	29
Bdr	6	0%	last	100.0%	1
Br	2	0%	last	14.3%	31
Grm	3	0%	last	65.7%	6
Gðr I	2	0%	last	50.0%	13
Gðr III	5	0%	last	0%	32
Hym	4	0%	last	47.4%	17
Rm	7	0%	last	75.0%	5
Skm	5	0%	last	51.6%	12
Vm	4	0%	last	88.5%	3
Vsp	6	0%	last	37.5%	25
Þrk	1	0%	last	58.3%	10
Ls	22	4.5%	18	45.1%	19
Sd	13	7.7%	17	65.6%	7
Fm	12	8.3%	16	42.9%	20
Hm	10	10%	15	50.0%	13
Vkv	9	11.1%	14	30.4%	28
Od	8	12.5%	13	40.0%	22
Am	39	12.8%	12	48.8%	16
Hrbl	7	14.3%	11	63.6%	9
Ghv	6	16.7%	10	40.0%	22
Sg	21	19.0%	9	41.5%	21
Grt	5	20%	7	33.3%	27
Grp	15	20%	7	35.7%	26
HH II	16	25%	6	40.0%	22

(*continued*)

be a *ljóðaháttr* poem, *HHv* a domestic *fornyrðislag* poem, and *Fm, Rm*, and *Sg* foreign-matter *fornyrðislag* poems. Kuhn's categorization of these poems is thus more about his hypothesis as to their origins, and thus is not tested here (but see the regression analysis in Figure 5.3).

Table 5.4 (*continued*)

Poem	Total negs	% *eigi*	Ranking by *eigi*	% V1/V2	Ranking by V1/V2
HH I	7	28.6%	4	65.2%	8
Gðr II	14	28.6%	4	52.0%	11
HHv	15	40%	3	47.2%	18
Hlr	3	66.7%	2	20.0%	30
Hdl	2	100%	1	50.0%	13
Rþ	0	N/A	N/A	100%	1

The results are not very straightforward. Among the poems with no instances of *eigi* (presumably the oldest on that criterion), there are poems with the very lowest rankings of V2 (*Gðr III, Br, Vsp*) but also the highest rankings (*Bdr, Vm, Alv, Rm, Grm*). Kendall's τ shows a weak negative correlation between a poem's rank by *eigi* and by V2 ($\tau = -0.122$) indicating that poems with low rankings for *eigi* (i.e. older) are a bit more likely to have a high ranking of V2, which is counter to the trend in skaldic poetry to have more V2 in later poems. However, this correlation is not significant ($p = 0.33$).[19]

In summary, none of the correlation analyses are able to establish that verb-late subordinate clauses decrease over time in Eddic poetry. The next section will test this using logistic regression.

5.2.3 Effect of independent variables

In this section, I will use logistic regression to determine whether the position of finite verbs in subordinate clauses can be predicted by Date (according to Finnur Jónsson's dating scheme), the Conjunction that introduces the clause, Meter (either the meter in which the entire poem is composed, or the meter of the individual stanza), or Kuhn's native/domestic distinction. Verb order is operationalized as in the correlation analyses: V1, V2, and clauses ambiguous between V1/V2 and line-final are conflated under "V1/V2"; line-final, clause-late, and clause-final verbs are subsumed under "V-late"; and clauses ambiguous between V1/V2 and clause-final are excluded from the analysis.

Although the previous section was unable to establish a diachronic trend in the rates of V2 by correlation with other criteria, let us attempt to examine the effect of Date more directly. Assuming Finnur Jónsson's dates, there is no clear diachronic

19. Kendall's correlation was used because of the large number of tied ranks for *eigi*. As I tried for the correlation with *of*, I examined the correlation between the rankings of *eigi* and V2 excluding the *ljóðaháttr* poems, but this was not statistically significant either.

picture in Table 5.5. If anything, later poems have a somewhat lower frequency of V2, contrary to the development in skaldic poetry.

Table 5.5 V1/V2 in subordinate clauses in Eddic poems, according to Finnur Jónsson's time periods

Date	# V1/ V2	% V1/ V2	# V-late	% V-late	Total
875–900 (*Bdr, Háv* 111–137, *Rþ, Skm, Þrk, Vkv*)	36	50%	36	50%	72
900–930 (*Grm, Hrbl, Háv* rest, *Vm*)	67	71.3%	27	28.7%	94
935 (*Ls, Vsp*)	29	43.3%	38	56.7%	67
925–975 (*Alv, Grt, Gðr II, Hm, HH II, Hdl, Rm, Svm/Fjm*)	66	52.4%	60	47.6%	126
975–1000 (*Akv, Br, Fm, Gðr I, III, HHv, Hym, Sd*)	76	43.4%	99	56.6%	175
1000–1025 (*Ghv, HH I, Hlr, Od, Svm/Grg*)	35	44.9%	43	55.1%	78
1050 (*Am, Sg*)	59	46.5%	68	53.5%	127
1150–1200 (*Grp*)	10	35.7%	18	64.3%	28
Total	**378**	**49.3%**	**389**	**50.7%**	**767**

The percentages in Table 5.5, however, mask the considerable variation within each of Finnur Jónsson's periods. The scatterplot in Figure 5.1 shows that each of Finnur's time bins (except 1150) contains texts with low rates of V2 and texts with higher rates. Nevertheless, there does seem to be an unexpected decrease in V2 over time.

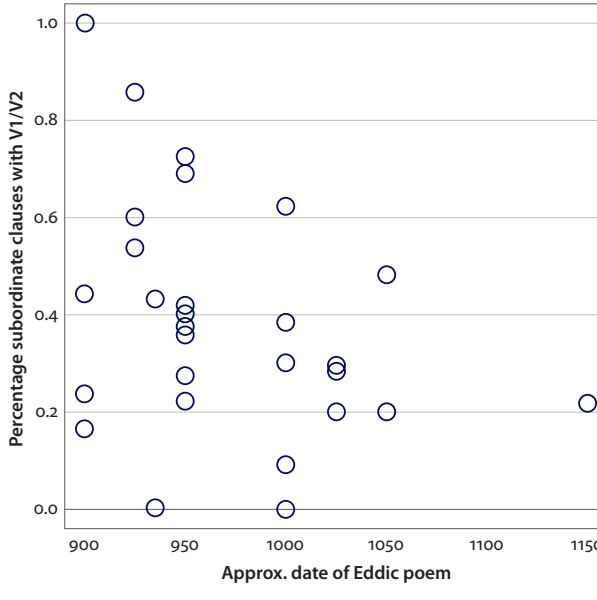

Figure 5.1 Scatterplot of V1/V2 in the Eddic poems, by Date

A logistic regression analysis confirms that this decrease in V2 over time is statistically significant (coefficient = −0.0036, z = −2.90, $p = 0.004$). This unexpected decline of V2, which is illustrated by the regression line in Figure 5.2, may be exaggerated here by the fact that all 12th-century data come from a single text, *Grp*. Because this trend is so different from the correlation analyses and is contrary to the development in skaldic poetry, we need to examine the potentially confounding effects of meter and of Kuhn's native/domestic distinction.

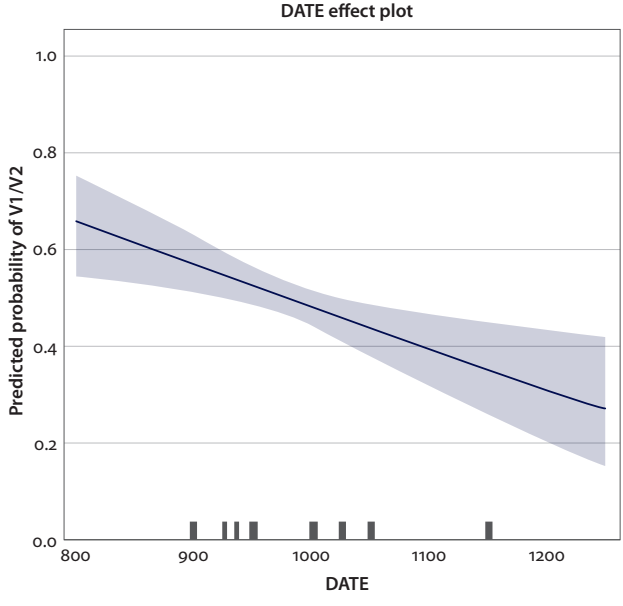

Figure 5.2 Regression line of V1/V2 in the Eddic poems, by Date

I first tested the effect of meter on verb placement, considering the primary meter of the poem in which each clause occurs. Of the three Eddic meters, *fornyrðislag* and *málaháttr* behave similarly in slightly preferring V-late in subordinate clauses, while the poems primarily composed in *ljóðaháttr* show a preference for V2. This is shown in Table 5.6.

Table 5.6 Rate of subordinate-clause V1/V2 in Eddic poems, according to meter

Meter	# V1/V2	% V1/V2	# V-late	% V-late	Total
Poems mostly in *fornyrðislag*	187	44.2%	236	55.8%	423
Poems mostly in *málaháttr*	47	45.2%	57	54.8%	104
Poems mostly in *ljóðaháttr*	144	60%	96	40%	240
Total	**378**	**49.3%**	**389**	**50.7%**	**767**

A x^2 test confirms that Meter has a significant effect on verb order ($x^2 = 16.083$, df = 2, $p < 0.001$). However, Cramer's V (0.145) indicates that this effect is quite small. The tiny difference between the meters *fornyrðislag* and *málaháttr* is not significant.[20] In addition, I tested the meter of each individual stanza (as several poems have a mix of *fornyrðislag* and *ljóðaháttr*), but the results were quite similar – a statistically significant but small preference for V2 in *ljóðaháttr* stanzas ($x^2 = 21.855$, df = 2, $p < 0.001$, Cramer's V = 0.169).

Secondly, let us consider Kuhn's *Fremdstofflieder* hypothesis. The results in Table 5.7 are very reminiscent of the analysis of meter. Despite the fact that Kuhn assigns some of the poems that are primarily in *ljóðaháttr* to his foreign-matter group, Kuhn's *ljóðaháttr* poems favor V2 at a similar rate to the analysis above. Crucially, however, there is very little difference between Kuhn's domestic *fornyrðislag* poems and his foreign-matter poems.

Table 5.7 Rate of subordinate-clause V1/V2 in Eddic poems, according to Kuhn's classification

Kuhn's groups	# V1/V2	% V1/V2	# V-late	% V-late	Total
Foreign-matter *forn.* poems	178	43.6%	230	56.4%	408
Native *fornyrðislag* poems	83	49.1%	86	50.9%	169
Ljóðaháttr poems	117	61.6%	73	38.4%	190
Total	**378**	**49.3%**	**389**	**50.7%**	**767**

Similar to the effects of Meter, the effect of Kuhn's Stoff categories on verb placement is statistically significant ($x^2 = 16.716$, df = 2, $p < 0.001$), but the effect size is very small (Cramer's V = 0.148). The significance of this factor is entirely due to the behavior of *ljóðaháttr* poems vis-à-vis the other two levels; a logistic regression analysis fails to find any significant difference between the levels domestic and foreign (coefficient = −0.22079, z = −1.204, $p = 0.229$).

Finally, I present the effect of the conjunction on the word order of the subordinate clause. There are a large number of conjunctions in the database, which I have combined into the following types: *áðr* 'before', *at* 'that' (including combinations such as *því at* 'because'), *ef* 'if', adverbial *er* 'when, where, as' (often combined with a disambiguating adverb as in *þá er* 'when'), *sem* 'as', relative *er*, relative *sá er*, and *unz* 'until'.[21] The results are shown in Table 5.8.

20. An anova between a model with all three meters and a model with just two (conflated *fornyrðislag* and *málaháttr* on the one hand vs. *ljóðaháttr* on the other) was not statistically significant ($p = 0.856$).

21. The conjunction *hví* 'how', which only occurs once in the database, has been excluded, thus the total in Table 5.8 has one token fewer than other tables in this section.

Table 5.8 V1/V2 in subordinate clauses in Eddic poems, according to conjunction

Conjunction	# V1/V2	% V1/V2	# V-late	% V-late	Total
áðr	13	39.4%	20	60.6%	33
at	73	45.6%	87	54.4%	160
ef	62	48.8%	65	51.2%	127
er (adverbial)	70	40.9%	101	59.1%	171
er (relative)	86	65.6%	45	34.4%	131
sem	11	33.3%	22	66.7%	33
sá er	48	56.5%	37	43.5%	85
unz	14	53.8%	12	46.2%	26
Total	**377**	**49.2%**	**389**	**50.8%**	**766**

There appears to be a slight preference for V1/V2 with relative *er* and *sá er*. Oddly, the adverbial conjunctions *áðr* and *er* prefer V-late but the adverbial *unz* slightly prefers V2. As with the analyses for Meter and Kuhn's categories, the effect of Conjunction is highly significant ($x^2 = 26.295$, df = 7, $p < 0.001$) but the size of the effect is quite small (Cramer's V = 0.185).[22]

With several independent variables showing a small effect on verb placement, it is necessary to test all factors in order to determine which of these contribute to the model, and which may be excluded. Because Kuhn's domestic vs. foreign matter categories have no significant effect on verb placement, that factor will not be considered. Instead, I conduct a multifactorial logistic regression analysis including the factors Date, Meter of poem (conflated *fornyrðislag/málaháttr* vs. *ljóðaháttr*), and Conjunction type (relative clauses vs. the rest). Models with insignificant predictors were eliminated by hand in a stepwise fashion: first the three-way interaction Date~Meter~Conjunction, then the two-way interactions Date~Meter and Date~Conjunction, and finally the insignificant main effect of Date. This leaves only one significant effect: the interaction of Meter and Conjunction type (coefficient = 0.95652, z = 2.203, $p = 0.028$).[23] An examination of Figure 5.3 reveals the reason for this interaction: in most types of subordinate clauses, there is little difference between the level *fornyrðislag/málaháttr* and the level *ljóðaháttr* in the rate of V1/V2, but in relative clauses, V1/V2 is strongly favored by *ljóðaháttr* poems.

22. Logistic regression was also used to determine which of the levels could be combined. An anova of a model with the two relative types conflated vs. all other types conflated was not significantly different from a model with the levels as in Table 5.8. Thus the significance of this factor is reducible to the difference between relative clauses and other types of subordinate clauses, although the effect remains a small one (Cramer's V = 0.149).

23. The same analysis was conducted but with meter of stanza substituted for meter of poem. The results were nearly identical, with a significant interaction such that relative clauses in *ljóðaháttr* stanzas favor V2 (coefficient = 1.15824, z = 2.509, $p = 0.012$).

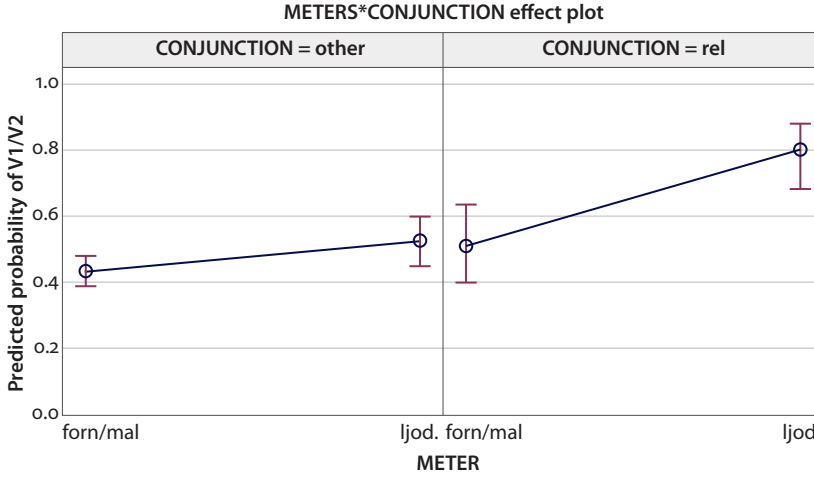

Figure 5.3 Regression line of V1/V2 in the Eddic poems, by Date

This strong effect of Meter on verb placement explains some of the apparent diachronic development in Figure 5.2 above. Most of the *ljóðaháttr* poems are dated by Finnur Jónsson to 900–950 (*Háv, Grm, Skm, Ls, Alv, Rm)*, and no *ljóðaháttr* poems are dated by him to after the year 1000, thus the higher degree of V2 in purportedly older poems largely reflects the higher degree of V2 in *ljóðaháttr* verse. As seen in Table 5.9, when poems that are primarily composed in *ljóðaháttr* are excluded, the effect of Date is much less clear.[24]

Table 5.9 V1/V2 in subordinate clauses in non-*ljóðaháttr* poems, according to Finnur Jónsson's time periods

Date	# V1/V2	% V1/V2	# V-late	% V-late	Total
875–900 (*Bdr, Rþ, Þrk, Vkv*)	20	48.8%	21	51.2%	41
900–930 (*Hrbl*)	21	63.6%	12	36.4%	33
935 (*Vsp*)	6	37.5%	10	62.5%	16
925–975 (*Grt, Gðr II, Hm, HH II, Hdl*)	43	44.8%	53	55.2%	96
975–1000 (*Akv, Br, Gðr I, III, HHv, Hym*)	40	37%	68	63%	108
1000–1025 (*Ghv, HH I, Hlr, Od*)	35	44.9%	43	55.1%	78
1050 (*Am, Sg*)	59	46.5%	68	53.5%	127
1150–1200 (*Grp*)	10	35.7%	18	64.3%	28
Total	**234**	**44.4%**	**293**	**55.6%**	**527**

24. A similar analysis was conducted but excluding individual stanzas in *ljóðaháttr* rather than entire poems. The results were nearly identical.

A logistic regression analysis of the effect of Date on verb position in the *fornyrðislag/málaháttr* poems continues to show a slight decrease in V2 over time, as illustrated in Figure 5.4. However, this model is not statistically significant (coefficient = −0.00177, z = −1.207, $p = 0.227$).

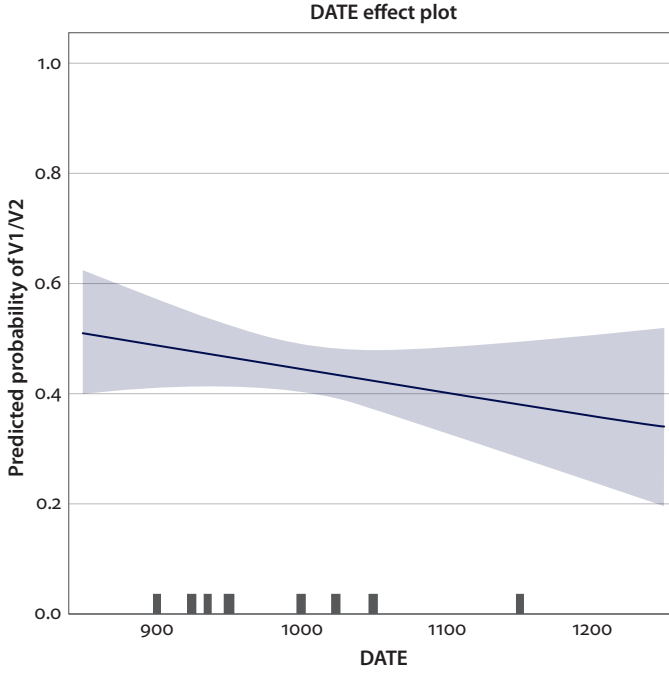

Figure 5.4 Regression line of V1/V2 in the non-*ljóðaháttr* Eddic poems, by Date

5.3 Discussion

Recall from Section 5.1.2 that Kuhn found a diachronic trend in skaldic poems to have fewer and fewer verb-late bound clauses over time. Therefore, this chapter has investigated whether a similar development can be detected in subordinate clauses in Eddic poetry. Unfortunately, neither a correlation of ranks analysis (comparing each poem's ranking by verb order to its ranking by *of/um*) nor a logistic regression analysis (using Finnur Jónsson's dates) was able to determine any significant diachronic change over time. In fact, the raw numbers suggest a (non-significant) trend toward verb-late in later Eddic poetry, the opposite of the development that Kuhn found in skaldic verse.

Because there is no discernable diachronic development in subordinate-clause word order in the Eddic corpus, this criterion cannot be used to attempt to date

individual Eddic poems by comparison with the purported trend in skaldic poetry. Thus unlike other features, I will not undertake an examination of the skaldic corpus for word order in subordinate clauses. Conversely, although there is a trend away from V-late in main clauses in Eddic poetry (Haukur Þorgeirsson 2012), there is no such trend in skaldic *dróttkvætt* poetry (Kuhn 1933). Therefore, a comparison of word order in a given Eddic poem with skaldic poetry of various centuries cannot be used as a dating method, neither in main clauses nor in subordinate clauses. Consequently, word order will not be used as a criterion in the Naïve Bayes analysis in Chapter 8. However, once my dates have been proposed based on the multi-factorial analysis in Chapter 8, the frequencies of V1/V2 in main clauses can be re-examined, as a potential check on the new dating system.

Although subordinate-clause word order cannot be used to date Eddic poetry, several interesting observations arise from these analyses. First, Kuhn claimed that the independent/bound clause distinction is collapsed in *ljóðaháttr* poetry. While I have not counted instances of verb-early vs. verb-late in main clauses, in subordinate clauses, fully 60% of the verbs are in a V1 or V2 position in the *ljóðaháttr* poems, compared to only 44% in the other meters (see Table 5.6 above). Thus this study can confirm that subordinate clauses in *ljóðaháttr* are structurally more similar to main clauses than subordinate clauses in *fornyrðislag* are.[25]

Secondly, Kuhn claimed that the normal position for verbs in *fornyrðislag* poetry is late in the clause (1933: 62). While he does not give numbers, this claim is basically backed up in my data, because over 56% of subordinate clauses in these poems have late placement of the verb. Some of the early placement of verbs can be accounted for as being auxiliary verbs, which Kuhn found to make up the majority of verbs in clause-early dips. A smaller number involve lexical verbs in stressed/alliterating positions, as in (21b) above. Unlike in subordinate clauses, independent clauses in *fornyrðislag* poems have late placement of the verb only about 2–5% of the time (according to Haukur Þorgeirsson 2012). Thus there is a robust main/subordinate-clause asymmetry in Eddic *fornyrðislag* poetry, unlike in Old Norse prose or in *ljóðaháttr* poems.

Thirdly, this study was unable to verify that Kuhn's "foreign-matter" poems behave significantly differently from "domestic" ones with respect to word order in subordinate clauses. Recall that Kuhn claimed that lexical verbs in bound clauses do not occur in dips in domestic poetry but can do so in the foreign-matter poems. While I did not test this directly (because I did not tag the metrical status of

25. According to Kari Ellen Gade (p.c.), the higher frequency of V1/V2 in *ljóðaháttr* poems could be due to the lax restrictions on anacrusis in that meter. Because *ljóðaháttr* allows two or even three weakly stressed words to occur in anacrusis, the subordinating conjunction and finite verb can appear adjacent at the beginning of the clause, resulting in V1/V2.

verbs nor distinguish lexical from auxiliary verbs), Kuhn's claim should entail that foreign-matter poems have higher rates of V1/V2 than domestic ones, because of their greater tolerance for lexical verbs in dips. However, I found no statistically significant difference between Kuhn's foreign and domestic categories with respect to verb order. This confirms observations by Fidjestøl (1999) and Haukur Þorgeirsson (2012) that there is more variation within each group than there is between the two groups. This raises the question whether the two groups of poems differ significantly with respect to the other properties that Kuhn associated with foreign influence – a question that is outside the scope of the current study.

Fourthly, aside from meter, the only factor that significantly predicts word order in the subordinate clauses of Eddic poetry is the type of subordinate clause. Relative clauses, whether introduced by *er* alone or by a pronoun plus *er* (usually *sá er*), slightly favor V2, while other types of subordinate clause slightly favor V-late. Why this word order difference occurs, and whether this is true in Old Norse outside Eddic poetry, are questions left for future research.

CHAPTER 6

Relative clause types

6.1 Background

Relative clauses in Old Norse prose are usually introduced by the words *sem* or *er*, which are uninflected particles like OE *þe* and Modern English *that*. These may be preceded by the pronoun *sá*, which has traditionally been considered the distal demonstrative pronoun 'that' (Nygaard 1905: 261–262; Faarlund 2004: 264; Wagener 2017). Other scholars, however, interpret *sá* in this context not as a demonstrative, but as either a correlative pronoun (Lindblad 1943) or a true relative pronoun (Åfarli 1995; Sapp 2019a).

The most detailed arguments for *sá* as a relative pronoun are found in Sapp (2019a). Sapp argues that alongside the original demonstrative functions of the pronoun (1a)–(b), there are clear instances of *sá er* in a new function as a relative pronoun (2). Note that the demonstrative in (1a) still has its deictic force, while that in (1b), while still syntactically part of the antecedent, lacks any demonstrative semantics and instead merely anticipates the relative clause. Examples such as (1b) represent the transitional stage giving rise to true relative *sá*: as can be seen in (2), relative *sá* is adjacent to the relative clause rather than the antecedent noun.

(1) a. ***Sá*** *stafur* ***er*** *hér er ritinn c*
sá letter REL here is written c
'that letter which is written here *c*' (*First Gram. Treatise* 111)

b. *Vér eigum dag* ***þann*** *fyr hendi,* ***er*** *dómadagur heitir.*
we have day sá at hand REL doomsday calls
'We have the day at hand that is called doomsday.' (*Hómilíubók* 940)

(2) *Hann setti jarl í hverju fylki,* ***þann er*** *dœma skyldi lǫg*
he set earl in each district, sá REL judge should law
'He placed an earl in each district, who should judge law.' (*Heimskringla* 98)

One hindrance to the analysis of *sá* as a relative pronoun is that it displays "case attraction," i.e. it is in the same case as the antecedent noun (Nygaard 1905: 261).[1]

1. Nygaard (1905: 263) maintains that pronouns can bear the case of the relativized argument in the Latinate "learned style." This is very rare in what Nygaard (1905: 261) terms the "popular style." The example that he gives happens to be from an Eddic poem; see Example (8) below.

In (2), *sá* appears in the masc.acc.sg form *þann*, agreeing with the accusative antecedent *jarl*, despite the fact that it represents the subject of the relative clause. However, Sapp (2019a) presents a number of arguments that, despite agreeing with the antecedent in case, *sá* is syntactically part of the relative clause. First of all, in Sapp's (2019a) Old Icelandic prose corpus, 65% of the instances of *sá* occur with relative clauses, suggesting that despite its etymology, *sá* has become specialized as a relative marker. Secondly, *sá* occurs in several contexts in which a definite demonstrative pronoun cannot occur, such as with indefinite nouns like *sounds* (3); because it cannot be a demonstrative here, it must be part of the relative clause. Third, several word order patterns suggest that *sá* is inside the relative clause: for example, demonstrative *sá* strongly tends to precede the antecedent as in (1a), but when a relative clause is present, *sá* is nearly always adjacent to the relative clause (2)–(3).

(3) *hver tunga hefir hljóð* ***þau er*** *eigi finnast í annarri.*
each tongue has sounds sá REL not find-REFL in another
'every language has sounds that are not found in others'
(*First Gram. Treatise* 5)

Sapp (2019a) concludes that relative *sá* consistently shows case attraction in Old Icelandic prose because it was reanalyzed from a correlative pronoun (inside the main clause) to a relative pronoun (at the beginning of the relative clause) just before the emergence of Old Icelandic prose in the 12th century.[2] That the rise of relative *sá* took place before the 12th century is confirmed by an investigation of the pronoun in Eddic and skaldic poetry (Sapp 2019b, expanded upon in Sections 6.2 and 6.3 below). Nevertheless, in the Old Norse/Old Icelandic period, *sá* almost always appears in conjunction with the relative particle *er* or *sem*, thus rarely functioning as the sole relative marker.[3] There seems to be no discernable syntactic or semantic difference between relative clause introduced by the particle *er* alone and those introduce by *sá er* (Wagener 2017: 132; Sapp 2019a: 20), except that *sá* is obligatory when the antecedent is a quantifier or numeral (Wagener 2017: 114).

However, this is a probably an instance of demonstrative rather than relative *sá*, because the pronoun stands at the beginning of the half-stanza and is in a stressed position. Therefore, this instance is not tagged in my data as an example of relative *sá er*. Nygaard (1865: 93) lists additional examples in *Vsp* 14, *HH I* 35, and *Vm* 49.

2. The earliest text in the *IcePaHC* corpus (Wallenberg et al. 2011) used by Sapp is the *First Grammatical Treatise*, written ca. 1150 (Jónas Kristjánsson 1997: 117).

3. Nygaard (1865: 93) notes that this is very rare and cites only two instances of this, one from an Eddic poem (*Grp* 36) and one skaldic (*Sólarljóð* 26). It becomes more frequent in Middle Icelandic (Sapp 2019a).

Sundquist (2002) uses variation in the types of Old English relative clauses to argue that *Beowulf* is a unified work by one poet. As in Old Norse, Old English relatives can be introduced by the invariant particle *þe* alone or by both an inflected demonstrative and the particle (*se þe*); in addition, Old English also allows relative clauses beginning with only the demonstrative *se*. Sundquist (2002: 245) argues that this is a good criterion for identifying the authorship of a poem, because it is a purely stylistic choice (as in Old Norse). He finds that there are two factors that affect the rate of the compound relative type (*se þe*): the distance of the relative clause from its antecedent and the definiteness of the antecedent. He examines the frequencies of the three relative clause types and the two factors that influence this choice in the three major sections of *Beowulf* and a comparison corpus of Cynewulf's poems. Sundquist demonstrates that the rate of the type *se þe* is fairly uniform across the three parts of *Beowulf*, contrasting sharply with much lower rates of this type in the Cynewulf poems (2002: 261). Moreover, the favoring effect of distant and indefinite antecedents on *se þe* is the same in the three sections of *Beowulf* (Sundquist 2002: 265). He concludes that the uniform behavior of relative clauses suggests that *Beowulf* was composed by a single poet (2002: 266).

Sundquist's article is relevant to the current study because it demonstrates that the stylistic feature of variation in relative clause types can be used to determine the authorship of a work. In the remainder of this chapter, I show that this feature can also be used as a dating criterion in Old Norse poetry.

6.2 Relative markers in my Eddic corpus

6.2.1 Selection of data

The Eddic data in this study are largely taken from Sapp (2019b), which investigated relative clauses in the 31 Eddic poems of CR. In addition to these examples, additional instances of relative clauses were identified in the subordinate clause data from Chapter 5 above. The relevant results were copied into a spreadsheet and coded by hand for the supposed date of composition (according to Finnur Jónsson), pronoun (*sá* vs. some less frequent demonstratives), particle (*er* vs. *sem*), position of the pronoun vis-a-vis the particle, and metrical position in the poetic line.

First, let us examine the overall distribution of *er* and various pronouns in the Eddic corpus, listed in Appendix 6 and summarized in Table 6.1. Over a third of relative clauses are introduced by *er* with no pronoun. More than half of the clauses are preceded directly or indirectly by the pronoun *sá*. A small number of relative clauses have the demonstrative *hinn* or an interrogative (*hverr* or *hvað*) along with the particle *er*, as in (7) below.[4]

4. Faarlund claims that this relative clause type that is "clearly foreign" (2004: 265).

Table 6.1 Occurrence of *er* with *sá* and other pronouns in Eddic poetry

Poem	*er* only	*hinn* or *hverr* and *er*	Non-adjacent *sá* and *er*	Adjacent *sá er*	Total	% *sá er*
Skm	12	1		3	16	18.8%
Vm	6	1	6	3	16	18.8%
Grm	12	2	2	4	20	20%
Hrbl	10		4	4	18	22.2%
HH II	9		3	4	16	25%
Bdr	3			1	4	25%
Hdl	3			1	4	25%
Þrk	2	1		1	4	25%
Svm/Fjm	5	1	11	7	24	29.2%
Ls	6	3	2	5	16	31.3%
Am	7	1	10	9	27	33.3%
Fm	5		5	5	15	33.3%
Alv *	1		3	2	6	33.3%
Br	2			1	3	33.3%
Ghv	2			1	3	33.3%
Gðr III	1	1		1	3	33.3%
HHv	11			6	17	35.3%
Akv	4		1	3	8	37.8%
Háv 138–164	1		7	5	13	38.5%
Vkv	8			5	13	38.5%
Háv 111–137	1	1	4	4	10	40%
Hm	3			2	5	40%
Hlr	1	1	1	2	5	40%
Rm	3		1	3	7	42.9%
Háv 1–110	9	5	9	30	53	56.6%
Sd	1	1	3	7	12	58.3%
Gðr I	2			3	5	60%
Hym	3			5	8	62.5%
Gðr II	1		1	4	6	66.7%
Grp	2		2	9	13	69.2%
Sg	1		1	5	7	71.4%
Od	1			3	4	75%
Svm/Grg	1			3	4	75%
Vsp	1		2	10	13	77.0%
HH I	2			11	13	84.6%
Grt					0	
Rþ					0	
Total	**142**	**19**	**78**	**172**	**411**	**41.8%**

* Of the twelve instances of *sá* separated from *er* in *Alv*, ten are in the refrain-like stanzas 9, 15, 17, 19, 21, 23, 25, 27, 31, and 33, as in (6a) in Chapter 3. I have excluded all but the first of these ten (while leaving the half-stanza in 13, whose relative clause has adjacent *sá er*).

In Old Norse poetry, it has been recognized since Kuhn (1933) that metrical and syntactic breaks closely correspond. In particular, Heusler (1950: 161) claims that when *sá* immediately precedes the relative clause, it belongs to the relative clause (although I find some examples, discussed below, where this may not be the case). Therefore, we can use the strict metrical rules of Eddic and skaldic poetry to help establish whether a given instance of *sá* modifies the antecedent NP or is part of the relative clause. Of the 234 instances of *sá* with a relative clause, 161 have *sá* adjacent to *er* (and in the same line of poetry). This is almost always line-initial (or following *ok* 'and'), which is strongly suggestive that *sá* introduces the relative clause (4).

(4) *þaðan koma* ***dǫggvar***, ***þær=s*** *í dala falla*
thence come dews sá=REL in dales fall
'From there come the dews, which fall in the dales' (*Vsp* 19)

Such examples are relatively infrequent in texts dated by Finnur Jónsson earlier than 925 and especially frequent in texts purportedly composed after the year 1000, suggesting that the relative use of *sá* gradually developed during the period in which the Eddic poems were composed. (For a statistical analysis, see the sections below.)

In the other 73 instances in which *sá* precedes a relative clause, it is not in the same line as the relative clause. Sometimes, *sá* immediately precedes the relative clause, but a line break intervenes (5). Assuming that the metrical division is equivalent to a clause boundary, examples of *sá* as in (5) are not relative pronouns. Other examples more clearly rule out the possibility that *sá* is a relative pronoun, because another word intervenes between *sá* and the relative clause (6):

(5) *í ey* ***þeiri*** ***er*** *Algræn heitir*
in island sá REL A. calls
'in the/that island, which is called Algræn' (*Hrbl* 16)

(6) *hvé* ***sá*** *hestr heitir* ***er*** *hverian dregr*
how that horse calls REL each drags
'what that horse is called, that drags each (day) …' (*Vm* 11)

The metrical position of the relative particle and the various pronouns can shed further light on their syntactic status. The *Greinir skáldskapar* database (ed. by Bjarki Karlsson et al., now superseded by *Bragi*, ed. by Haukur Þorgeirsson) tagged each word according to its position within the poetic line and whether it is in a stressed/alliterating position (a "lift") or an unstressed one (a "dip"). Sapp (2019b) analyzed the metrical position of these particles and pronouns. The data are reproduced in Table 6.2.

Of the 367 relative clauses with *er* in Sapp's (2019b) corpus, in 304 instances, the particle alone, or a pronoun plus the particle, is in anacrusis, the optional, unstressed position at the beginning of a poetic line. This confirms that the line

Table 6.2 Metrical position of *er, sá*, and other pronouns in the CR Eddic poems (Sapp 2019b: 12)

	***er* alone**	***sá* + *er***	***hinn* + *er***	***hverr* + *er***	**Total**
er in anacrusis*	118	66	6	1	191
pron. + *er* in anacrusis		109	2	2	113
er in dip**	7	4			11
sá er in dip		20			20
stressed pronoun, *er* in dip		24	1	7	32
Total	**125**	**223**	**9**	**10**	**367**

* The numbers for *sá* + *er, hinn* + *er*, and *hverr* + *er* here indicate that *er* alone is in anacrusis, while the pronoun occurs in a preceding line.
** The four instances of *sá* + *er* here involve *er* alone in the dip, while *sá* occurs in a preceding line.

divisions of Eddic poetry often correspond to clause boundaries and that the relative particle *er* and the accompanying pronoun *sá* are nearly always unstressed. This can be seen in Example (4) above, in which the plural form of *sá*, the clitic form of *er*, and the preposition *í* are in anacrusis, preceding the first lift *dala*. These words must be in anacrusis in the latter half line, because scanning e.g. *þær* as belonging to the odd line as in (4′) results in unmetricality:

(4′) **þaðan koma dǫggvar þær er í …*

Note also that the cliticization of *er* to *sá* indicates that the two are in the same clause, as Harbert (1992) argues for Gothic *sa ei*.

Similarly, there are 31 cases of *er* alone or of *sá er* in a non-line-initial dip. This is further evidence that these items are generally unstressed, although in these cases the clause boundary does not correspond to a metrical line.

A final possibility is for the pronoun to be in a lift, followed by *er* in a dip. This occurs disproportionately often with *hverr/hvað* (7 of 10 instances) as in (7), but it also occurs in about 10% of the instances of pre-relative *sá* (8).[5] These may well be demonstrative pronouns rather than relative pronouns, especially *þeir* in (8), which fails to show case attraction.[6]

(7) *Héto mik allir … Hildi undir hiálmi, **hverr er** kunni.*
called me all Hildr under helmet who REL knew
'All … called me Hildr under the helmet, who knew (me).' (*Hlr* 7)

5. This is especially common in the meter *ljóðaháttr*.

6. *Vsp*'s rate of *sá er* appears quite high for a purportedly early poem at 71.4%. However three of the ten instances in *Vsp* involve stressed *sá* as in (8). If these are best treated as demonstratives rather than relatives, the rate of *sá er* in this poem drops to 50%.

(8) ***þeir er*** *sótto* *frá salar steini*
sá REL sought from hall's stone
'(they) who from the hall's stone sought [seats]' (*Vsp* 14)

6.2.2 Comparison of rankings

As in previous chapters, I will first attempt to establish relative clause type as a valid dating criterion by correlating the ranking of poems by their frequency of *sá er* with their rankings by more established dating criteria: the particle *of/um* (a feature of early poetry) and the negator *eigi* (found more in later poetry).

First, let us consider the correlation between the ranking by *sá er* and the ranking by the particle *of*. The rate of the particle is the same as used in previous chapters, and the percentage of *sá er* comes from the "adjacent *sá er*" column of Table 6.1 above. The data are presented in Table 6.3, arranged by the ranking of the particle.

Table 6.3 Comparison of ranking by the particle *of* with the ranking by adjacent *sá er*

Poem	Reduced # of lines	# particle *of*	Rate *of* per 10 lines	Ranking by *of*	% *sá er*	Ranking by *sá er*
Þrk	218	15	0.688	1	25%	28
Od	250	12	0.480	2	75%	3
Bdr	108	5	0.463	3	25%	28
Vm	274	12	0.438	4	18.8%	34
Gðr I	201	8	0.398	5	60.0%	9
Sd	255	10	0.392	6	58.3%	10
Háv 138–164	182	7	0.385	7	38.5%	16
Hm	218	8	0.367	8	40%	13
Háv 1–110	662	24	0.363	9	56.6%	11
Vsp	503	17	0.338	10	77.0%	2
Br	150	5	0.333	11	33.3%	20
Grm	336	11	0.327	12	20%	33
Ls	368	12	0.326	13	31.3%	26
Ghv	174	5	0.287	14	33.3%	20
Vkv	286	8	0.280	15	38.5%	16
Hym	304	8	0.263	16	62.5%	8
Svm/Fjm	236	6	0.254	17	29.2%	27
Sg	558	13	0.233	18	71.4%	5
Alv	174	4	0.230	19	33.3%	20
Svm/Grg	89	2	0.225	20	75%	3
Skm	246	5	0.203	21	18.8%	34
Hlr	108	2	0.185	22	40.0%	13
Rm	175	3	0.1714	23	42.9%	12
Gðr II	350	6	0.1714	23	66.7%	7

(*continued*)

Table 6.3 (*continued*)

Poem	Reduced # of lines	# particle *of*	Rate *of* per 10 lines	Ranking by *of*	% *sá er*	Ranking by *sá er*
Akv	351	6	0.1709	25	37.8%	18
Fm	269	4	0.149	26	33.3%	20
Háv 111–137	146	2	0.137	27	40.0%	13
Gðr III	80	1	0.125	28	33.3%	20
Hrbl	251	3	0.120	29	22.2%	32
Hdl	390	4	0.103	30	25%	28
HHv	318	3	0.094	31	35.3%	19
Rþ	366	3	0.082	32	N/A	N/A
Grp	418	3	0.072	33	69.2%	6
HH I	454	3	0.066	34	84.6%	1
Grt	182	1	0.055	35	N/A	N/A
HH II	426	2	0.047	36	25%	28
Am	761	3	0.039	37	33.3%	20

Table 6.3 shows that the correlation is far from perfect. For example, of the three poems with the highest rankings of the particle, *Þrk* and *Vm* have among the lowest rankings of *sá er* (as expected if *sá er* is a late feature), but *Od* has an unexpectedly high ranking of *sá er*. That these two features do not correlate well is confirmed by the fact that Kendall's τ is very close to 0 ($\tau = -0.016$), indicating practically no correlation. Moreover, the correlation is not significant ($p = 0.449$), although this may be due to the fact that there are many ties (e.g. six poems have 33.3% *sá er*). Another possibility could be the fact that rates of *of* vary widely; as noted by Fidjestøl, while there is an obvious trend across the Eddic corpus, *of* is not a perfect criterion for dating an individual Eddic poem.

As a second attempt, we can correlate the frequencies of *sá er* with the innovative negator *eigi*. These data are in Table 6.4, arranged by the ranking of *eigi* from lowest ranked (presumably oldest) to highest ranked (innovative).

As in the correlation with *of*, the correlation between *sá er* and *eigi* does not look very strong. Among the poems that have the highest rates of *eigi* (presumably late), there are poems that are highly ranked for *sá er* as expected (*Od, Gðr II, HH I*) but also poems with unexpectedly low frequencies of *sá er* (*Hdl, Þrk, HH II*). The correlation of ranks analysis shows a weak positive correlation between the two rankings (Kendall's $\tau = 0.120$), but this is not significant ($p = 0.177$). The failure to achieve significance in these correlation analyses may be due to the large number of tied rankings, as well as the unevenness of the data: there is nearly as much variation within poems that are supposedly early or supposedly late as there is across these groups. Nevertheless, the following sections show that the increase in *sá er* is statistically significant in Eddic poetry (on Finnur Jónsson's dates) and in the more securely dated corpus of skaldic poetry.

Table 6.4 Comparison of ranking by negator *eigi* with the ranking by adjacent *sá er*

Poem	Total negs	% *eigi*	Ranking by *eigi*	% *sá er*	Ranking by *sá er*
Alv	4	0%	last	33.3%	20
Akv	6	0%	last	37.8%	18
Bdr	6	0%	last	25%	28
Br	2	0%	last	33.3%	20
Grm	3	0%	last	20%	33
Gðr I	2	0%	last	60%	9
Gðr III	5	0%	last	33.3%	20
Háv 1–110	25	0%	last	56.6%	11
Háv 138–164	6	0%	last	40%	13
Hym	4	0%	last	62.5%	8
Rm	7	0%	last	42.9%	12
Skm	5	0%	last	18.8%	34
Svm/Fjm	4	0%	last	29.2%	27
Svm/Grg	3	0%	last	75%	3
Vm	4	0%	last	18.8%	34
Vsp	6	0%	last	77.0%	2
Þrk	1	0%	last	25%	28
Ls	22	4.5%	19	31.3%	26
Háv 111–137	13	7.7%	17	38.5%	16
Sd	13	7.7%	17	58.3%	10
Fm	12	8.3%	16	33.3%	20
Hm	10	10%	15	40%	13
Vkv	9	11.1%	14	38.5%	16
Od	8	12.5%	13	75%	4
Am	39	12.8%	12	33.3%	20
Hrbl	7	14.3%	11	22.2%	32
Ghv	6	16.7%	10	33.3%	20
Sg	21	19.0%	9	71.4%	5
Grt	5	20%	7	N/A	N/A
Grp	15	20%	7	69.2%	6
HH II	16	25%	6	25%	28
HH I	7	28.6%	4	84.6%	1
Gðr II	14	28.6%	4	66.7%	7
HHv	15	40%	3	35.3%	19
Hlr	3	66.7%	2	40%	13
Hdl	2	100%	1	25%	28
Rþ	0	N/A	N/A	N/A	N/A

6.2.3 Effect of independent variables

Having failed to show any correlation between the frequency of *sá er* and the rankings of the other dating criteria, this section tests the effect of Date directly using logistic regression. However, as the Eddic poems have not been definitively dated, the dates used in this analysis are the proposals of Finnur Jónsson. Assuming that his dates are not too far off, there appears to be a rough trend toward more relative clauses with *sá er* over time, as seen in Table 6.5.

Table 6.5 Relative *sá er* in Eddic poems, according to Finnur Jónsson's time periods

Date	# adjacent *sá er*	% adj *sá er*	# other	% other	Total
875–900 (*Bdr, Háv* 111–137, *Rþ, Skm, Þrk, Vkv*)	10	27.0%	27	73%	37
900–930 (*Grm, Hrbl, Háv* rest, *Vm*)	50	38.5%	80	61.5%	130
935 (*Ls, Vsp*)	15	51.7%	14	48.3%	29
925–975 (*Alv, Grt, Gðr II, Hm, HH II, Hdl, Rm, Svm/Fjm*)	23	33.8%	45	70.6%	68
975–1000 (*Akv, Br, Fm, Gðr I, III, HHv, Hym, Sd*)	31	43.7%	40	56.3%	71
1000–1025 (*Ghv, HH I, Hlr, Od, Svm/Grg*)	20	69.0%	9	30.9%	29
1050 (*Am, Sg*)	14	41.2%	20	58.8%	34
1150–1200 (*Grp*)	9	69.2%	4	30.8%	13
Total	**172**	**49.3%**	**239**	**50.7%**	**411**

This trend can be visualized as in the scatterplot in Figure 6.1. As with other factors discussed in previous chapters, each time period contains a great deal of variation, with each of Finnur's dates (except the sole text from 1150) containing poems with frequent and infrequent *sá er*.

Nevertheless, it is clear that the poems with the lowest rates of *sá er* are dated early by Finnur, while a greater proportion of the later poems exhibit *sá er* more frequently.[7] This is confirmed statistically by the logistic regression analysis illustrated in Figure 6.2. The slope indicates that with each additional year, the likelihood of *sá er* increases slightly, and the effect is very significant (coefficient = 0.005, z = 2.96, $p = 0.003$).

7. A reviewer notes that if Finnur Jónsson considered *sá er* in his proposed dates, my conclusion here would be circular reasoning. Because Finnur largely used his intuitions to date Eddic poetry, this cannot be ruled out entirely; however, his main criteria were hiatus forms, vocabulary tied to Norwegian vs. Icelandic flora and fauna, and religious implications.

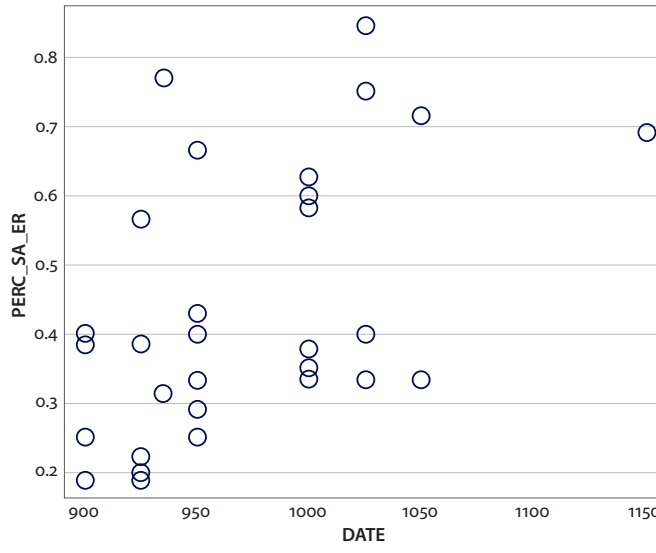

Figure 6.1 Percentage of adjacent *sá er* in the Eddic poems by Date

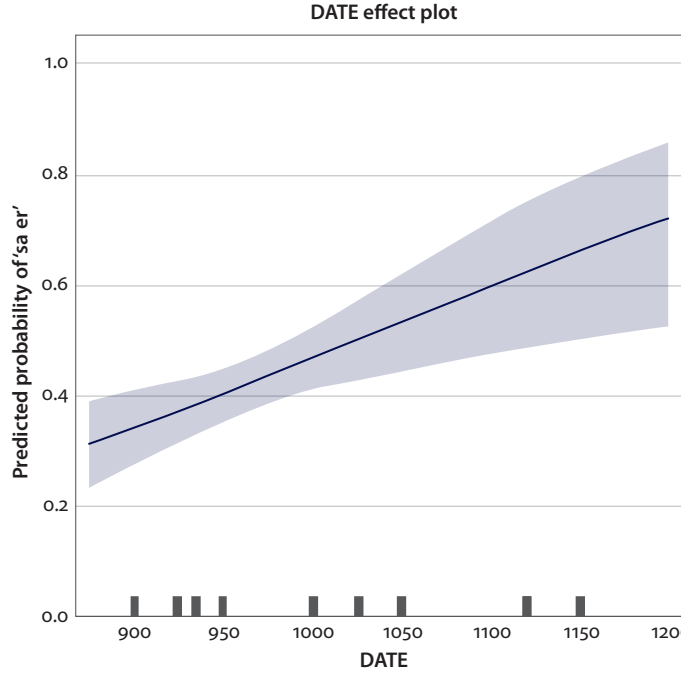

Figure 6.2 Regression line of adjacent *sá er* in the Eddic poems by Date

6.3 Relative markers in my skaldic corpus

6.3.1 Selection of data

I conducted a search for the relative particles *er* and *sem* in the poems of the Skaldic Project (Clunies Ross et al. 2012). Words in the database are lemmatized but not otherwise tagged (for details see Wills 2015); I was able to search for *er* as a relative particle, because the verb form *er* 'is' is lemmatized under *vera* 'to be', while the relative particle is lemmatized as "*er* (conj.)." After removing adverbial uses of *er* and limiting the results to poems by known skalds, this yielded 238 instances of the particle *er*.[8] These were the verified by hand and coded for date (as given in the documentation on the *SkP* website), pronoun, particle, and the position of pronoun vis-à-vis the particle.[9]

Table 6.6 presents the results. Nearly two-thirds of these clauses are preceded directly by the pronoun *sá* and another 6.3% are indirectly preceded by *sá*. A small number of relative clauses are preceded by the demonstrative *hinn* or one of the interrogatives (*hverr* or *hvað*). Similar to the trend in the Eddic corpus, examples of adjacent *sá er* are less frequent in skaldic poems before the year 1000 and increasingly frequent thereafter.

Table 6.6 Occurrence of *er* with *sá* and other pronouns in skaldic poetry

Skald	Date of last poem	*er* only	*hinn/hverr* and *er*	Non-adj. *sá* and *er*	Adjacent *sá er*	Total	% *sá er*
Bragi	825		2		0	2	0%
Þjóð	850	3	2	1	2	8	25%
Þhorn	900	4	5		8	17	47.1%
Glúmr	970			1	0	1	0%
Eyv	985		2	1	4	7	57.1%
Eskál	986		1		1	2	50%
Tindr	987			1	1	2	50%
Eil	1000				1	1	100%
Hfr	1001	1	2		4	7	57.1%
ÞKolb	1014	1			4	5	80%
Óhelg	1025				0	N/A	

8. There are also a small number of relative clauses with *sem*, but these will not be treated further. For the rise of *sem* from Old Icelandic to the present, see Sapp (2019a).

9. Some of these data were presented in Sapp (2019b). The dataset in the current project is somewhat smaller, because the current study is limited to skalds who are attested in at least 80 lines of poetry and have known dates.

Table 6.6 (*continued*)

Skald	Date of last poem	*er* only	*hinn/hverr* and *er*	Non-adj. *sá* and *er*	Adjacent *sá er*	Total	% *sá er*
Ótt	1026	1			3	4	75%
Þloft	1032		1		1	2	50%
Sigv	1040	5	7	2	31	45	68.9%
Þfagr	1051		1		3	4	75%
Hharð	1054	1		1	1	3	33.3%
ÞjóðA	1066	1	1	1	6	9	66.7%
Arn	1070	2	1	1	10	14	71.4%
Steinn	1070	1	2		1	4	25%
Gísl	1104			1	2	3	66.7%
Mark	1106	1	1		3	5	60%
Ív	1140				4	4	100%
Rv	1154				3	3	100%
ESk	1159	1	3		31	35	88.6%
Gamlkan	1180		2	1	16	19	84.2%
HSt	1200	1			1	2	50%
GunnL	1218	4	1	3	14	22	63.6%
Bjbp	1223		1		2	3	66.7%
Total		**27**	**35**	**14**	**157**	**233**	**67.4%**

6.3.2 Effect of independent variables

Looking at the table above, there appears to be a trend toward more relative clauses with *sá er* over time: most poets of the 9th and 10th centuries have *sá er* in 50% or fewer relative clauses, whereas poets from the 11th century on tend to have two-thirds or more relative clauses with *sá er*. This is visualized in Figure 6.3.

There is, however, a great deal of variation among individual poets within a century. Moreover, the poets that appear to be outliers in their centuries, e.g. Hallar-Steinn, have few relative clauses overall. Therefore, a regression analysis is useful for abstracting away from this uneven data. Indeed, the regression line shows a steady and highly significant (coefficient = 0.006, z = 3.83, $p < 0.001$) increase in *sá er* over time, as illustrated in Figure 6.4.[10]

10. In addition to Date, the rate of *sá er* varies somewhat by Meter, although the only significant distinction is between *dróttkvætt* and the minor meter *kviðuháttr* ($\chi^2 = 17.025$, df = 3, $p < 0.001$). The effect size is also fairly small (Cramer's V = 0.267).

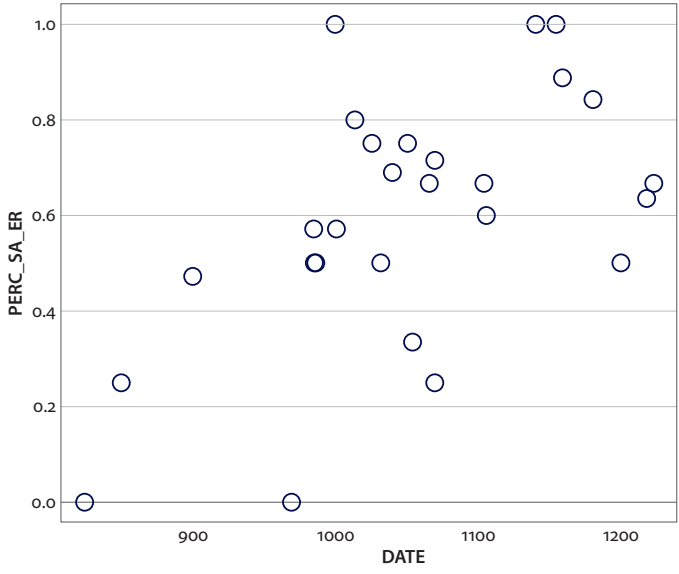

Figure 6.3 Percentage of adjacent *sá er* in the skaldic poems

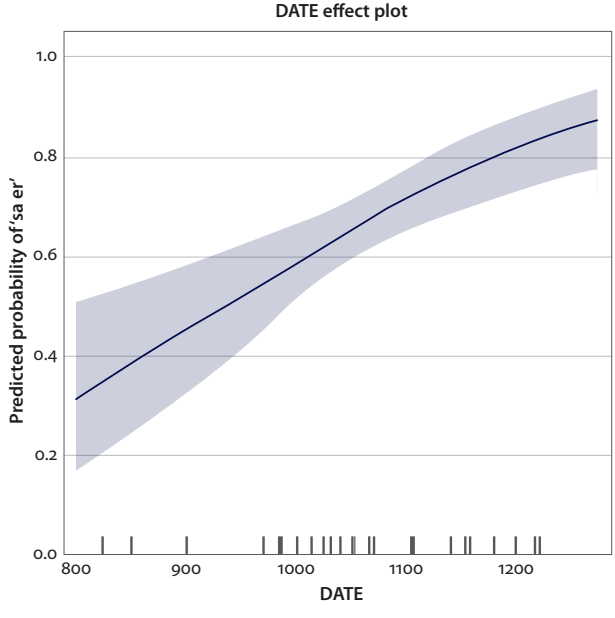

Figure 6.4 Regression line of adjacent *sá er* in the skaldic poems

6.3.3 Combining the two genres

Looking now at Eddic and skaldic poetry together, there is what appears to be a striking difference between the two genres with respect to relative clause type, as seen in Table 6.7. Eddic poems slightly favor relative clauses of types other than adjacent *sá er*, while skaldic poetry strongly favors *sá er* (67.4%). This distinction is statistically significant ($x^2 = 38.795$, df = 1, $p < 0.001$).

Table 6.7 Relative *sá er* in Eddic and skaldic poems

Genre	# adjacent *sá er*	% *sá er*	# other	% other	Total
Eddic	172	41.8%	239	58.2%	411
skaldic	157	67.4%	76	32.6%	233
Total	**329**	**51.1%**	**315**	**48.9%**	**644**

I used a multiple logistic regression analysis to determine the best model with these two factors: Genre and Date. Because of the very high variation from poem to poem, I used a mixed-effects model (`lme4`, Bates et al. 2012), with Poem/skald as a random effect and Date and Genre as fixed effects. The results show that once the random variation across Poem/skald is controlled for, there is no significant effect of Genre ($p = 0.115$), nor is there a significant interaction between Genre and Date ($p = 0.747$).[11] The only significant model is the one with Poem/skald as a random effect and Date as a main effect, with later poems favoring *sá er* (coefficient = 0.007, z = 7.16, $p < 0.001$). This indicates that, aside from the fact that *sá er* is somewhat more frequent in skaldic poetry, the likelihood of *sá er* increases on parallel trajectories in the two genres. The similar developments of *sá er* in Eddic and skaldic poetry can be seen in the interaction plot in Figure 6.5.

11. I obtained *p*-values by likelihood ratio tests of the model with all effects against a model without the effect or interaction in question.

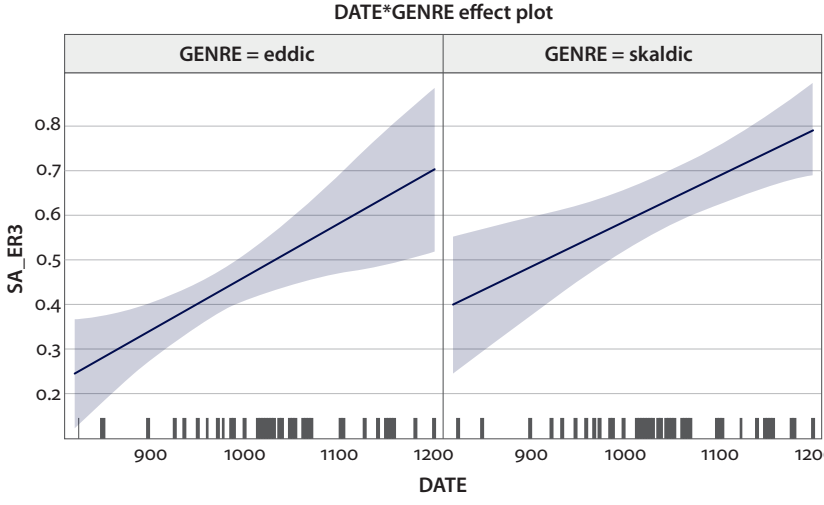

Figure 6.5 Regression line of adjacent *sá er* in the Eddic and skaldic poems

6.4 Discussion

This chapter has examined the rise of relative clauses beginning with *sá er* and its use as a criterion for dating Eddic poetry. This feature does not seem to correlate to other dating criteria (the decline of the particle *of* and the use of the new negator *eigi*), which may be due to methodological problems with trying to correlate these criteria (large number of ties and unevenness of the data). However, regression analyses indicate that *sá er* increases over time in the datable work of known skalds, and that purportedly younger Eddic poems have higher rates of *sá er* than older ones (on Finnur Jónsson's dates). Moreover, *sá er* rises in Eddic poetry on a similar trajectory to that in skaldic poetry, and there is no statistically significant difference between the two genres. Therefore, relative clauses in *sá er* should be added to the criteria for dating Eddic poetry, which will be done in Chapter 8.

CHAPTER 7

Metrical criteria for dating

7.1 Selection of metrical criteria for this study

Fidjestøl (1999), Sapp (2000), Gade (2001), and Myrvoll (2014) identify a number of features of skaldic meter that change over time and thus can be used to date skaldic poems of uncertain date. Some of these features also occur in Eddic meters; as in previous chapters, I will attempt to date the Eddic poems by comparing each poem to the diachronic trends in the skaldic corpus. Before turning to the features that I compare in skaldic and Eddic poetry, I will first discuss some criteria used by previous scholars and delineate why these criteria will not be employed in my study.

First, recall from Chapter 2, Section 2.3.3 that Fidjestøl (1999), and later Thorvaldsen (2016), confirm that in some (presumably older) poems words like *(v)reiðr* alliterate with *v-*, while in other poems (presumably later) these words alliterate with *r-*. However, this criterion applies to only a handful of words, and so is not attested often enough for me to use in my statistical analysis (although it will be examined again as part of the general discussion in Chapter 8). Similarly, the feature contracted vs. hiatus forms (Fidjestøl 1999; Gade 2001; Myrvoll 2014) occurs only in certain forms of a few lexical items, so that each poem has only a small number of examples (see Section 2.3.4 for a discussion). If we discard items that Gade (2001) identifies as possible 12th–13th century archaisms, the number of examples left for analysis is vanishingly small, so I will not treat this criterion in this chapter. Another metrical criterion evaluated by Fidjestøl (1999) is syncope (see Section 2.3.5), but at best this feature can only tell us whether a poem was composed after the 8th century. I assume that the Eddic poems in their extant forms cannot plausibly be older than that, ruling out syncope as a useful dating criterion.

Finally, there are several recently proposed metrical criteria for dating skaldic poetry, discussed in Chapter 2, Section 2.3.9, which cannot be applied to the dating of Eddic poetry. In her study of stanzas in the skald sagas, Gade (2001) proposes several metrical criteria that only pertain to the skaldic meter *dróttkvætt*. As Eddic meters do not have these characteristics, they will not be investigated in the current study. Similarly, Myrvoll (2014) examines several criteria that do not pertain to Eddic poetry, involving internal rhyme and function words in certain line types. He also examines two criteria that can be detected in Eddic meters, but for which there is no clear diachronic trend: the decline in resolution and violations of Craigie's

Law. With no clear diachronic development in these two features, there is no way to date an Eddic poem based on its frequency of the features.

The rest of this chapter is devoted to the two remaining metrical criteria, which may have potential bearing on the dating of Eddic poetry. Section 7.2 will investigate the change in the distribution of Sievers' five types, i.e. the increase of Type A lines at the expense of the other four types. Section 7.3 will compare Myrvoll's (2014) finding that secondary stress in dips increases in skaldic poetry to the situation in the Eddic corpus.

7.2 Variation in metrical types

7.2.1 Previous studies of type variation

Several systems have been proposed for classifying alliterative Germanic verse, the most influential of these being Sievers' (1893) classification of lines into five metrical types. Because most previous studies of the change in metrical types over time assume Sievers' types, that is the system that will be adopted in the current study. Each line of *fornyrðislag* has two syllables with primary stress ("lifts," indicated by "/") and two unstressed syllables ("dips, "x") or secondarily stressed syllables ("\").[1] There are five basic patterns of lifts and dips; Gade (2002) and Fulk (2016) each give a detailed overview of these five types in Eddic poetry.

Type A consists in its basic form of a trochaic pattern (1), Type B resembles two iambs (2), and Type C is like an iamb followed by a trochee (3). Types D and E both require secondary stress: in D, one-syllable word occupies the first lift, followed immediately by another lift, secondary stress, and a dip (4). In Type E, the primary and secondary stress begin the line, and the one-syllable word is the final lift (5).[2]

(1) Type A: *gullnar tǫflur* / x / x
golden checkers (*Vsp* 61)

(2) Type B: *mun Óðins sonr* x / x /
will Odin's son (*Vsp* 55H)

1. Lines in the other two Eddic meters can be classified into the same types. Odd lines in *ljóðaháttr* are essentially like those in *fornyrðislag*, while full lines and many even lines contain an extra lift (Fulk 2016: 261). Lines in *málaháttr* contain either an extra lift or an extra dip (Fulk 2016: 262).

2. These five examples are given by Fulk (2016: 256).

(3) Type C: *á rǫcstóla* x / / x
to fate-thrones (*Vsp* 9)

(4) Type D: *grund, valkyrior* / / \ x
earth valkyries (*Vsp* 30)

(5) Type E: *ginnheilǫg goð* / \ x /
sacrosanct gods (*Vsp* 9)

Each of these types has a number of sub-types, which are listed in Fulk (2016: 265–268).

It has long been known that the distribution of Sievers' five types changed over time in Germanic alliterative verse, such as the decrease in D and E lines in Old English poetry (see Fulk 1992: 254–257 for a discussion). Several recent studies have investigated this in Old Norse skaldic poetry. In Sapp's (2000) study of some poems in the meter *kviðuháttr*, he finds that in odd lines, lines of Type A increased over time and D lines became less frequent. Similarly, Sapp finds that in even lines, Type A lines increased, mostly at the expense of lines of Type B.

Myrvoll (2014) takes a much wider look at the distribution of the five types in skaldic poetry, and he examines each meter separately. Beginning with his selection of four skaldic poems in *fornyrðislag*, Type A in odd lines increases over time from 23% in Egill's *Hǫfuðlausn* to 60–63% in the 12th century, but in even lines the development is non-linear. The clearest trend is that Types B and E decline over time (2014: 168). In *kviðuháttr*, Myrvoll (2014) examines a larger number of poems but finds the same trends as Sapp (2000).[3] Turning to *dróttkvætt*, in odd lines, Type A gradually increases, with the biggest increase between the 10th and 11th centuries; similarly, Types C and E decrease sharply from the 10th to 11th century. The developments in Types B and D are non-linear (Myrvoll 2014: 177). In even lines in *dróttkvætt*, there is less change over time, and the change is not linear (a rise in Type A from 45% in the 10th to 50% in the 11th century, but then falling back to 46% by the 13th; B and C very rare; D and E not linear) (Myrvoll 2014: 191). In *hrynhent*, there is little variation, because Type A makes up about 90% of lines overall, without a clear diachronic trend (Myrvoll 2014: 197). Myrvoll's general finding is that Type A increases over time, most clearly in odd lines in *fornyrðislag* and *dróttkvætt* and in even lines in *kviðuháttr* (2014: 197–198).

3. The reason for the increase in type A even lines at the expense of type B lines is probably related to the decline of verb-final bound clauses (Gade 2005: 169).

7.2.2 The Eddic data

For my counts of Sievers' five types in the Eddic poems, I relied heavily on the only published scansions of the complete *Poetic Edda*: Suzuki (2014). In addition to the Eddic poems of CR, Suzuki's corpus includes *Bdr, Rþ, Hdl*, and *Grt* but not *Svipdagsmál*.[4]

Let us begin by examining the distribution of Types A-E in both odd and even lines of Eddic poetry in Table 7.1. Note that this excludes the "full-line" of the *ljóðaháttr* poems, because these have no equivalent in the other meters.

Table 7.1 Distribution of Siever's five types in Eddic poetry

Poem	Type A	% A	Type B	Type C	Type D	Type E	Total
Alv	66	46.8%	25	21	27	2	141
Akv	191	55.0%	10	54	90	2	347
Am	425	55.9%	1	127	206	1	760
Bdr	68	59.6%	10	29	5	2	114
Br	96	64.0%	12	30	9	3	150
Fm	94	46.3%	40	53	5	11	203
Grm	105	44.7%	42	51	28	9	235
Grp	226	53.3%	52	106	31	9	424
Grt	96	52.7%	10	50	17	9	182
Ghv	101	60.8%	9	41	14	1	166
Gðr I	134	62.0%	10	54	15	3	216
Gðr II	214	61.5%	16	90	20	8	348
Gðr III	51	63.8%	7	14	6	2	80
Hm	133	62.4%	8	43	29	0	213
Hrbl	123	57.5%	12	34	40	5	214
Háv 1–110	160	40.8%	136	65	21	10	392
Háv 111–137	41	28.5%	23	42	37	1	144
Háv 138–164	40	37.0%	30	27	9	2	108
HH I	243	53.3%	36	128	34	15	456
HH II	237	55.9%	33	124	21	9	424
HHv	158	57.0%	30	59	19	11	277
Hlr	65	60.2%	10	24	6	3	108
Hym	167	54.9%	19	64	35	19	304
Ls	118	46.3%	55	59	17	6	255
Od	137	54.8%	31	56	20	6	250
Rm	69	47.3%	19	44	12	2	146

4. Suzuki's counts for most of the poems are found in his Appendix I, while those for *Akv, Hm*, and *Hrbl* are found in his Table 9.22 (2014: 522), Table 10.13 (2014: 538), and Table 11.21 (2014: 565–566). Note that Suzuki's counts exclude a small number of stanzas from *Háv, Grm, HH II, Sd*, and *Hm* that are in a minority meter, as indicated in his Table 1.1 (2014: 2). For example, he excludes the ten *fornyrðislag* stanzas from *Háv*, so his counts represent the 154 *ljóðaháttr* stanzas. In each case, these excluded stanzas make up a small percentage of the lines of each poem, so this omission should not have a great effect on the percentages of the line types.

Table 7.1 (*continued*)

Poem	Type A	% A	Type B	Type C	Type D	Type E	Total
Rþ	282	77.7%	22	30	24	5	363
Sg	359	64.2%	51	110	33	6	559
Sd	55	43.0%	32	33	6	2	128
Skm	65	36.7%	46	41	17	8	177
Þrk	156	60.9%	23	52	17	8	256
Vm	73	33.5%	69	47	25	4	218
Vkv	187	59.4%	18	82	21	7	315
Vsp	305	56.7%	39	137	44	13	538
Hdl	227	58.2%	23	102	33	5	390
Total	**5,267**	**54.9%**	**1,009 (10.5%)**	**2,123 (22.1%)**	**993 (10.3%)**	**209 (2.2%)**	**9,601**

Table 7.1 clearly shows that Type A makes up the majority of lines, followed by Type C. Types B and D make up a substantial minority, but Type E is very infrequent in all poems.

However, these distributions are not the same in every poem. The histogram in Figure 7.1 shows a roughly bell-shaped curve: fourteen poems have frequencies of Type A lines between 50% and 60% of their total lines, nine poems have 60–70% of lines with Type A, and seven have 40–50% Type A lines. There is one outlier at the high end (which is *Rþ*, with 77.7% of its lines being Type A) and four at the low end with less than 40% of lines having Type A (*Skm, Vm*, and two parts of *Háv*).

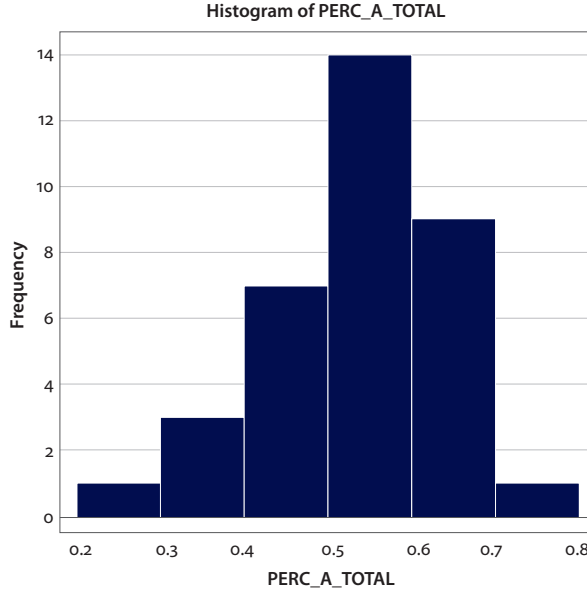

Figure 7.1 Histogram of the percentage of Type A lines

The fact that the four poems with the lowest percentage of Type A are in the meter *ljóðaháttr* is notable. In fact, the poems composed primarily in *ljóðaháttr* as a group have a much lower rate of A lines than the poems in *fornyrðislag/málaháttr*, as seen in Table 7.2.[5]

Table 7.2 Percentage of Type A lines in *ljóðaháttr* vs *fornyrðislag/málaháttr* poems

Meter	Type A	% A	Other types	% other	Total
forn./mál.	4223	58.8%	2954	41.2%	7177
ljóðaháttr	1044	43.1%	1380	56.9%	2424
Total	**5,267**	**54.9%**	**4334**	**45.1%**	**9,601**

The clear difference between the two meters can be seen in the box plot in Figure 7.2: note that the interquartile range for *ljóðaháttr* poems does not overlap with any of the *fornyrðislag/málaháttr* poems.

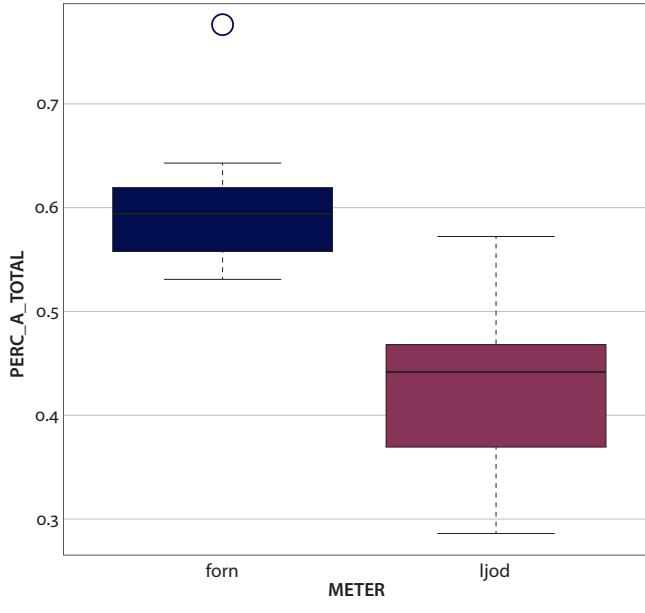

Figure 7.2 Box plot of the percentage of Type A lines in *ljóðaháttr* vs *fornyrðislag/málaháttr* poems

5. *Málaháttr*, being fully represented only by *Am*, is collapsed with *fornyrðislag* here.

The distinction between poems in these two meters is significant according to a linear regression model ($F(1, 33) = 59.31$, $p < 0.001$, $R^2 = 0.643$). Meter is thus a significant factor that will have to be taken into account when trying to establish whether there is a separate effect of Date on the frequency of Type A in Eddic poetry.

Gade (2012) notes several metrical properties in which *ljóðaháttr* differs from *fornyrðislag*. Most relevant to the present study, odd lines in *ljóðaháttr* favor initial lifts (thus a higher proportion of Types A, D, and E), while even lines favor initial dips (thus Types B and C are more frequent).[6] Recall that in Myrvoll's study of skaldic poetry, Type A shows the most consistent increase over time in odd lines. Therefore, let us examine the distribution of Sievers' five types in Eddic poetry in odd lines only, shown in Table 7.3.

Table 7.3 Distribution of Sievers' five types in Eddic poetry, odd lines only

Poem	Type A	% A	Type B	Type C	Type D	Type E	Total
Alv	58	80.6%	1	12	1	0	72
Akv	97	55.7%	3	13	60	1	174
Am	205	53.8%	1	50	125	0	381
Bdr	35	61.4%	7	14	1	0	57
Br	49	65.3%	8	12	4	2	75
Fm	66	66.7%	11	16	2	4	99
Grm	87	75.7%	2	7	15	4	115
Grp	107	50.5%	36	55	11	3	212
Grt	60	65.9%	7	16	6	2	91
Ghv	56	67.5%	7	13	7	0	83
Gðr I	69	63.3%	9	22	8	1	109
Gðr II	115	66.1%	13	28	15	3	174
Gðr III	24	60.0%	7	6	3	0	40
Hm	76	71.7%	5	8	17	0	106
Hrbl	64	60.4%	1	16	22	3	106
Háv 1–110	144	74.6%	13	16	13	7	193
Háv 111–137	34	46.6%	4	5	29	1	73
Háv 138–164	35	66.0%	4	10	3	1	53
HH I	133	58.3%	30	43	16	6	228
HH II	105	49.5%	28	63	13	3	212
HHv	95	68.3%	8	20	9	7	139
Hlr	34	63.0%	9	7	2	2	54
Hym	87	57.2%	13	28	18	6	152
Ls	105	83.3%	9	9	3	0	126

(*continued*)

6. For a detailed discussion and counts of each line type in odd and even lines, see Suzuki (2014: 645–652).

Table 7.3 (*continued*)

Poem	Type A	% A	Type B	Type C	Type D	Type E	Total
Od	66	52.8%	21	29	6	3	125
Rm	47	63.5%	4	16	7	0	74
Rþ	138	75.8%	15	15	12	2	182
Sg	187	66.8%	37	45	10	1	280
Sd	50	79.4%	2	8	1	2	63
Skm	54	60.7%	8	11	11	5	89
Þrk	74	57.8%	21	25	8	0	128
Vm	72	66.1%	10	13	11	3	109
Vkv	105	66.5%	8	35	9	1	158
Vsp	169	62.8%	27	49	16	8	269
Hdl	121	62.1%	17	38	15	4	195
Total	**3,023**	**63.0%**	**406 (8.5%)**	**773 (16.1%)**	**509 (10.6%)**	**85 (1.8%)**	**4,796**

As the table shows, most poems have moderately high rates of Type A in odd lines. This is illustrated in the histogram in Figure 7.3, which shows that the bulk of poems have frequencies of Type A between 55% and 70%. No poems have less than 45% of odd lines in Type A, while a few have much higher rates:

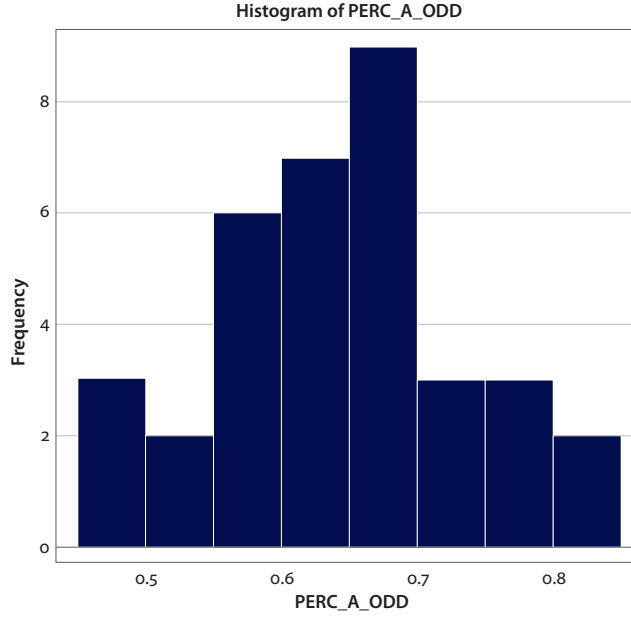

Figure 7.3 Histogram of the percentage of Type A in odd lines

Note from Table 7.3 that among the highest ranked poems for the frequency of Type A odd lines are the following poems in the *ljóðaháttr* meter: *Ls, Alv, Sd, Grm*, and the first part of *Háv*. This is the opposite of what we saw when both odd and even lines were examined above, confirming the observation by Gade (2012) and Suzuki (2014) that Type A is favored in *ljóðaháttr* odd lines. The frequency of Type A in odd lines in the *ljóðaháttr* poems as a whole is larger than that for the *fornyrðislag/málaháttr* poetry, as seen in Table 7.4, and this difference is statistically significant ($F(1, 33) = 9.61$, $p = 0.004$, $R^2 = 0.226$).

Table 7.4 Percentage of Type A in odd lines in *ljóðaháttr* vs *fornyrðislag/málaháttr*

Meter	Type A	% A	Other types	% other	Total
forn./mál.	2176	60.6%	1415	39.4%	3591
ljóðaháttr	847	70.3%	358	29.7%	1205
Total	**3,023**	**63.0%**	**1,773**	**37.0%**	**4,796**

There are three reasons that we can use the frequency of Type A in odd lines as a good proxy for the change in line types over time in Eddic poetry. First of all, although there is a drastic difference in the distribution of line types in *ljóðaháttr* in odd lines vs. total lines in *ljóðaháttr*, the proportion of Type A lines is roughly the same in odd lines (60.6%) and in combined even+odd lines (58.8%). Secondly, the effect size of the difference between the two meters is much smaller in odd lines only ($R^2 = 0.226$) than in all odd and even lines together ($R^2 = 0.643$); thus in odd lines, the distinction between *ljóðaháttr* and *fornyrðislag/málaháttr* poetry has been neutralized somewhat. Thirdly, looking at the development of Type A in odd lines allows for the most relevant comparison with skaldic poetry, in which Type A increases linearly in odd lines.

7.2.3 Comparison of rankings

As I did for other criteria, now I will determine whether Eddic poetry shows an increase in Type A lines over time, similar to the increase the Myrvoll found in skaldic verse. I analyze the correlation between the ranking of the particle *of/um* and the ranking by percentage of Type A in odd lines (for the reasons outlined in the previous paragraph). The result, seen in Table 7.5, is that there is not a clear correlation.

Table 7.5 Comparison of ranking by the particle *of* with the ranking by odd A lines

Poem	# of lines	# ex. *of*	Freq. of *of* per 10 lines	Ranking by *of*	% Type A (odd)	Ranking by Type A (odd)
Þrk	218	15	0.688	1	57.8%	28
Od	250	12	0.480	2	52.8%	32
Bdr	108	5	0.463	3	61.4%	23
Vm	274	12	0.438	4	66.1%	14
Gðr I	201	8	0.398	5	63.3%	19
Sd	255	10	0.392	6	79.4%	3
Háv 138–164	182	7	0.385	7	66.0%	15
Hm	218	8	0.367	8	71.7%	7
Háv 1–110	662	24	0.363	9	74.6%	6
Vsp	503	17	0.338	10	62.8%	21
Br	150	5	0.333	11	65.3%	17
Grm	336	11	0.327	12	75.7%	5
Ls	368	12	0.326	13	83.3%	1
Ghv	174	5	0.287	14	67.5%	9
Vkv	286	8	0.280	15	66.5%	12
Hym	304	8	0.263	16	57.2%	29
Sg	558	13	0.233	18	66.8%	10
Alv	174	4	0.230	19	80.6%	2
Skm	246	5	0.203	21	60.7%	24
Hlr	108	2	0.185	22	63.0%	20
Gðr II	350	6	0.1714	23	66.1%	13
Rm	175	3	0.1714	23	63.5%	18
Akv	351	6	0.1709	25	55.7%	30
Fm	269	4	0.149	26	66.7%	11
Háv 111–137	146	2	0.137	27	46.6%	35
Gðr III	80	1	0.125	28	60.0%	26
Hrbl	251	3	0.120	29	60.4%	25
Hdl	390	4	0.103	30	62.1%	22
HHv	318	3	0.094	31	68.3%	8
Rþ	366	3	0.082	32	75.8%	4
Grp	418	3	0.072	33	50.5%	33
HH I	454	3	0.066	34	58.3%	27
Grt	182	1	0.055	35	65.9%	16
HH II	426	2	0.047	36	49.5%	34
Am	761	3	0.039	37	53.8%	31

Note first that some of the poems with the highest rates of the particle and thus purportedly older (*Þrk, Vm, Od, Bdr, Háv* 138–164, *Gðr I*) have average to low rates of Type A (rankings between 14 and 28), as expected if the oldest Eddic poems have the lowest rates of Type A. However, others with frequent use of the particle (*Sd, Hm, Háv* 1–110, *Grm*) have among the highest rates of Type A. In fact, the

Spearman's rank correlation shows the opposite of the predicted effect: while I would predict that Type A lines should be less frequent in older poetry, there is moderate, positive correlation between more frequent use of *of* and more frequent Type A lines ($\rho = 0.263$), although this is not statistically significant ($p = 0.127$).

Because we have already seen in the previous section that Type A dominates odd lines in *ljóðaháttr* poetry, I ran correlation of ranks again, but excluding poems composed primarily in that meter. Again, in this analysis, the correlation runs in the opposite way from the expected (a small, positive correlation between high rates of *of* and Type A lines) and is not statistically significant ($\rho = 0.28$, $p = 0.166$). As a final attempt, I ranked the poems by their increase in Type A in both odd and even lines, and here there is no correlation either, as shown by the near-zero Spearman's ρ ($\rho = -0.035$, $p = 0.840$). In sum, we cannot use a correlation with the frequency of the particle *of* to determine whether Type A lines increase over time in Eddic poetry.

Let us now examine the correlation between a poem's frequency of *eigi* and frequency of Type A in odd lines, shown in Table 7.6.

Table 7.6 Comparison of ranking by negator *eigi* with the ranking by odd A in lines

Poem	Total negs	% *eigi*	Ranking by eigi	% Type A (odd)	Ranking by Type A (odd)
Akv	6	0%	last	55.7%	30
Hym	4	0%	last	57.2%	29
Þrk	1	0%	last	57.8%	28
Gðr III	5	0%	last	60.0%	26
Skm	5	0%	last	60.7%	24
Bdr	6	0%	last	61.4%	23
Vsp	6	0%	last	62.8%	21
Gðr I	2	0%	last	63.3%	19
Rm	7	0%	last	63.5%	18
Br	2	0%	last	65.3%	17
Háv 138–164	6	0%	last	66.0%	15
Vm	4	0%	last	66.1%	14
Háv 1–110	25	0%	last	74.6%	6
Grm	3	0%	last	75.7%	5
Alv	4	0%	last	80.6%	2
Ls	22	4.5%	19	83.3%	1
Háv 111–137	13	7.7%	17	46.6%	35
Sd	13	7.7%	17	79.4%	3
Fm	12	8.3%	16	66.7%	11
Hm	10	10%	15	71.7%	7
Vkv	9	11.1%	14	66.5%	12
Od	8	12.5%	13	52.8%	32

(*continued*)

Table 7.6 (*continued*)

Poem	Total negs	% *eigi*	Ranking by eigi	% Type A (odd)	Ranking by Type A (odd)
Am	39	12.8%	12	53.8%	31
Hrbl	7	14.3%	11	60.4%	25
Ghv	6	16.7%	10	67.5%	9
Sg	21	19.0%	9	66.8%	10
Grt	5	20%	7	65.9%	16
Grp	15	20%	7	50.5%	33
HH II	16	25%	6	49.5%	34
HH I	7	28.6%	4	58.3%	27
Gðr II	14	28.6%	4	66.1%	13
HHv	15	40%	3	68.3%	8
Hlr	3	66.7%	2	63.0%	20
Hdl	2	100%	1	62.1%	22
Rþ	0	N/A	N/A	75.8%	4

Here, too, we see very little correlation. Note that among the texts with no instances of *eigi* (so the oldest poems on the negation criterion), there are poems with relatively less frequent Type A (*Hym, Skm, Gðr I*) and more frequent Type A (*Grm, Alv*). At the other end of the spectrum, there poems with high rates of *eigi* (presumably young on that criterion) with unexpectedly low rates of Type A (*Þrk, Od, Gðr II*). This lack of correlation is confirmed by Kendall's rank correlation; τ is close to 0 and the effect is not significant ($\tau = -0.093$, $p = 0.465$). As before, this insignificant correlation is not improved by excluding *ljóðaháttr* poems or by including even lines.

As a final attempt to use a correlation analysis to determine whether there is any diachronic increase in Type A lines, I attempted to correlate the frequency of Type A lines with the frequency of relative clauses with *sá er*, shown in Table 7.7.

Table 7.7 Comparison of ranking by adjacent *sá er* with the ranking by odd A lines

Poem	Total relatives	% *sá er*	Ranking by *sá er*	% Type A (odd)	Ranking by Type A (odd)
Skm	16	18.8	34	60.7%	24
Vm	16	18.8	34	66.1%	14
Grm	20	20%	33	75.7%	5
Hrbl	18	22.2	32	60.4%	25
Bdr	4	25%	28	61.4%	23
HH II	16	25%	28	49.5%	34
Hdl	4	25%	28	62.1%	22
Þrk	4	25%	28	57.8%	28

Table 7.7 (*continued*)

Poem	Total relatives	% *sá er*	Ranking by *sá er*	% Type A (odd)	Ranking by Type A (odd)
Ls	16	31.3	26	83.3%	1
Alv	6	33.3	20	80.6%	2
Am	27	33.3	20	53.8%	31
Br	3	33.3	20	65.3%	17
Fm	15	33.3	20	66.7%	11
Ghv	3	33.3	20	67.5%	9
Gðr III	3	33.3	20	60.0%	26
HHv	17	35.3	19	68.3%	8
Akv	8	37.8	18	55.7%	30
Háv 111–137	13	38.5	16	46.6%	35
Vkv	13	38.5	16	66.5%	12
Hm	5	40%	13	71.7%	7
Háv 138–164	10	40%	13	66.0%	15
Hlr	5	40%	13	63.0%	20
Rm	7	42.9	12	63.5%	18
Háv 1–110	53	56.6	11	74.6%	6
Sd	12	58.3	10	79.4%	3
Gðr I	5	60%	9	63.3%	19
Hym	8	62.5	8	57.2%	29
Gðr II	6	66.7	7	66.1%	13
Grp	13	69.2	6	50.5%	33
Sg	7	71.4	5	66.8%	10
Od	4	75%	4	52.8%	32
Vsp	13	77.0	2	62.8%	21
HH I	13	84.6	1	58.3%	27
Grt	0	N/A	N/A	65.9%	16
Rþ	0	N/A	N/A	75.8%	4

As with other attempts to correlate the ranking by line type with another linguistic feature, there is no discernable pattern here. Among the poems with the lowest rates of *sá er* (thus oldest on that criterion) there are poems with lower rates of Type A (*Þrk, HH II, Skm, Hrbl*) and higher rates (*Alv, Grm*). Those with the highest frequencies of *sá er* include poems with frequent Type A (*Háv* 138–164, *Sd, Sg*) and less frequent Type A (*Hym, Gðr II, Grp, Od*). While there is a weak correlation (Spearman's $\rho = 0.115$), this is not statistically significant ($p = 0.523$).

To sum up this section, the ranking of the poems by frequency of Type A in odd lines does not seem to correlate to any other dating criterion.

7.2.4 Effect of independent variables in Eddic corpus

Because the correlations with *of, eigi*, and *sá er* failed to show any significant increase in the rate of Type A over time, this section examines the question of date directly, by using Finnur Jónsson's estimates for the dates of Eddic poems in a regression analysis. As in the analyses above, I have calculated the frequency of Type A in odd lines only. Table 7.8 shows that there is no clear trend: there is a slight increase from 900 to 935, followed by a decrease over time. Recall that the year 1150, with its relatively low rate of Type A, is represented by a single text.

Table 7.8 Odd A lines in Eddic poems, according to Finnur Jónsson's time periods

Date	Type A	% A	Other	% other	Total
875–900 (*Bdr, Háv* 111–137, *Rþ, Skm, Þrk, Vkv*)	440	64.0%	247	36.0%	687
900–930 (*Grm, Hrbl, Háv* rest, *Vm*)	402	69.8%	174	30.2%	576
935 (*Ls, Vsp*)	274	69.4%	121	30.6%	395
925–975 (*Alv, Grt, Gðr II, Hm, HH II, Hdl, Rm*)	582	63.0%	342	37.0%	924
975–1000 (*Akv, Br, Fm, Gðr I & III, HHv, Hym, Sd*)	537	63.1%	314	36.9%	851
1000–1025 (*Ghv, HH I, Hlr, Od*)	289	59.0%	201	41.0%	490
1050 (*Am, Sg*)	392	59.3%	269	40.7%	661
1150–1200 (*Grp*)	107	50.5%	105	49.5%	212
Total	**3,023**	**63.0%**	**1,773**	**37.0%**	**4,796**

The scatterplot in Figure 7.4 shows that within most of Finnur's time periods, the frequencies of Type A vary widely by text.

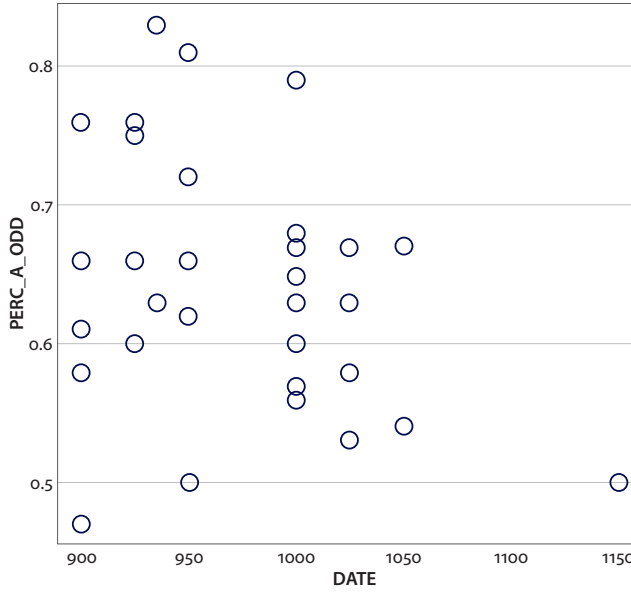

Figure 7.4 Percentage of Type A in odd lines in the Eddic poems by Date

In fact, a linear regression model, visualized in Figure 7.5, shows an unexpected downward trend, which is largely due to *Grp*, but this is not statistically significant (coefficient = −0.00044, $t = -1.713$, $p = 0.096$).

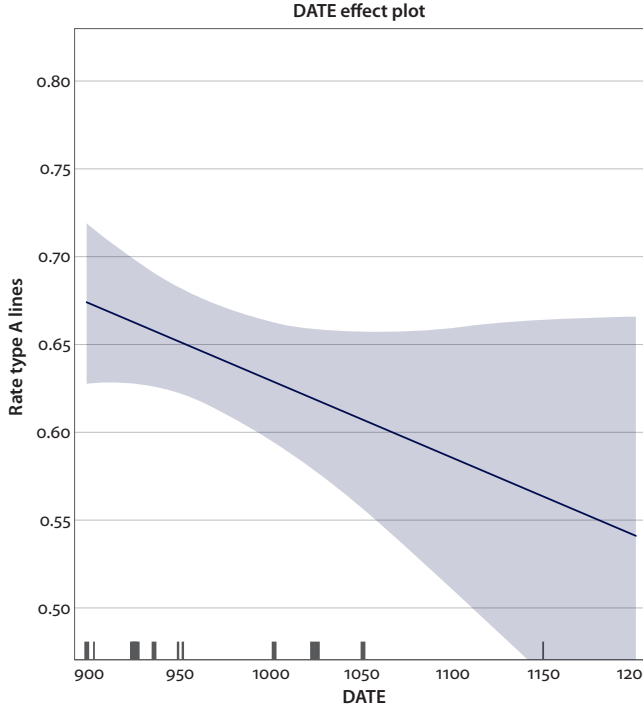

Figure 7.5 Regression line of odd A lines in the Eddic poems, main effect Date

Although Date is not a significant factor by itself, there is a significant interaction between Date and Meter (coefficient = 0.0015, $t = 2.28$, $p = 0.030$). Visual inspection of the regression lines in Figure 7.6 reveals that this interaction is caused by the slight decrease of Type A lines over time in *fornyrðislag* and *málaháttr* poetry, while Type A increases over time in *ljóðaháttr* poems.

To sum up this section, neither the correlation analyses nor the regression analyses show a clear effect of Date on the frequency of Type A odd lines in Eddic poetry, except in poems composed primarily in the meter *ljóðaháttr*. As for skaldic verse, recall from Section 7.2.1 above that Myrvoll (2014) also found differences in the distribution of line types in the various meters. Myrvoll reports that Type A in odd lines increases over time in skaldic poems in *fornyrðislag, kviðuháttr*, and *dróttkvætt*, while there is no change in the meter *hrynhent* (2014: 197–198). Thus in both Eddic and skaldic poetry, meter plays a role in the distribution of Type A lines over time, but not in a way that is helpful for dating Eddic poetry: Eddic *fornyrðislag* poems trend to fewer A lines over time, while skaldic poems in

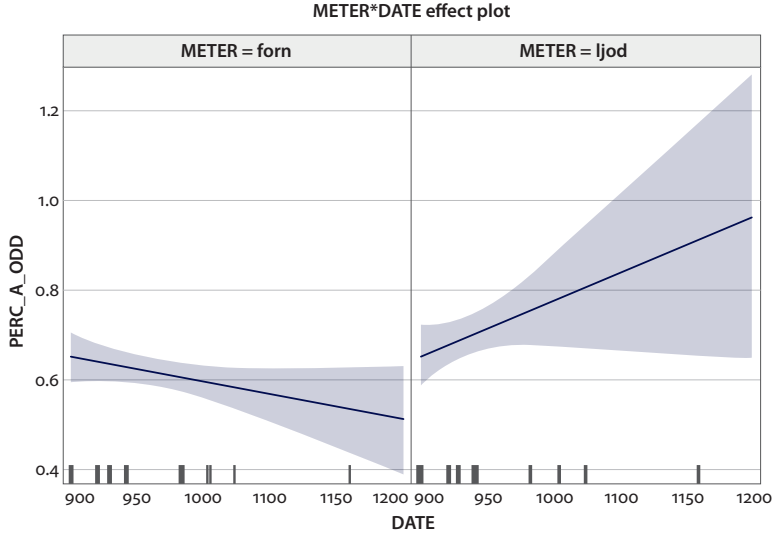

Figure 7.6 Regression line of Type A in odd lines in the Eddic poems, interaction of Date and Meter

fornyrðislag show more A lines over time. As a result of the different developments in Eddic *fornyrðislag, ljóðaháttr*, and skaldic poetry, the distribution of line types cannot be used to help establish an absolute chronology of the Eddic poems. Thus this metrical feature will be excluded from the Naïve Bayes analysis in Chapter 8.

7.3 Increase in heavy dips

7.3.1 Previous study: Myrvoll (2014)

In relatively rare cases, especially in lines of Type A, a dip may be occupied by a syllable that is not completely unstressed, a phenomenon that Myrvoll (2014) calls "heavy dips". In *dróttkvætt* for instance, instead of the configuration / x / x / x, Myrvoll gives examples such as the following, where the bolded word or morpheme can be stressed but occurs in a dip (2014: 239):

(6) a. *Bragn**ingr** réð í blóði*
ruler made in blood
'The ruler made [weapons red] in blood' (Jór *Send* 1)

b. *óðusk malm**þings** meiðar*
dreaded metal-meeting's poles
'the poles of the metal meeting [warriors] felt dread' (Hfr *ErfÓl* 13)

c. *fylli=k flokk* ***þinn***, *stillir*
fill=I following your, ruler
'I fill up your following, ruler' (Eyv *lv* 10)

In the above examples, morphemes like *-ing-* (6a) and second parts of compounds like *-þing-* (6b) bear secondary stress. The possessive adjective *þinn* (6c) can be in a stressed position, but because it appears in a dip here, Myrvoll argues that it too contains secondary stress. According to Myrvoll's counts, heavy dips account for 8.8% of A lines in *dróttkvætt*.

Myrvoll offers a detailed treatment of this phenomenon in lines of Type A in skaldic poetry in the meters *dróttkvætt* and *kviðuháttr*. In *dróttkvætt*, which represents the majority of skaldic verse, the percentage of A lines with heavy dips rises from 2.4% in the earliest poems (in the 9th and 10th centuries) to 12.8% in the 12th, before falling again to 9% in the 13th (2014: 246–247). However, he finds that there is a lot of variation among individual poets within each century.

7.3.2 The Eddic data

In order to obtain counts for heavy dips, I have relied on the counts in Suzuki's (2014) appendices.[7] Suzuki labels lines with secondary stress in the first dip (/ \ / x) as his "Type A2a" (2014: 43) and those with secondary stress in the second dip (/ x / \ or / \ / \) as "A2b" (2014: 51). I will not include in these counts catalectic lines (/ \ / ; Suzuki's Type A2a-) or those with anacrusis (x / \ / x; Suzuki's Type aA2a) as these are very infrequent, and given that they have missing or extra syllables, Suzuki's scansions are not as secure as for more conventional line types. In addition, following Myrvoll (2014), I have excluded the frequent Type A2k (/ \ˇx; labelled A1s in Suzuki's tables) from both the counts of heavy dips and from the counts of total A lines, and I have included both odd and even lines. In Table 7.9. the total heavy dips represent the sum of Suzuki's Types A2a and A2b, while the total A lines and percentage are my own calculations.

7. As an anonymous reviewer points out, Myrvoll's definition of a heavy dip includes derivational suffixes like *-ingr*, while Suzuki only counts root morphemes, so my counts for Eddic poetry will be somewhat lower than those for skaldic poetry. This means that this feature cannot be directly compared in the two genres.

Table 7.9 Type A lines in Eddic poetry with heavy dips

Poem	Total heavy dips	Total A lines (minus A2k)	% of heavy dips
Alv	9	66	13.6%
Akv	9	185	4.9%
Am	10	424	2.4%
Bdr	2	64	3.1%
Br	3	90	3.3%
Fm	1	86	1.2%
Grm	11	93	11.8%
Grp	1	205	0.5%
Grt	2	91	2.2%
Ghv	2	94	2.1%
Gðr I	3	128	2.3%
Gðr II	8	190	4.2%
Gðr III	1	50	2.0%
Hm	2	127	1.6%
Hrbl	3	114	2.6%
Háv 1–110	3	148	2.0%
Háv 111–137	2	38	5.3%
Háv 138–164	0	39	0%
HHv	4	148	2.7%
HH I	10	212	4.7%
HH II	6	208	2.9%
Hlr	0	61	0%
Hym	2	133	1.5%
Hdl	9	207	4.3%
Ls	6	107	5.6%
Od	10	132	7.6%
Rm	1	60	1.7%
Rþ	3	272	1.1%
Sg	16	342	4.7%
Sd	1	54	1.9%
Skm	4	61	6.6%
Vm	2	69	2.9%
Vkv	13	177	7.3%
Vsp	29	283	10.2%
Þrk	3	145	2.1%
Total	**191**	**4903**	**3.9%**

Table 7.9 shows that heavy dips are quite rare in Eddic poetry, making up less than 4% of all A lines in Eddic poems. The bulk of poems have heavy dips in just between 0% and 6% of the relevant lines, visualized in Figure 7.7.

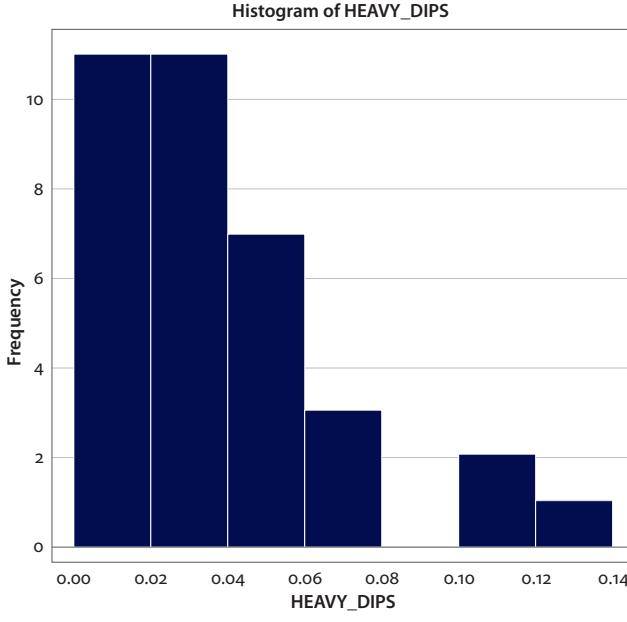

Figure 7.7 Histogram of the percentage of Type A lines

However, note that a few poems have heavy dips in more than 10% of Type A lines: *Alv, Grm*, and *Vsp*. We cannot attribute the high rate of heavy dips in *Alv* and *Grm* to the fact that these are composed in the meter *ljóðaháttr*, because there is little difference in the frequency of heavy dips between poems composed primarily in *ljóðaháttr* and those in *fornyrðislag/málaháttr*. As seen in Table 7.10, both meters have heavy dips in about 4% of relevant A lines, and the difference is not statistically significant ($F(1, 33) = 1.208$, $p < 0.28$, $R^2 = 0.035$).

Table 7.10 Percentage of heavy dips in *ljóðaháttr* vs *fornyrðislag/málaháttr* poems

Meter	Heavy dips	% heavy dips	Total A lines (minus A2k)
forn./mál.	146	3.7%	3934
ljóðaháttr	44	4.5%	969
Total	**190**	**3.9%**	**4,903**

Rather, looking at the examples from these poems, two patterns emerge. In *Alv*, one type of phrase accounts for nearly all examples of heavy dips. In answer to standard question in this poem "What is the X called, in each world?", many of the answers involve a compound noun (with secondary stress) followed by *iotnar* 'giants.' Thus

the earth is *igrœn iotnar* 'splendid green of giants' (10:4), the sky is *uppheim iotnar* 'heaven above of giants' (12:4), the sun is *eygló iotnar* 'everglow of giants' (16:4), etc.[8] The second pattern is that in *Vsp* and *Grm*, heavy dips are especially common in lists of names. Three of the examples in *Vsp* are from a single stanza of the *Dvergatal* ('list of the dwarfs' names'), shown in (7). Nearly all of the examples in *Grm* are from lists of names, especially the list of the names of Óðinn near the end of the poem, as in (8). In the examples below, the heavy dips are in bold:[9]

(7) *Veigr oc Gand**álfr***, *Vindálfr, Þráinn*
Þeccr oc Þorinn, *Þrór, Vitr oc Litr*,
*Nár oc Ný**ráðr***– *nú hefi ec dverga*
*– Reginn oc Ráð**sviðr***– *rétt um talða.*
'Liquor and Staff-Elf, Windelf and Thrain, Known and Thorin, Thror, Colour and Wise, Corpse and New-advice: now I have rightly – Regin and Counsel-clever – reckoned up the dwarfs.' (*Vsp* 12)

(8) *Síð**hǫttr**, Síð**sceggr***, *Sigfǫðr, Hnicuðr,*
*Alf**ǫðr**, Valf**ǫðr***, *Atríðr oc Farmatýr …*
'Broadhat, Broadbeard, Victory-father, Hnikud, All-father, Father of the Slain, Atrid, and Burden-god …' (*Grm* 48)

Perhaps the association between heavy dips and lists of names is because of the tendency of mythological names to be compounds, which necessarily contain secondary stress. One compound name can easily be accommodated in various line types, but the occurence of two such names within a single line requires Type A2k (e.g. *Sigfǫðr, Hnicuðr* in 8) or an A line with one or more heavy dips. Moreover, these parts of *Vsp* and *Grm* may be interpolations from *þulur*, which are often metrically irregular (Kari Ellen Gade, p.c.).

8. Additional examples: the giants call clouds *úrván iotnar* 'hope of dew of giants' (18:4), calm is *álheim iotnar* 'the great lee of giants' (22:4), the ocean is *óliós iotnar* 'eel-land of giants' (24:4), and night is *ofhlý iotnar* 'unlight of giants' (30:4). The other heavy dips both involve the phrase *álfar lagastaf* 'the elves [call it] liquid-fundament' (24:5 and 32:5).

9. One other example in *Vsp*–30:7 – has a list of names, while I have no account for the remaining examples: 1:5, 2:7, 19:3, 20:3, 20:12, 23:6, 24:5, 25:8, 26:1, 26:7, 31:4, 31:7, 32:3, 34:3, 35:3, 41:5, 45:7, 45:9, 46:5, 48:7, 50:8, 56:8, 63:2, 63:5. Additional examples in *Grm* that involve lists are 36:7, 37:1, 44:8, and those that do not are 9:4, 22:1, and 25:4.

7.3.3 Comparison of rankings

In order to test whether there is an increase in heavy dips over time in the Eddic poems, I first present a correlation in Table 7.11 between the ranking by *of/um* and the ranking by percentage of A lines with heavy dips.

Table 7.11 Comparison of ranking by the particle *of* with the ranking heavy dips

Poem	# of lines	# ex. *of*	Freq. of *of* per 10 lines	Ranking by *of*	% of heavy dips	Ranking by heavy dips
Þrk	218	15	0.688	1	2.1%	24
Od	250	12	0.480	2	7.6%	4
Bdr	108	5	0.463	3	3.1%	15
Vm	274	12	0.438	4	2.9%	16
Gðr I	201	8	0.398	5	2.3%	21
Sd	255	10	0.392	6	1.9%	27
Háv 138–164	182	7	0.385	7	0%	34
Hm	218	8	0.367	8	1.6%	29
Háv 1–110	662	24	0.363	9	5.3%	8
Vsp	503	17	0.338	10	10.2%	3
Br	150	5	0.333	11	3.3%	14
Grm	336	11	0.327	12	11.8%	2
Ls	368	12	0.326	13	5.6%	7
Ghv	174	5	0.287	14	2.1%	23
Vkv	286	8	0.280	15	7.3%	5
Hym	304	8	0.263	16	1.5%	30
Sg	558	13	0.233	18	4.7%	11
Alv	174	4	0.230	19	13.6%	1
Skm	246	5	0.203	21	6.6%	6
Hlr	108	2	0.185	22	0%	34
Gðr II	350	6	0.1714	23	4.2%	13
Rm	175	3	0.1714	23	1.7%	28
Akv	351	6	0.1709	25	4.9%	9
Fm	269	4	0.149	26	1.2%	31
Háv 111–137	146	2	0.137	27	2.0%	25
Gðr III	80	1	0.125	28	2.0%	26
Hrbl	251	3	0.120	29	2.6%	19
Hdl	390	4	0.103	30	4.3%	12
HHv	318	3	0.094	31	2.7%	18
Rþ	366	3	0.082	32	1.1%	32
Grp	418	3	0.072	33	0.5%	33
HH I	454	3	0.066	34	4.7%	10
Grt	182	1	0.055	35	2.2%	22
HH II	426	2	0.047	36	2.9%	17
Am	761	3	0.039	37	2.4%	20

There appears to be little relation between the rankings of poems by their percentage of Type A lines with "heavy dips" and the frequency of the particle. There are poems that appear to be older on the criterion of the particle that have very few heavy dips (e.g. the third part of *Háv*) and others that have among the highest ranks for heavy dips (*Od*). The three poems with the highest rates of heavy dips (*Grm, Vsp*, and *Alv*) have moderate rates of the particle, and thus do not seem to be young. The statistics confirm this lack of a correlation, as Spearman's ρ is close to zero ($\rho = 0.095$) and the analysis is statistically insignificant ($p = 0.589$).

As a second attempt, consider the correlation in Table 7.12 between the poems' rankings based on heavy dips and their rankings for the negative marker *eigi*.

Table 7.12 Comparison of ranking by the negator *eigi* with the ranking heavy dips

Poem	Total negs	% *eigi*	Ranking by eigi	% of heavy dips	Ranking by heavy dips
Alv	4	0%	last	13.6%	1
Akv	6	0%	last	4.9%	9
Bdr	6	0%	last	3.1%	15
Br	2	0%	last	3.3%	14
Grm	3	0%	last	11.8%	2
Gðr I	2	0%	last	2.3%	21
Gðr III	5	0%	last	2.0%	26
Háv 1–110	25	0%	last	2.0%	25
Háv 138–164	6	0%	last	0%	34
Hym	4	0%	last	1.5%	30
Rm	7	0%	last	1.7%	28
Skm	5	0%	last	6.6%	6
Vm	4	0%	last	2.9%	16
Vsp	6	0%	last	10.2%	3
Þrk	1	0%	last	2.1%	24
Ls	22	4.5%	19	5.6%	7
Háv 111–137	13	7.7%	17	5.3%	8
Sd	13	7.7%	17	1.9%	27
Fm	12	8.3%	16	1.2%	31
Hm	10	10%	15	1.6%	29
Vkv	9	11.1%	14	7.3%	5
Od	8	12.5%	13	7.6%	4
Am	39	12.8%	12	2.4%	20
Hrbl	7	14.3%	11	2.6%	19
Ghv	6	16.7%	10	2.1%	23
Sg	21	19.0%	9	4.7%	11
Grt	5	20%	7	2.2%	22
Grp	15	20%	7	0.5%	33

Table 7.12 (*continued*)

Poem	Total negs	% *eigi*	Ranking by eigi	% of heavy dips	Ranking by heavy dips
HH II	16	25%	6	2.9%	17
HH I	7	28.6%	4	4.7%	10
Gðr II	14	28.6%	4	4.2%	13
HHv	15	40%	3	2.7%	18
Hlr	3	66.7%	2	0%	34
Hdl	2	100%	1	4.3%	12
Rþ	0	N/A	N/A	1.1%	32

This analysis is equally bad: if one looks at the poems with 0 instances of *eigi* (arguably old on that criterion), some have among the highest ranking of heavy dips and some among the lowest. The correlation is very weak ($\tau = -0.056$), and the analysis is statistically insignificant ($p = 0.663$).

As a final attempt to correlate the ranking of heavy dips with another linguistic feature, I conducted a correlation with the ranking of relative clauses introduced by *sá er*, shown in Table 7.13.

Table 7.13 Comparison of ranking by adjacent *sá er* with the ranking by heavy dips

Poem	Total relatives	% *sá er*	Ranking by *sá er*	% of heavy dips	Ranking by heavy dips
Skm	16	18.8%	34	6.6%	6
Vm	16	18.8%	34	2.9%	16
Grm	20	20%	33	11.8%	2
Hrbl	18	22.2%	32	2.6%	19
Bdr	4	25%	28	3.1%	15
HH II	16	25%	28	2.9%	17
Hdl	4	25%	28	4.3%	12
Þrk	4	25%	28	2.1%	24
Ls	16	31.3%	26	5.6%	7
Alv	6	33.3%	20	13.6%	1
Am	27	33.3%	20	2.4%	20
Br	3	33.3%	20	3.3%	14
Fm	15	33.3%	20	1.2%	31
Ghv	3	33.3%	20	2.1%	23
Gðr III	3	33.3%	20	2.0%	26
HHv	17	35.3%	19	2.7%	18
Akv	8	37.8%	18	4.9%	9
Háv 111–137	13	38.5%	16	5.3%	8

(*continued*)

Table 7.13 (*continued*)

Poem	Total relatives	% *sá er*	Ranking by *sá er*	% of heavy dips	Ranking by heavy dips
Vkv	13	38.5%	16	7.3%	5
Hm	5	40%	13	1.6%	29
Háv 138–164	10	40%	13	0%	34
Hlr	5	40%	13	0%	34
Rm	7	42.9%	12	1.7%	28
Háv 1–110	53	56.6%	11	2.0%	25
Sd	12	58.3%	10	1.9%	27
Gðr I	5	60%	9	2.3%	21
Hym	8	62.5%	8	1.5%	30
Gðr II	6	66.7%	7	4.2%	13
Grp	13	69.2%	6	0.5%	33
Sg	7	71.4%	5	4.7%	11
Od	4	75%	4	7.6%	4
Vsp	13	77.0%	2	10.2%	3
HH I	13	84.6%	1	4.7%	10
Grt	0	N/A	N/A	2.2%	22
Rþ	0	N/A	N/A	1.1%	32

Here, too, there seems to be no correlation: even setting aside *Alv* and *Grm*, poems with low rates of *sá er* (presumably older) can have either high rates of heavy dips (*Skm*) or lower rates (*Þrk)*. The effect is weak and insignificant (Spearman's $\rho = -0.124$; $p = 0.493$).

The failure of these three analyses to show any correlation is probably due to the small variance in the percentage of Type A lines with heavy dips between the lowest ranked poems (*Háv* 138–164 and *Hlr* with 0%) and the highest ranked (*Alv* with 13.6%). Most poems have heavy dips in just 2–5% of their A lines. As a result, the differences in rankings are not very meaningful.

7.3.4 Effect of independent variables in Eddic corpus

The correlation analyses failed to find any diachronic trend, probably due to the fact that there is not much variation in heavy dips. This section will test whether a regression analysis performs any better.

Looking first at the percentage of heavy dips in each of Finnur Jónsson's time periods, there is no clear pattern in Table 7.14. The year 935 seems to be a high point, but that is due to the fact that this period contains only two texts, one of which is *Vsp*.

Table 7.14 Heavy dips in Eddic poems, according to Finnur Jónsson's time periods

Date	Heavy dips	% heavy dips	Total A lines (minus A2k)
875–900 (*Bdr, Háv* 111–137, *Rþ, Skm, Þrk, Vkv*)	27	3.6%	757
900–930 (*Grm, Hrbl, Háv* rest, *Vm*)	18	3.9%	463
935 (*Ls, Vsp*)	35	9.0%	390
925–975 (*Alv, Grt, Gðr II, Hm, HH II, Hdl, Rm*)	37	3.9%	949
975–1000 (*Akv, Br, Fm, Gðr I & III, HHv, Hym, Sd*)	24	2.7%	874
1000–1025 (*Ghv, HH I, Hlr, Od*)	22	4.4%	499
1050 (*Am, Sg*)	26	3.4%	766
1150–1200 (*Grp*)	1	0.5%	205
Total	**190**	**3.9%**	**4,903**

The scatterplot in Figure 7.8 shows that within all Finnur's time periods through 1050, the frequencies of heavy dips vary widely by text, and the year 1150 is represented by a single text (*Grp*):

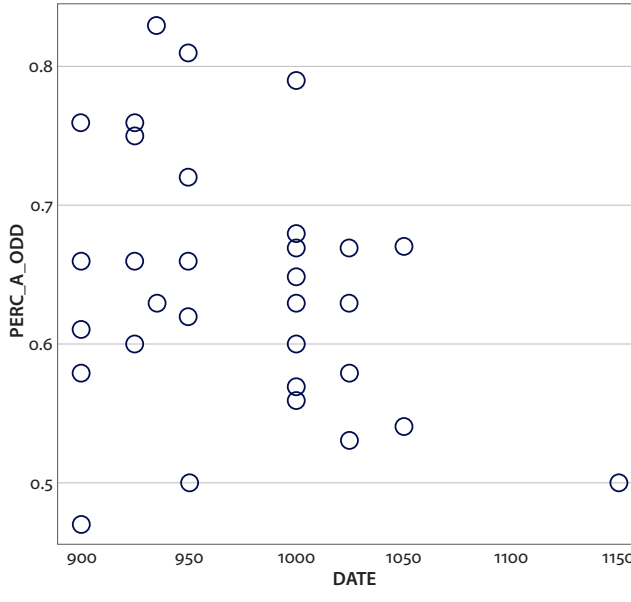

Figure 7.8 Percentage of heavy dips in the Eddic poems by Date

In fact, a linear regression model, visualized in Figure 7.9, shows an unexpected downward trend, which is probably entirely due to *Grp*. However, this model is not statistically significant ($F(1, 33) = 2.325$, $p = 0.137$, $R^2 = 0.066$).

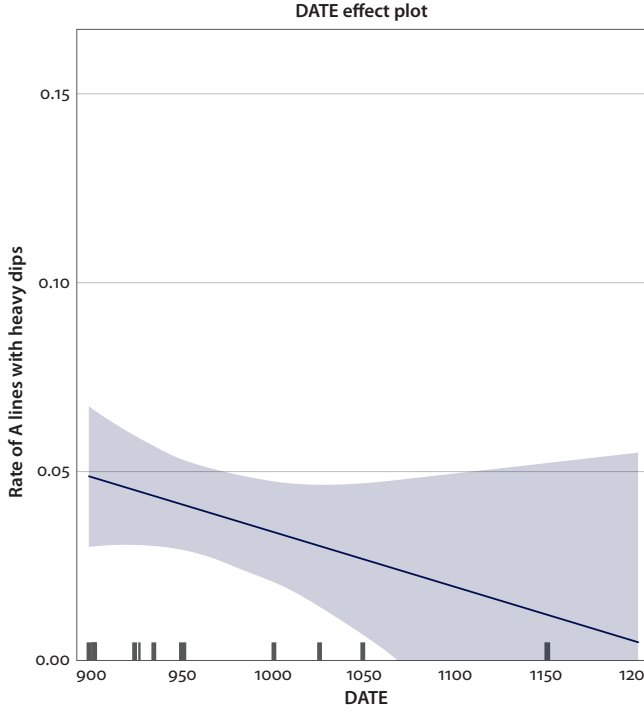

Figure 7.9 Regression line of heavy dips in the Eddic poems, main effect of Date

In summary, there is little variation among the Eddic poems in the rate of heavy dips. What variation there is can be explained by a repeated phrase in *Alv* and the *þulur*-like lists of mythological names in *Vsp* and *Grm*. There is no significant difference between different Eddic meters, nor is there a development over time, unlike Myrvoll's (2014) finding in skaldic poetry. Therefore, the frequency of heavy dips cannot be used to establish an absolute chronology of Eddic poems.

7.4 Discussion

This chapter has presented a number of metrical criteria which have been used for dating Old Norse skaldic poetry. However, none of them proved useful for dating Eddic poems in the current study.

First of all, recall from Chapter 2, Section 2.3.9, that some dating features do not apply to Eddic poetry because they occur only in *dróttkvætt* and similar meters: the verse type *brestr erfiði Austra*, function words in position 4 of E lines, expansion of the preposition *fyrir* (Gade 2001), and internal rhyme (Myrvoll 2014). Other

features – resolution and violations of Craigie's Law – do not develop linearly in skaldic poems (Myrvoll 2014) and thus cannot help establish a timeline for change in Eddic poetry. In addition, Fidjestøl (1999) demonstrated that syncope is the terminus post quem of extant *ljóðaháttr* poems, but I have not investigated this feature because it only proves that no *ljóðaháttr* poem is older than about the 8th century (Chapter 2, Section 2.3.5). None of these metrical features will be discussed further.

This leaves four features that might make for points of comparison between the dates of skaldic poetry and Eddic poems: alliteration of *vr-* with *r-*, hiatus forms, the distribution of line types, and heavy dips. For the distribution of line types and the frequency of heavy dips, the variation within the Eddic corpus does not seem to correlate with any known measure of the age of Eddic poems. For the features *vr-* and hiatus forms, there are simply too few examples in each poem for statistical analysis. Therefore, these four features will not be used in the Naïve Bayes analysis to classify the Eddic poems by date on comparison with skaldic poetry. However, once the classifier produces a new timeline for the composition of Eddic poetry, we will re-examine some of these features to see if they support or challenge the resulting dates.

CHAPTER 8

A multivariate system of dating Eddic poetry

In this chapter, I present a new system of dating Eddic poetry using a Naïve Bayes Classifier (NBC). In Section 8.1, I discuss how NBCs work and how they are used in linguistics to classify texts. In Section 8.2, I create a model by training the NBC on the skaldic data with three linguistic features: particle *of/um*, negation type, and relative clause type. This model is then applied to the *Poetic Edda*, assigning an approximate date to each Eddic poem. In Section 8.3, I discuss the implications of my proposed dates, comparing them to previous scholarship and re-evaluating other dating criteria. Section 8.4 concludes the book.

8.1 Background

8.1.1 Text classification with Naïve Bayes Classifiers

Text classification is an increasingly important subfield of applied linguistics, as it is used to identify the topic of internet articles and to filter spam emails. In addition, text classification techniques can be used to identify attributes of the text's author and have been used in applications ranging from philology to criminology (forensic linguistics). NBCs are the primary method for text classification, "account[ing] for most of the probabilistic approaches … in the literature" (Sebastiani 2002: 20).

A famous early study by Mosteller & Wallace used Bayesian statistics to determine the authorship of the *Federalist Papers* (discussed and expanded in Mosteller & Wallace 1984). Historians had been unable to determine whether 12 of the 77 *Federalist Papers* were written by Alexander Hamilton or James Madison (Mosteller & Wallace 1984: 3). Attempts to identify the author by stylistic differences, e.g. average sentence length, were unsuccessful (Mosteller & Wallace 1984: 7). Mosteller & Wallace found that Hamilton tends to write *while* as opposed to Madison's *whilst*, but one word was not enough to discriminate the authorship of a given text (1984: 16). Thus they built a model that includes a large selection of discriminating words, chiefly function words (e.g. Hamilton's higher frequency of the preposition *by*), which should not vary by the topic of the paper (Mosteller & Wallace 1984: 17).

They conclude that Madison wrote all of the disputed papers, a finding that is backed up by additional statistical tests (Mosteller & Wallace 1984: 263–264).

Bayesian statistics are used when the value of a parameter (such as the author of a text) is unknown. The NBC uses Bayes' theorem to predict the unknown value from data and prior knowledge. Bayes' theorem states that the probability that an item belongs to a class (C) given some data (D) equals the probability of those data occurring in the class, multiplied by the overall probability of the class, divided by the probability of the data:

(1) Bayes' theorem:

$$P(C|D) = \frac{P(D|C) * P(C)}{P(D)}$$

(from Mitchell 1997: 156)

Applied to text classification, the data D are the linguistic features of the texts, and the class C is some attribute of the text such as its author, topic, whether it is spam, etc. The values on the right side of the equation are those observed in the training data: a set of texts for which the classes and distributions of the linguistic features are known. P(D|C) is known as the "likelihood", i.e. the probability that the data occur in a certain class in the training data. P(C) is the "prior probability" of the class, in other words the percentage of texts in the training corpus that belong to that class. P(D) is the frequency of the linguistic features in the whole training corpus. Bayes' theorem allows us to classify additional texts because "[n]ew instances can be classified by combining the predictions of multiple hypotheses, weighted by their probabilities" (Mitchell 1997: 155). The left side of the equation is the "posterior probability", P(C|D), i.e. the probability that a new text belongs to a specific class given a particular distribution of linguistic features. For each new text in the test set, this formula is applied for all possible classes, and the text will be assigned to the class that results in the highest posterior probability. This is known as the Maximum A Posteriori rule (Mitchell 1997: 157).

The term "naïve" comes into play when there is more than one variable. The NBC is naïve, because when there are multiple variables, the likelihood is calculated by simply multiplying the probabilities of those variables, e.g. if there are three linguistic features, the likelihood equals P(D1|C)*P(D2|C)*P(D3|C). Roger Levy calls this the Naïve Bayes Conditional Independence Assumption: "Assume that the probability of observing the conjunction of attributes is equal to the product of the individual probabilities" (Levy 2009). Just multiplying the probabilities is normally a problematic method in statistical work, because it requires the (naïve) assumption that the variables are independent of each other. Despite the fact that the assumption of independence is rarely true, multiplying the probabilities by each other is the quickest, simplest way to calculate the likelihood, and research on Naïve Bayes Classifiers has shown that they yield robust results even when this assumption

is violated (Levy 2009).[1] NBCs have proven to yield similar results to other classifiers, provided a sufficiently large data set (Yang & Liu 1999). Note that my three linguistic criteria are independent of each other as demonstrated by the correlation analyses in the previous chapters, thus the Naïve Bayes Conditional Independence Assumption is actually met. Levy (2009) states that when this assumption holds, the Bayes classifier is an optimal method for classification.

There are different ways to use NBCs for text classification. Some of these are fully automated, such as the "bag of words" method of estimating differences in vocabulary across texts (Sebastiani 2002: 10). My method is not fully automated, but is considered "Supervised machine learning" (Jurafsky 2019). In supervised machine learning, the researcher defines the classes and hand-codes the training set. In the current study, I have defined the classes as 50- or 100-year bins, and both the training data and test data have been coded for their percentages of the three relevant linguistic features.

8.1.2 Applying Naïve Bayes Classifiers to philology

While many studies since Mosteller & Wallace have used NBCs to attribute the author of a text, to my knowledge the first linguist to use a NBC to date texts is Zimmermann (2014). In order to determine the age of 19 undated Old English texts, Zimmermann calculated the rates of 14 syntactic features in the undated texts and a corpus of 50 dated texts (mostly Old English, but with a few Middle English ones as a control), organized into 50-year periods. He trained the NBC on the dated texts and then applied the model to the undated ones. Zimmermann's NBC classified all of the undated texts as Old English, proving that the syntactic features alone can distinguish Old English texts from Middle English (2014: 18). Even better, the NBC placed 12 of the 14 texts into a 50-year period consistent with the scholarly consensus about the texts' ages (Zimmermann 2014: 20). Zimmermann concludes that "syntax is relatively resilient to adaptations introduced by scribes during the copying process" and can be useful alongside more traditional dating methods (2014: 26).

There are many advantages to using NBCs in historical research. First, as a probabilistic classifier, the NBC seems quite suited to dating texts: Fulk points out that the effort to date ancient texts is probabilistic, and "one means of rendering a hypothesis probable is to show that it explains a wider variety of facts than any

1. "However, strong violations of the independence assumptions and non-linear classification problems can lead to very poor performances of naive Bayes classifiers" (Raschka 2014). In my case, the features are quite independent of each other, and I have purposefully selected features that show linear development in the skaldic corpus.

competing hypothesis … if there are linguistic features of an archaic nature in the poem, the greater number of such features" the likelier that the poem is old (2014: 24). Secondly, the NBC easily weighs multiple factors, which is important because a given text may seem to share both older and younger features (Mundal 2004: 224). Thirdly, NBCs are robust with small sets of data, including data with missing values (Raschka 2014). Fourthly, by comparing the texts with unknown dates to those whose dates are known, NBCs can provide an absolute chronology. This is a great improvement over attempts such as Åkesson's study of negation and Fidjestøl's (1999) re-examination of the expletive particle, which could only produce a relative chronology for Eddic poems.

8.2 Dating Eddic poems by the Naïve Bayes Classifier

8.2.1 Training the model on the skaldic data

The first step in using a NBC is to train the model on a corpus whose values are known. In this study, the training data are the skaldic poems with known dates of composition, which have been coded for the three linguistic features that show linear developments in the skaldic corpus and are also relevant in Eddic poetry. These three features are the rate of the particle *of/um* per ten lines, the percentage of negative clauses with the innovative negator *eigi*, and the percentage of relative clauses with the pronoun *sá* adjacent to the relative particle *er*.

I have assigned the work of each skald to 50-year bins, with the exceptions of the 9th and 10th centuries. There are only two 9th-century skalds, so they are placed into a single bin. Although the 10th century contains a larger number of skalds, only one is from the first half of that that century, Þhorn. Because the NBC cannot calculate likelihoods for a class consisting of only one item, the 10th century is treated as a single bin. (See Table 1.2 in Chapter 1 for the exact dates of composition of the poems and how these correspond to the bins.) An additional difference between the skaldic training set for the NBC and the skaldic data in previous chapters is that the training set excludes the 11th-century Ólhelg (Saint Óláfr), as his stanzas contain none of the three features included in the model: no instances of the particle *of/um* (thus a rate of 0), no clausal negation (thus N/A), and no relative clauses (also N/A).[2]

2. Moreover, Kari Ellen Gade (p.c.) considers the stanzas by Ólhelg to be spurious.

The resulting training data are presented in Table 8.1.

Table 8.1 Skaldic training data for the NBC model

Skald	Century	Particle *of* per 10 lines	% *eigi*	% *sá er*
Bragi	9th	0.548	0%	0%
Þjóð	9th	0.721	0%	25.0%
Þhorn	10th	0.082	0%	47.1%
Eskál	10th	0.41	8.3%	50.0%
Eyv	10th	0.407	0%	57.1%
Glúmr	10th	0.4	0%	0%
Tindr	10th	0.104	N/A	50.0%
Eil	11th early	0.179	0%	100%
Hfr	11th early	0.204	0%	57.1%
Hharð	11th early	0.08	33.3%	33.3%
Ótt	11th early	0.266	33.3%	75.0%
Sigv	11th early	0.128	34.8%	68.9%
ÞKolb	11th early	0.238	0%	80.0%
Þloft	11th early	0.072	N/A	50.0%
Arn	11th late	0.103	35.7%	71.4%
Steinn	11th late	0	66.7%	25.0%
Þfagr	11th late	0.222	0%	75.0%
ÞjóðA	11th late	0.114	12.5%	66.7%
Gísl	12th early	0	N/A	66.7%
Ív	12th early	0	N/A	100%
Mark	12th early	0.046	33.3%	60.0%
Rv	12th early	0	62.5%	100%
ESk	12th late	0.061	20%	88.6%
Gamlkan	12th late	0.129	50.0%	84.2%
GunnL	13th	0.027	50.0%	63.6%
Bjbp	13th	0.127	75%	66.7%
HSt	13th	0.101	50%	50.0%

Before classifying the Eddic poems on this model, I need to test how accurate the model is and whether any adjustments are necessary. I performed these tests using R's `caret` package (Kuhn 2020).[3] Because `caret` cannot analyze empty cells, four skalds for which there was no negation (Tindr, Þloft, Gísl, and Ív) were removed from the models in this section (but are included in the final version of the model, applied to the Eddic data in 8.2.2 below).

3. Other packages used, e.g. in the graphs in this section, are `rsample` (Kuhn et al. 2020), `dplyr` (Wickham et al. 2020), `ggplot2` (Wickham 2016), and `corrplot` (Wei & Simko 2017).

In order to know whether the training data might be able to predict the unknown classes in the test set, we can first check how accurately the training data classifies the training set, whose classes are known. This is accomplished using 10-fold cross validation, which divides the training data into a smaller training set consisting of 90% of the data and a development test set with the remaining 10%.[4] The data from the development test set are fitted to a model created on the training set. This procedure is repeated ten times – each time with a different 10% as the development test set. Table 8.2 compares the dates predicted by the model ("Prediction") to the known dates ("Reference").

Table 8.2 10-fold cross validation of the skaldic data

Prediction	Reference						
	09th	**10th**	**11th early**	**11th late**	**12th early**	**12th late**	**13th**
9th	**8.7**	0.0	0.0	0.0	0.0	0.0	0.0
10th	0.0	**17.4**	4.3	0.0	0.0	0.0	0.0
11th early	0.0	0.0	**19.6**	13.0	0.0	0.0	0.0
11th late	0.0	0.0	2.2	**4.3**	0.0	0.0	0.0
12th early	0.0	0.0	0.0	0.0	**8.7**	0.0	0.0
12th late	0.0	0.0	0.0	0.0	0.0	**8.7**	0.0
13th	0.0	0.0	0.0	0.0	0.0	0.0	**13.0**

In this model, texts were accurately classified for most of the seven time bins, as indicated by the numbers in bold. The exceptions are skalds from the late 11th century, many of whom were misclassified as being from the early 11th century. Overall, the classification accuracy (the average of the 10 tests) was quite good at 80.4%.

Next, let us consider the distributions of the three factors, shown in Figure 8.1. The percentage of *sá er* has a normal, Gaussian (bell-shaped) distribution, while the percentage of *eigi* and rate of the particle *of/um* are a bit skewed toward skalds with zero or few instances.

The non-normal distributions for two of the factors suggest that some tuning of the parameters of the analysis might result in a more accurate model. I set up a tuning grid with the following parameters: kernel density estimate vs. Gaussian estimate, bandwidth adjustments between 0 and 5, and Laplace smoother between 0 and 5. The result with the highest classification accuracy using a kernel density estimate resulted in an accuracy of 79.9%, not quite as good as the model with a Gaussian estimate. In addition, I pre-processed the data using Box Cox normalization, center-scaling, and PCA (Principal component analysis), which yielded an

4. In order to prevent time periods with only one text during the cross validation, the data in this section are doubled, i.e., each poem is included twice.

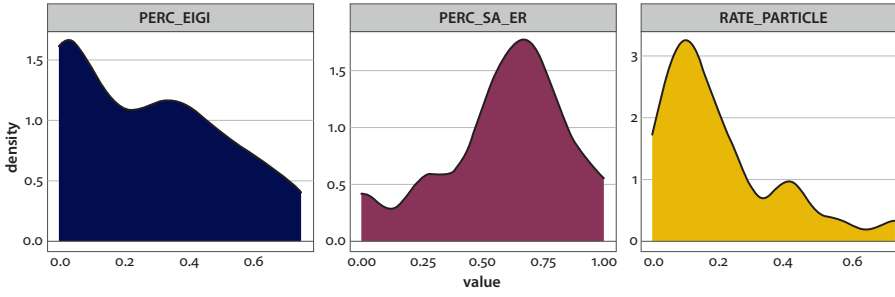

Figure 8.1 Distributions of the three factors in the skaldic data

even worse classification accuracy of 62.0%. Therefore, subsequent analyses will use the standard Gaussian estimate for NBC with a Laplace smoother of 1.

Finally, the `caret` package allows the researcher to investigate the importance of the three linguistic factors in the model relative to each other. The variable importance analysis, visualized in Figure 8.2, shows the contribution of the three factors in classifying texts in each period, measured on a scale of 0 to 100. In all time periods, the most important factor for classifying texts is the particle *of* (an importance of 100 in every bin), followed by the percentage of *sá er*. In the earliest and latest time periods, the percentage of the negator *eigi* is not a deciding factor, probably due to the very low rates of *eigi* throughout the 9th and 10th centuries, and the very high rate in the 13th. However, in the 11th and early 12th centuries, when there is the most variation in negation type, *eigi* is of high importance. This confirms that all three linguistic factors are useful in discriminating the date of composition of Old Norse poetry.

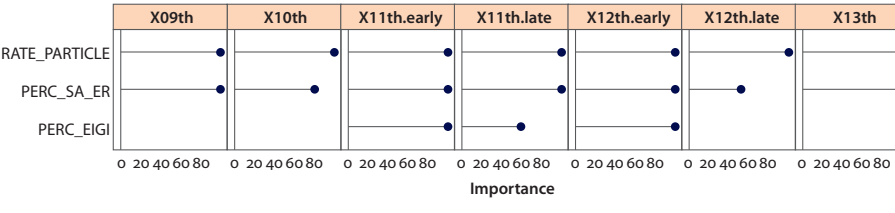

Figure 8.2 Variable importance analysis of the three factors in the NBC

8.2.2 The NBC model and its application to the Eddic poems

Having demonstrated that the chosen linguistic factors can be used to predict the dates of skaldic poems with reasonable accuracy (about 80%), in this section, the model created on the skaldic data is applied to the Eddic poems. Using the *R* package `e1071` (Meyer et al. 2019), I created a training set on all the skalds listed in

Table 8.1, including the four which were excluded in the analyses in Section 8.2.1 (Tindr, Þloft, Gísl, and Ív). Because tuning the parameters in the previous section did not improve the classification accuracy, I used the default settings for the naiveBayes function in `e1071` (Gaussian distribution with Laplace smoother set to 1).

The model built on the data from skaldic poetry was then applied to the testing data, i.e. the Eddic poems. The data from the Eddic poems are presented in Table 8.3.

Table 8.3 Eddic testing data for the NBC model

Poem	Century	Rate *of* per 10 lines	% *eigi*	% *sá er*
Alvíssmál	?	0.230	0%	33.3%
Atlakviða	?	0.171	0%	37.8%
Atlamál	?	0.039	12.8%	33.3%
Baldrs draumar	?	0.463	0%	25.0%
Brot af Sigurðarkviðu	?	0.333	0%	33.3%
Fáfnismál	?	0.149	8.3%	33.3%
Grímnismál	?	0.327	0%	20.0%
Grípisspá	?	0.072	20%	69.2%
Grottasǫngr	?	0.055	20%	N/A
Guðrúnarhvǫt	?	0.287	16.7%	33.3%
Guðrúnarkviða I	?	0.398	0%	60.0%
Guðrúnarkviða II	?	0.171	28.6%	66.7%
Guðrúnarkviða III	?	0.125	0%	33.3%
Hamðismál	?	0.367	10%	40%
Hárbarðsljóð	?	0.120	14.3%	22.2%
Hávamál 1–110	?	0.363	0%	56.6%
Hávamál 111–137	?	0.137	7.7%	40.0%
Hávamál 138–164	?	0.385	0%	38.5%
Helgakviða Hjǫrvarðs.	?	0.094	40%	35.3%
Helgakviða Hund. I	?	0.066	28.6%	84.6%
Helgakviða Hund. II	?	0.047	25%	25%
Helreið Brynhildar	?	0.185	66.7%	40.0%
Hymiskviða	?	0.263	0%	62.5%
Hyndluljóð	?	0.103	100%	25.0%
Lokasenna	?	0.326	4.5%	31.3%
Oddrúnargrátr	?	0.48	12.5%	75.0%
Reginsmál	?	0.171	0%	42.9%
Rígsþula	?	0.082	N/A	N/A
Sigrdrífumál	?	0.392	7.7%	58.3%
Sigurðarkv. in skamma	?	0.233	19.0%	71.4%
Skírnismál	?	0.203	0%	18.8%
Svm/Fjǫlsvinnsmál	?	0.254	0%	29.2%
Svm/Gróugaldr	?	0.225	0%	75%
Vafþrúðnismál	?	0.438	0%	18.8%
Vǫlundarkviða	?	0.280	11.1%	38.5%
Vǫluspá	?	0.338	0%	77.0%
Þrymskviða	?	0.688	0%	25%

The result of applying the skaldic model to the Eddic data gives the posterior probabilities that each Eddic poem dates to each of the seven time periods, presented in Table 8.4. The Maximum A Posteriori (MAP) of each poem, i.e. the highest of the seven posterior probabilities, is in bold. As noted above, the MAP is considered an accurate measure of the text's class, even if the numerical likelihoods themselves are not precise. Thus the MAP of each poem indicates the time period in which the poem was composed according to the NBC.

Table 8.4 Likelihoods for each Eddic poem

Text	9th cent.	10th cent.	11th early	11th late	12th early	12th late	13th cent.
Alvíssmál	0.000	**0.851**	0.118	0.031	0.000	0.000	0.000
Atlakviða	0.000	**0.719**	0.212	0.068	0.000	0.000	0.000
Atlamál	0.000	0.082	0.370	**0.472**	0.075	0.000	0.000
Baldrs draumar	0.110	**0.890**	0.000	0.000	0.000	0.000	0.000
Brot af Sigurðarkviðu	0.005	**0.974**	0.017	0.004	0.000	0.000	0.000
Fáfnismál	0.000	**0.442**	0.402	0.155	0.000	0.000	0.000
Grímnismál	0.011	**0.976**	0.010	0.003	0.000	0.000	0.000
Grípisspá	0.000	0.000	**0.616**	0.313	0.025	0.000	0.046
Grottasǫngr	0.000	0.000	**0.360**	0.260	0.123	0.235	0.022
Guðrúnarhvǫt	0.020	0.022	**0.781**	0.177	0.000	0.000	0.000
Guðrúnarkviða I	0.001	**0.988**	0.009	0.002	0.000	0.000	0.000
Guðrúnarkviða II	0.000	0.000	**0.759**	0.199	0.000	0.000	0.042
Guðrúnarkviða III	0.000	**0.731**	0.178	0.091	0.000	0.000	0.000
Hamðismál	0.037	**0.885**	0.064	0.014	0.000	0.000	0.000
Hárbarðsljóð	0.000	0.044	**0.578**	0.377	0.000	0.000	0.000
Hávamál 1–110	0.001	**0.970**	0.024	0.004	0.000	0.000	0.000
Hávamál 111–137	0.000	0.408	**0.431**	0.161	0.000	0.000	0.000
Hávamál 138–164	0.010	**0.985**	0.005	0.001	0.000	0.000	0.000
Helgakviða Hjǫrv.	0.000	0.000	0.385	**0.550**	0.001	0.000	0.064
Helgakviða Hund. I	0.000	0.000	0.103	0.061	0.029	**0.805**	0.002
Helgakviða Hund. II	0.000	0.000	0.346	**0.587**	0.067	0.000	0.000
Helreið Brynhildar	0.000	0.000	0.135	**0.650**	0.000	0.000	0.215
Hymiskviða	0.000	**0.694**	0.268	0.038	0.000	0.000	0.000
Hyndluljóð	0.000	0.000	0.001	**0.996**	0.000	0.000	0.002
Lokasenna	0.006	**0.965**	0.023	0.005	0.000	0.000	0.000
Oddrúnargrátr	0.024	**0.954**	0.017	0.005	0.000	0.000	0.000
Reginsmál	0.000	**0.666**	0.259	0.075	0.000	0.000	0.000
Rígsþula	0.000	0.072	0.240	0.204	0.008	0.195	**0.280**
Sigrdrífumál	0.004	**0.961**	0.030	0.005	0.000	0.000	0.000
Sigurðarkv. in sk.	0.000	0.000	**0.876**	0.124	0.000	0.000	0.000
Skírnismál	0.001	**0.897**	0.073	0.030	0.000	0.000	0.000
Svm/Fjǫlsvinnsmál	0.001	**0.909**	0.071	0.019	0.000	0.000	0.000
Svm/Gróugaldr	0.000	0.420	**0.510**	0.070	0.000	0.000	0.000
Vafþrúðnismál	0.105	**0.894**	0.000	0.000	0.000	0.000	0.000
Vǫlundarkviða	0.005	0.428	**0.475**	0.093	0.000	0.000	0.000
Vǫluspá	0.000	**0.865**	0.121	0.015	0.000	0.000	0.000
Þrymskviða	**0.741**	0.259	0.000	0.000	0.000	0.000	0.000

Let us first take a broad inspection of the data. First, only one text is classified as 13th century, which is *Rþ*, not attested in the CR manuscript. The fact that none of the 29 CR poems have been classified this late is a positive outcome, because the CR manuscript is from the 13th century, and the scholarly consensus is that none of its poems is later than the 12th century. Secondly, only one poem (*Þrk*) is classified in the 9th century, and only one (*HH1*) is placed in the 12th century, so that the majority of poems are classified as 10th or 11th century. Again, this roughly matches the scholarly consensus that most Eddic poems are from the centuries just before and just after the conversion of Iceland. In general, then, the NBC gives results that seem very plausible. As for the proposed dates of the individual poems, these will be discussed in detail in the next section.

8.3 Implications of the proposed dates

8.3.1 Comparison to classifications by other scholars

In this section, I will evaluate and interpret the results of my new classification of Eddic texts based on the NBC. Table 8.5 compares the proposals of Finnur Jónsson (1920), de Vries (1941–1942), and von See et al. (1997–2019) with my classification.

There are of course many differences between my proposed dates and those by other scholars, which will be discussed below in the sections on individual poems. I will begin this discussion by making a few general comparisons and evaluations of these other scholars' proposals. (The date of each individual poem will be treated in 8.3.3 below.) Beginning with Finnur Jónsson, for the most part, my relative ages line up well with his: except for *Rþ*, the poems dated by Finnur to before 935 are classified by the NBC to the 9th, 10th, or in three cases the early 11th century. All of the poems dated by him between 925 and 1000 are classified as 10th or 11th century by the NBC. Poems considered later than 1000 by Finnur are placed by the NBC into the 11th or 12th centuries, with just one exception (*Od*). Despite widespread criticism of Finnur's criteria for dating the poems (intertextual relationships, religious settings, and flora and fauna), his relative dates are largely supported by the linguistic evidence investigated in this study.

As for de Vries, there are many points of agreement with Finnur's and my results from the NBC: all three of us date *Skm, Háv* (except stanzas 111–137), *Vm, Grm, Vsp, Ls, Rm, Fm*, and *Sd* to the 9th or the 10th century. Where de Vries and Finnur disagree, my results mostly match Finnur's: he and I agree on earlier dates for *Þrk, Bdr, Alv, Hym, Br, Gðr I, Gðr III*, and *Od*, and we both date *Hlr, Ghv, Sg*, and *Am* to the 11th century. In a few cases, my results are closer to de Vries'

Table 8.5 Previous scholars' dates vs. the results of the Naïve Bayes Classifier*

Poem	Finnur Jónsson	De Vries	Von See et al.	Naïve Bayes Classifier
Háv 111–37	875–900			early 11th century
Skm	900	870–1000	1100–1270	10th
Þrk	900	1150–1200	"late" < 1270	9th
Vkv	900	before 800	1100–1270	early 11th
Rþ	900	1100–1150	1200's	13th
Bdr	900	1150–1200	< 1225	10th
Háv, rest	900–930	870–1000	< 1200	10th
Vm	900–930	870–1000	1200's	10th
Grm	900–930	870–1000	900–1225	10th
Hrbl	900–930	870–1000	< 1225	early 11th
Vsp	935	870–1000	< 1225	10th
Ls	935	870–1000	< 1225	10th
Hm	925–950	before 800	1100–1250	10th
Gðr II	925–950	1150–1200	< 1250	early 11th
HH II	925–950	1000–1100	< 1262	late 11th
Svm/Fjm	925–950	1300–	n/a	10th
Rm	925–950; 950–975	870–1000	1100–1250	10th
Alv	950–975	1150–1200	1100–1270	10th
Hdl	950–975	1150–1200	< 1225	late 11th
Grt	950–975	1000–1100	900–1225	early 11th
HHv.	950–975; 975–1000	1100–1150	< 1262	late 11th
Hym	975–1000	1150–1200	< 1150	10th
Fm	975–1000	870–1000	1050–1200	10th
Sd	975–1000	870–1000	< 1250	10th
Br	975–1000	1150–1200	1100–1250	10th
Gðr I	975–1000	1150–1200	1145–1270	10th
Gðr III	975–1000	1150–1200	< 1270	10th
Akv	975–1000	before 800	< 1145	10th
HH I	1000–1025	1000–1150	1100–1250	late 12th
Hlr	1000–1025	1150–1200	< 1200	late 11th
Od	1000–1025	1150–1200	1100–1250	10th
Ghv	1000–1025	1150–1200	< 1250	early 11th
Svm/Grg	1000–1025	1300–	n/a	early 11th
Sg	1050	1150–1200	< 1250	early 11th
Am	1050	1150–1200	< 1250	late 11th
Grp	1150–1200	1200–1250	< 1250	early 11th

* The dates by other scholars reported here are taken from Table 2.1 in Chapter 2 above; see the footnote to that table for references.

proposals – *Rþ, Hrbl, HH II, Grt, HHv* – and for *Gðr II* and *Hdl* the NBC returns a date between Finnur's and de Vries'. In general, this study lends more support to Finnur's proposals than to those of de Vries.

Finally, recall that von See et al. use very conservative dating criteria, thus their dates are much more tentative. Setting aside their extremely vague conclusions such as "< 1250," I will note a few points of agreement and disagreement. Von See et al.'s dates are markedly later than mine and Finnur's (and to a lesser extent de Vries') with respect to many texts: *Skm, Þrk, Vkv, Vm, Hm, Rm, Alv, Fm, Br*, and *Gðr I*. Von See et al. propose dates for a few texts that are compatible with mine and are also in agreement with Finnur (*Grm*) or de Vries (*Grt*). Finally, my results agree with von See et al.'s relatively late dates compared to Finnur and de Vries with respect to two texts: I place *HH I* in the 12th and *Rþ* in the 13th century. On the whole, von See et al.'s late dates seem to be reflective of Klaus von See's tendency to view Eddic poetry as being the product of scholastic or courtly influence from continental Europe and do not find much support from a linguistic analysis, except in the cases of *HH I* and *Rþ*.

8.3.2 Evaluation of other dating criteria

The preceding chapters identified three criteria that are useful for dating Eddic poetry via a statistical comparison with skaldic poetry, and these are the three that were used to build the Naïve Bayes model. Of the three, the rate of the particle *of/um* turns out to be the most important factor for classifying texts, closely followed by the percentage of relative clauses with *sá er* (see Figure 8.2 above). The percentage of negative clauses with *eigi* is an important factor for this model only beginning in the 11th century.

Other features have been discussed in this book but were not included in the NBC for various reasons. The details about these have been discussed in previous chapters and will not be repeated here. Instead, in this section I examine whether these other dating criteria support the results of the NBC.

Alliteration of **vr*- with *r*- (Chapter 2, Section 2.3.3): Fidjestøl (1999) found that words beginning in Proto-Norse **vr*- alliterate with *v*- in *Vm, Fm, Sd*, and *Bdr*, with both *v*- and *r*- in *Þrk, Akv, Ls*, and *Háv*, and with *r*- in *Grp, Alv, Am, HHv, HH II, Grm*, and *Rþ*. Haukur Þorgeirsson (2016) also examined this feature and drew mostly similar conclusions to Fidjestøl. While there are far too few examples of this feature to be used in a statistical analysis, Fidjestøl's and Haukur's results are compared with the results of my NBC in Table 8.6 (poems with no reflexes of words in **vr*- have been omitted).

The NBC has dated the texts to periods that are mostly compatible with the **vr*- criterion. All of the texts with only alliteration in *v*- are dated by the NBC to

Table 8.6 Ages of the Eddic poems on alliteration with **vr-* vs. the results of NBC

Poem	Fidjestøl	Haukur	Naïve Bayes Classifier
Þrymskviða	"weak case" for *v-*		9th
Vafþrúðnismál	*v-* (before 1000)	*v-* (early)	10th
Baldrs draumar	*v-* (before 1000)		10th
Fáfnismál	*v-* (before 1000)	*v-* (early)	10th
Sigrdrífumál	*v-* (before 1000)	*v-* (early)	10th
Svm/Fjǫlsvinnsmál	"weak case" for *v-*		10th
Hávamál, parts	*v-* and *r-* (900–1000)	*v-* (early)	10th
Lokasenna	*v-* and *r-* (900–1000)	*v-* (early)	10th
Atlakviða	*v-* and *r-* (900–1000)	*v-* (early)	10th
Alvíssmál	*r-* (after 900)		10th
Grímnismál	"weak case" for *r-*		10th
Svm/Gróugaldr	*r-* (after 900)		early 11th
Helgakviða Hjǫrvarðs.	*r-* (after 900)		late 11th
Grípisspá	*r-* (after 900)	*r-* (late)	early 11th
Atlamál	*r-* (after 900)	*r-* (late)	late 11th
Helgakviða Hund. II	"weak case" for *r-*		late 11th
Rígsþula	"inconclusive" *r-*		13th

the 9th or 10th century, and all of those that alliterate with both *v-* and *r-* are dated to the 10th century. Finally, note that poems that alliterate exclusively with *r-*, thus dating to the year 900 or later, are mostly classified by the NBC to the 11th century or later. On the whole, the evidence from alliteration supports the validity of the dates resulting from my NBC.

Contracted vs. hiatus forms (Chapter 2, Section 2.3.4): Recall Fidjestøl's claim that words containing hiatus vowels in pre-Old Norse (e.g. *áa* or *éi*) undergo contraction to long monophthongs (*áa>á, éi>é*) beginning in the 10th century and Myrvoll's finding that falling diphthongs change to rising diphthongs (*éa> já*) in the 13th. Like the previous feature, there are too few instances of this to have included it in the NBC analysis. However, Fidjestøl's data can be compared to the dates from the NBC, as in Table 8.7.

The texts dated by the NBC to the 9th and 10th centuries have no contraction or only one or two contracted words, compatible with Fidjestøl's finding that contraction first appears in skaldic poetry in the 10th century. In my 11th- and 12th-century groups, we find both contracted and uncontracted forms, which is in line both with Fidjestøl's claim that hiatus and contracted forms occurred alongside each other until the 13th century and with Gade's (2001) claim that hiatus forms continued to be used as poetic license. Given the small number of words that show this feature, the possibility of poetic license, and the fact that hiatus forms do not disappear until around 1200 when the period of Eddic composition was largely

Table 8.7 Hiatus and contracted forms in *fornyrðislag* poems vs. dates from the NBC*

Poem	Hiatus forms	Contracted	Naïve Bayes Classifier
Þrk	(léa, féar)		9th
Vsp	Háars, velspáa, Gimléi		10th
Hym	sáo, fríi, tváa, (fía), eitrfáan		10th
Rm	(féar,) tréom		10th
Sd	klóom		10th
Br	scáa		10th
Fm	(séa)	1 example	10th
Gðr I	séir, knéom, séi	1 example	10th
Od	ósmáar, fimtían		10th
Akv	Kíars, eyrscáan	1 example	10th
Hm		2 examples	10th
Vkv	sáuz, (híu, séa,) sáo, (séa)		early 11th
Sg	(éarn,) séir, féi, (féar,) séi, (éarn)		early 11th
Grt	(gréa, féar)		early 11th
Gðr II	Háalfs, (féar,) séir	1 example	early 11th
Grp	séi, séi, séir, náa	3 examples	early 11th
HHv	fáaðr, séir		late 11th
HH II	gráan, séi, (séa)		late 11th
Am	(féar)		late 11th
Hdl	(séa)		late 11th
HH I	fáa, (séac, séa,) fáa,		late 12th
Rþ	bláfáan		13th

* Adapted from Table 2.2 in Chapter 2. Poems with no conclusive instances are excluded from the table. Forms in parentheses involve the change *éa* to *já*, argued by Myrvoll (2014) to have occurred after 1200.

over, I concur with Fidjestøl and Gade that this is a poor criterion for dating Eddic poetry. Regardless of the strength of this criterion, however, none of the hiatus vs. contracted forms provides any real counterevidence to the dates resulting from my NBC analysis.

Mythological kennings (Chapter 2, Section 2.3.6): De Vries (1934) found that kennings involving pagan gods were not used by skalds from 1000 to 1150, and he concluded that the Eddic poetry on mythology was unlikely to have been composed in this period. Although de Vries' method has been strongly criticized, it has been revived by Males (2020) and does find some support from my study, because nearly all of the mythological poems are placed into the 9th or 10th century by the NBC. The exceptions are mostly in my early-11th-century group (*Hrbl, Grt, Svm/Grg*, and stanzas 111–137 of *Háv*), i.e. just after the conversion of Iceland, when we might speculate that a few poems with mythological themes continued to be composed (see also Fidjestøl 1999: 293). This leaves only two mythological poems from much

later than the conversion. *Hdl*, dated to the late 11th century by the NBC, has an obvious reference to Christianity ("Then will come another, even mightier / though I dare not name his name"), and perhaps this reference was enough to allow the composition of a pagan poem well into the Christian era. Finally, the NBC places *Rþ* in the 13th century, i.e. during the antiquarian revival, when both de Vries and Fidjestøl find an increase in mythological references in skaldic poems. In sum, the NBC dates most of the mythological poems to the pagan period (or a few decades after conversion) as might be expected from their content, while *Hdl* was composed in a clearly Christian milieu and *Rþ* is a late, antiquarian product.

Verb position in independent clauses (Chapter 5, Section 5.1.5): Haukur Þorgeirsson (2012) examined violations of V1/V2 in Eddic poems composed in *fornyrðislag*, finding that there were more such violations in older poems than in later ones. Because skaldic poetry does not show the same kind of variation in this feature that Eddic poems do, I did not attempt to include main-clause word order in my statistical analysis, but it can be used as a check on my results. In Table 8.8, I compare Haukur's counts of V1/V2 violations with the dates that result from the NBC.

Table 8.8 Violations of V1/V2 vs. the results of the Naïve Bayes Classifier*

Poem	# long lines	# V1/V2 violations	% V1/V2 violations	Naïve Bayes Classifier
Br	75	6	8.0%	10th
Vkv	143	10	7.0%	early 11th
Gðr II	175	11	6.3%	early 11th
Gðr I	100.5	6	6.0%	10th
Hm	106	6	5.7%	10th
Þrk	109	6	5.5%	9th
Vsp	269	13	4.8%	10th
Ghv	87	4	4.6%	early 11th
Grt	91	4	4.4%	early 11th
Grp	209	8	3.8%	early 11th
Od	125	4	3.2%	10th
Akv	175.5	5	2.8%	10th
Hdl	195	5	2.6%	late 11th
Sg	279	6	2.2%	early 11th
Hym	152	3	2.0%	10th
Rþ	183	3	1.6%	13th
HH II	214	3	1.4%	11th late
HHv	100	1	1.0%	11th late
HH I	227	2	0.9%	12th late

* Counts for number of lines, number of violations, and ratio are all from the tables in Haukur Þorgeirsson (2012: 255, 260). Haukur did not investigate poems in *ljóðaháttr*.

Counts for number of lines, number of violations, and ratio are all from the tables in Haukur Þorgeirsson (2012: 255, 260). Haukur did not investigate poems in *ljóðaháttr*.

This criterion appears to be very compatible with the results of my NBC analysis. First, most of the poems that I date to the 9th and 10th centuries have relatively high rates of verb-late in independent clauses (4.8% or higher), except *Od, Akv*, and *Hym* (which still have 2–3%). Secondly, most of 11th-century poems, especially those from the early 11th century, have rates of verb-late in the middle of the range, from 2.2% in *Sg* to 7% in *Vkv*. Finally, the four poems with the fewest V1/V2 violations (*Rþ* and the Helgi poems) are dated to the late 11th, 12th, and 13th centuries.

Verb position in subordinate clauses revisited (Chapter 5, Section 5.2): I was unable to detect a diachronic trend in the clause-late placement of verbs in subordinate clauses using existing dating methods (using Finnur Jónsson's dates, or by correlation with other dating criteria). Therefore, verb position was not included as a factor in my NBC model. However, now that I have proposed new dates for the poems based on the result of the NBC, let us see whether any pattern emerges.

As with my previous attempts to discern a change in subordinate-clause word order over time, there is no diachronic pattern in Table 8.9. The texts with very few instances of early verb placement (thus presumably older) range from the 10th to the late 11th centuries. The 9th-century *Þrk*, which should show the lowest rates of early verb placement, turns out to have a relatively high rate of V1/V2. Clearly, the position of the verb in subordinate clauses is not a valid dating criterion for Eddic poetry.

Kuhn's *Fremdstofflieder* hypothesis (Chapter 5, Section 5.1): Kuhn (1933) proposed that *fornyrðislag* poems with foreign matter (*Vkv* and the poems of the Niflung cycle) behave differently from *fornyrðislag* poems with domestic matter (the Helgi poems and the certain mythological ones) with respect to a number of grammatical features. Fidjestøl (1999) and others have already pointed out numerous flaws in Kuhn's reasoning, and my statistical analyses failed to find significant differences in word order between the supposed domestic and foreign groups. Moreover, now that I have proposed new dates for many of the poems, any apparent differences that remain between these two groups can be explained as the result of time differences. The domestic *fornyrðislag* poems are nearly all from the 9th or 10th century (*Þrk, Bdr, Vsp, Ls, Alv, Hym*). As for the purportedly foreign poems in that meter, only four (*Br, Gðr I, Gðr III*, and *Od*) are from the 10th century, while the other seven are from the 11th century. Haukur Þorgeirsson (2012) has already demonstrated that the differences between Kuhn's groups with respect to main-clause verb order can be explained as simple diachronic change, and my results similarly suggest that Kuhn's other observations are an effect of time rather than the foreign vs. domestic distinction.

Table 8.9 Subordinate-clause verbs vs. the results of the Naïve Bayes Classifier*

Poem	# V1/V2/ambig.	# unambig. V-late	% V1/V2/ambig.	Naïve Bayes Classifier
Gðr III	0	7	0%	10th
Br	2	12	14.3%	10th
Hlr	2	8	20.0%	late 11th
Akv	5	13	27.8%	10th
Vkv	7	16	30.4%	early 11th
Grt	4	8	33.3%	early 11th
Grp	10	18	35.7%	early 11th
Vsp	6	10	37.5%	10th
Ghv	8	12	40.0%	early 11th
HH II	14	21	40.0%	late 11th
Od	10	15	40.0%	10th
Sg	17	24	41.5%	early 11th
Fm	15	20	42.9%	10th
Ls	23	28	45.1%	10th
HHv	17	19	47.2%	late 11th
Hym	9	10	47.4%	10th
Am	42	44	48.8%	late 11th
Gðr I	7	7	50.0%	10th
Hm	7	7	50.0%	10th
Hdl	5	5	50.0%	late 11th
Skm	16	15	51.6%	10th
Gðr II	13	12	52.0%	early 11th
Þrk	7	5	58.3%	9th
Hrbl	21	12	63.6%	early 11th
HH I	15	8	65.2%	late 12th
Sd	21	11	65.6%	10th
Grm	23	12	65.7%	10th
Rm	12	4	75.0%	10th
Alv	11	3	78.6%	10th
Vm	23	3	88.5%	10th
Bdr	5	0	100%	10th
Rþ	1	0	100%	13th

* The table excludes *Háv* and *Svm*, because I did not count this feature in those poems.

Metrical criteria (Chapter 7): The two metrical criteria that have been investigated in this study are the frequency of Type A in odd lines and the increase in dips containing secondary stress ("heavy dips"). Neither of these show the increase in Eddic poems that is predicted by the development in skaldic poetry. Let us see whether any light is shed on these features given the new dating proposals that result from the NBC, shown in Table 8.10.

Table 8.10 Metrical criteria vs. the results of the Naïve Bayes Classifier

Poem	% of odd A lines	% of heavy dips	Naïve Bayes Classifier
Háv 111–37	46.6%	5.3%	early 11th century
HH II	49.5%	2.9%	late 11th
Grp	50.5%	0.5%	early 11th
Od	52.8%	7.6%	10th
Am	53.8%	2.4%	late 11th
Akv	55.7%	4.9%	10th
Hym	57.2%	1.5%	10th
Þrk	57.8%	2.1%	9th
HH I	58.3%	4.7%	late 12th
Gðr III	60.0%	2%	10th
Hrbl	60.4%	2.6%	early 11th
Skm	60.7%	6.6%	10th
Bdr	61.4%	3.1%	10th
Hdl	62.1%	4.3%	late 11th
Vsp	62.8%	10.2%	10th
Hlr	63.0%	0%	late 11th
Gðr I	63.3%	2.3%	10th
Br	65.3%	3.3%	10th
Grt	65.9%	2.2%	early 11th
Vm	66.1%	2.9%	10th
Gðr II	66.1%	4.2%	early 11th
Vkv	66.5%	7.3%	early 11th
Fm	66.7%	1.2%	10th
Sg	66.8%	4.7%	early 11th
Ghv	67.5%	2.1%	early 11th
HHv	68.3%	2.7%	late 11th
Rm	71.6%	1.7%	10th
Hm	71.7%	1.6%	10th
Háv, rest	72.8%	16%	10th
Grm	75.7%	11.8%	10th
Rþ	75.8%	1.1%	13th
Sd	79.4%	1.9%	10th
Alv	80.6%	13.6%	10th
Ls	83.3%	5.6%	10th

This result is no better than the previous ones. Beginning with the percentage of Type A lines, among poems with a relative low rate, there are early poems such as *Hym* and *Þrk*, as well as much later poems like *HH II* and *Am*. Similarly, among the poems with high frequencies of Type A are the early *Hm* and the very late *Rþ*, plus a large number of 10th-century *ljóðaháttr* poems. The picture is no better with heavy dips: the poems with very infrequent heavy dips include quite early poems

(*Fm, Hym*) and much later ones (*Hlr, Rþ*). Nor do these two metrical features correlate with each other: *Od* and *Háv* 111–137 have the very lowest rates of Type A but among the highest number of heavy dips. In short, neither of these metrical criteria appear to be useful for dating Eddic poetry or even for serving as a check on proposed dates.

8.3.3 On the ages of the individual poems

The scholarly debates on the ages of these poems are discussed in detail in Chapter 2, Section 2.2 above. In this section, I will discuss how the results of the NBC help inform the scholarship on these poems, in some cases providing evidence to support a particular scholar's theory, and in other cases suggesting that a revision of the consensus about certain poems may be necessary.

Vǫluspá (Vsp): Because it provides the most comprehensive overview of Old Norse mythology of any of the Eddic poems, *Vsp* has long been the most controversial poem in the corpus. Proposed dates range from the 10th century (Finnur Jónsson, de Vries), to the early Christian period (McKinnell, Einar Ól. Sveinsson, Dronke), to the scholastic movement of 12th- and 13th-century Iceland (Lönnroth, Schulte, Rafnsson). A major line of reasoning among those who see *Vsp* as late is the use of supposedly Christian motifs. It is thus especially interesting that the linguistic features point to the 10th century: with its relatively high frequency of the particle *of* but no instances of *eigi*, the NBC dates it to the 10th century, despite the relatively high rate of *sá er*. The 10th-century date is supported by the sole use of hiatus forms and the robust attestation of verb-late main clauses. What, then, should we make of the motifs that seem to point to Christian influence? These could be late interpolations on the part of the compiler of the *Poetic Edda*, but the 10th century dating of the poem is fully compatible with the milieu of late paganism, a time when Christian imagery was freely blended with the old religion. I thus agree with Jónas Kristjánsson that "the poet's mental furniture was fundamentally heathen even though he … got some of his ideas from the new religion" (1997: 44).

Hávamál (Háv): This is the longest and most complex of the Eddic poems, and consequently the scholarship on its date is rich. It is often divided into as many as six sections, and the different sections are assigned different dates by some scholars. Finnur Jónsson dated *Loddfáfnismál* (stanzas 111–137) to the 9th century and the rest of *Háv* to the 10th. Einar Ól. Sveinsson (1962) and McKinnell (2014), on the other hand, considered the other parts of the poem to be the oldest, dating back to the early 10th century, with *Loddfáfnismál* dating to the Christian era. Evans (1986) also dates the first section to the early 10th century but considers *Loddfáfnismál* equally old. A radically different view is advocated by the work of Klaus von See

(1981, 1989, 2019), who argues that *Háv* is a unified, 13th-century learned work, a controversial view that has been challenged by many scholars.

The results of the NBC provide empirical support for the antiquity of *Háv*. The NBC places stanzas 1–110 and 138–164 in the 10th century; these sections have quite high rates of the particle *of*, very little negation with *eigi*, and moderate rates of *sá er*. *Loddfáfnismál* is dated to the early 11th century, probably because it has lower rates of the particle *of* and higher rates of *eigi* than the other sections. This lines up exactly with the dates proposed by Einar Ól. Sveinsson and McKinnell. That the bulk of *Háv* was composed in the 10th century is supported by alliteration of **vr-* words with both *v-* and *r-*. It seems safe to conclude that the language of the various sections of *Háv* dates back to the pagan era, even if these sections were not assembled into a single work until a few centuries later.

Vafþrúðnismál (Vm): Because of its less tragic tone and lack of Christian elements, Ulvestad (1954) and de Vries (1941) date this poem earlier than *Vsp*, to the 9th and early 10th century, respectively. Larrington (2002b) notes that this is considered by many to be one of the oldest Eddic poems. On the other hand, von See et al. (2019) suggest that it is later than *Vsp* and note that it has some vocabulary that is associated with 13th- and 14th-century texts. My analysis classifies this poem as a 10th-century poem, with its high rate of *of/um* and low rates of the other two linguistic features. This early date is corroborated by evidence from alliteration with **vr-*. In sum, all of the linguistic evidence supports the consensus (*pace* von See et al.) that *Vm* belongs to the oldest layer of Eddic composition.

Grímnismál (Grm): The consensus in the literature is that this is one of the older mythological poems, with Finnur Jónsson and de Vries placing it in the 10th century. Von See et al. argue that it must post-date some 10th-century skaldic verse but do not attempt a more precise dating. The linguistic features used in my analysis all point to an early date, and indeed the NBC classifies *Grm* as a 10th-century work. None of the additional criteria in Section 8.3.2 provide any conclusive evidence either to support or contradict this conclusion.

Skírnismál (Skm): This poem is considered as early as 900 by scholars such as Finnur Jónsson, de Vries, Einar Ól. Sveinsson, and Dronke, but Andersson (1985) and von See et al. place it in the 12th century or later due to its bridal-quest and balladic elements. In its morpho-syntactic features, however, this poem has similar frequencies to *Grm* and is classified by the NBC analysis in the 10th century.

Hárbarðsljóð (Hrbl): This poem is dated to the late pagan period in the older literary histories, but von See et al. argue that it is a product of literary scholarship, perhaps dating to the 12th century. With its lower frequency of *of/um* and its attestation of the new negator *eigi*, the NBC places the poem in the early 11th century. This is more in line with the traditional interpretation that the poem dates to the period of transition to Christianity.

Hymiskviða (Hym): Many scholars agree that *Hym* is the youngest mythological poem, citing its humorous tone, use of kennings, and (less plausibly) Christian elements. Proposals range from the end of the 10th century (Finnur Jónsson) to the 12th (de Vries). Linguistically, it has a high frequency of the later relative pronoun *sá er*, but the other two features are consistent with an early date. In such cases, the NBC is especially useful for weighing features against each other, and this poem is classified by the model as 10th century. While this date goes against the scholarly consensus, note that the presence of humor and kennings are not definitive dating criteria (kennings were certainly used in 10th century in skaldic poetry). One other linguistic feature of *Hym* – its lack of contracted forms – would seem to support my early dating, while its low frequency of V2 violations is more consistent with 11th- and 12th-century poems.[5]

Lokasenna (Ls): Many scholars consider this a purely pagan, 10th-century work (Finnur Jónsson, de Vries, Einar Ól. Sveinsson, Anderson 2002), while Abram (2011) and von See et al. view it as an antiquarian catalog of myths dating to the 12th century. Linguistically, it has moderate rates of the morpho-syntactic features that I include in my NBC model, which dates the poem to the 10th century. This is consistent with the alliteration criterion, as the poem alliterates **vr-* words with both *v-* and *r-*.

Þrymskviða (Þrk): Here, too, a wide range of dates have been proposed, from the late 9th century (Finnur Jónsson), to the 12th century (de Vries, citing influence of the ballad), to the 13th (Hallberg, who suggested that it was composed by Snorri). McKinnell (2014) splits the difference, suggesting that the poem results from archaic material that was revised in the 12th century. The morpho-syntactic features examined here, however, point unambiguously to an early date: *sá er* is rare, there is no clausal negation in *eigi*, and *of/um* is extremely frequent. Thus, the NBC analysis places this poem in the 9th century, which is consistent with the (weak) evidence from alliteration in *v-*.

Vǫlundarkviða (Vkv): Finnur Jónsson dates this poem to the 10th century, McKinnell (1992) places it in 10th or 11th century England, and von See et al. regard it as a 12th-century composition that was influenced by other heroic Eddic poems. Setting aside the putative place of composition (England or Scandinavia), I conclude from the NBC analysis that it dates to the early 11th century. This date in the middle of the period is compatible with the additional criteria from 8.3.2 above: it has a high degree of V1/V2 violations but no contracted forms.

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5. Kari Ellen Gade (p.c.) suggests that the use of kennings might indicate that the poet of *Hym* may have composed skaldic poetry as well; if true, the unexpectedly high rate of V2 in *Hym* could be explained as influence from *dróttkvætt*.

Alvíssmál (Alv): Nearly all scholarship considers this to be a late work, a mere catalog of poetic diction dating to the 12th century (de Vries, Einar Ól. Sveinsson, von See et al., and Acker 2002). All of its morpho-syntactic features, however, are early; thus the NBC dates *Alv* to the 10th century. This is consistent with Finnur Jónsson's intuitions about the age of the poem. As for other features, a 10th-century date is not inconsistent the poem's alliteration of **vr-* words with *r-*.

The Helgi poems (*HH I, HHv, HH II*): Most scholars date *HH I* to the 11th century, but its age relative to the other Helgi poems is disputed, with de Vries and Andersson (1985) considering it older than the other two. Finnur Jónsson, Einar Ól. Sveinsson, Phillpotts (1973), and Jónas Kristjánsson, however, all contend that *HH I* is the youngest of the three. *HHv* and *HH II* are dated by Finnur to the 10th century, while de Vries, Andersson, and von See et al. consider them to be late compilations of earlier fragments with 12th- and even 13th-century elements. In their morpho-syntactic features, all three poems have quite low rates of the particle *of* and robust use of the innovative negator *eigi*, but only *HH I* attests a high degree of relative *sá*. As a result, the NBC model places *HHv* and *HH II* in the late 11th century and *HH I* in the 12th. While this confirms the relative dates of Finnur, Einar Ól. Sveinsson, Phillpotts, and Jónas Kristjánsson, my dates are about a century later than those proposed by many other scholars. However, note that my results are supported by additional linguistic criteria: none of these poems have alliteration in *v-*, and all have very few violations of V1/V2 in main clauses.

Grípisspá (Grp): Most scholars consider this a 12th- or 13th-century, antiquarian endeavor, derivative of the rest of the Sigurðr poems and serving as an introduction to them. Given this scholarly consensus, it is surprising that the NBC places it in the early 11th century. *Grp* has frequencies of my three morpho-syntactic criteria that are associated with later poems but do not quite approach the extreme frequencies of 12th-century skaldic poets. This result cannot simply be dismissed as a problem with the model, because additional linguistic criteria are consistent with an 11th-century date of composition: *Grp* has a mix of hiatus and contracted forms, and nearly 4% of its main clauses have late placement of the verb.

There are two possible explanations for the presence of older linguistic forms in this poem. The first is that *Grp* genuinely belongs to the oral tradition of Eddic poetry and is over a century earlier than most scholars believe. Von See et al. argue that its poet knew *Fm* and *Sd*, and other scholars note the influence of other Sigurðr poems on *Grp*. Of the poems related to Sigurðr, the NBC places *Rm, Fm, Sd, Br*, and *Gðr I* in the 10th century, while *Gðr II* and *Sg* are dated to the early 11th century, leaving *Hlr* as the only Sigurðr poem from the late 11th century. Thus it is possible that *Grp* was composed by a late 11th-century poet, who was familiar with all of Eddic poems about Sigurðr and composed it as a summary of those contemporaneous works. The second explanation is that the poet of *Grp* lived in the 12th century

and was influenced not only by the themes of the other Eddic poems but also by their grammar and style. If that were the case, we would expect the poem's early features to be used in a stereotyped, archaizing way. For the particle *of*, there is no sign that this feature is an archaism, as none of the three instances occurs before a participle (see Chapter 3, Section 3.1.3 on this stereotyped use of *of*). Similarly, the high percentage of clitic negation occurs in various forms, suggesting that it is productive: we find the negative clitic *-a* in *era* (stanza 23), *-t/-ð* in *angraðit* and *eroð* (stanzas 34 and 42), *-at* in *munat* (stanza 52 and 53), and the negative combined with a subject clitic in *emka* (stanza 21), *vilkat* (26), *scalattu* (22), *garaðu* (29), and *mantattu* (31). In sum, none of the factors examined in this study suggest that *Grp* is younger than all the other poems in the CR by a century.[6]

Young Sigurðr poems *(Rm, Fm, Sd)*: Finnur Jónsson, de Vries, and Einar Ól. Sveinsson seem to agree that for the most part, these three poems are fairly old, probably from the 10th century. More recent scholars such as Gunnell (2005), Haimerl (2013), and von See et al. view these as 12th- or 13th-century amalgamations of earlier poems. Morpho-syntactically, these poems have moderate rates of *sá er* and *of/um* but few examples of *eigi*, and the NBC places all three in the 10th century. This early date is consistent with the other linguistic features: *Fm* has alliteration in *v-* and one hiatus form alongside one instance of contraction, while *Rm* and *Sd* have only hiatus forms. Even if these poems found their current arrangement only in the 12th or 13th century, the linguistic evidence suggests that the stanzas themselves are much older.

Elegiac poetry *(Br, Sg, Gðr I, Hlr, Gðr II-III, Od)*: The scholarly debate on this group of poems is complex, and there is much uncertainty about the relative ages of the poems. In general, there is agreement that these poems are not the earliest Eddic poetry: the group as a whole is dated by Finnur Jónsson to the 10th and early 11th centuries, by de Vries to the late 12th century, and by Harris (1982) and von See et al. to the 12th and 13th centuries. The NBC places all of these poems in the 10th and 11th centuries, which is more in line with Finnur's intuitions than with scholars who believe that elegiac material is a sign of late, Continental influence.

Turning to individual poems, *Br* is considered the earliest one by Einar Ól. Sveinsson and von See et al., and indeed the NBC dates it to the 10th century. This is corroborated by the frequent late placement of verb. The NBC also dates *Gðr I, Gðr III*, and *Od* to that period; while this contradicts most scholarship on these poems, the early date of *Gðr I* and *Od* is consistent with their solid attestations of hiatus forms and late placement of the verb.

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6. Kari Ellen Gade (p.c.) points out, however, that there are metrical features in the poem that appear to be late, e.g. the treatment of the name Sigurðr.

Sg has been called one of the earliest poems in the group (by Andersson 1980) and one of the latest (by de Vries and von See et al.). However, the linguistic criteria cause the NBC to date this poem to the middle of the period, which is supported by its large number of hiatus forms. (Its rate of V1/V2 violations seems low for an early-11th-century poem at 2.2%, but *Akv* is from the same period and has a similar rate.) The other poem dated to this bin by the NBC is *Gðr II*. This has long been considered the oldest poem of the group, being also known as *Guðrúnarkviða in forna* and dated at least 25 years earlier than the others by Finnur Jónsson. My later date supports the contention by McKinnell (2014) and von See et al. that this poem has been the recipient of influence from poems like *Br* and *Sg*, rather than the other way around.

Finally, the NBC places *Hlr* the late 11th century. Although there are no conclusive data for *Hlr* from the additional linguistic features, this finding supports the consensus that *Hlr* is among the latest elegiac poems in the *Edda*.

Atlakviða (Akv): There is widespread agreement that this poem is one of the oldest Eddic poems in the heroic group. De Vries and Jónas Kristjánsson date it to before 870, but Finnur Jónsson, Einar Ól. Sveinsson, and Dronke consider it a 10th-century work, given its archaic flavor and indeterminate meter. Based on my three morpho-syntactic criteria, however, the NBC places *Akv* in the 10th century. This is confirmed by evidence from alliteration, although its rate of 2.8% of V1/V2 violations is a bit lower than most other 10th-century poems.

Atlamál in grœnlenzku (Am): This poem is widely recognized to be influenced by *Akv* and a good deal later than it. Finnur Jónsson dates *Am* to the 11th century, while most other scholars date it to the 12th century, noting influence not only from *Akv* but also from some elegiac poems. *Am* has a very low frequency of the particle, but its rates of *eigi* and *sá er* are not as high as we might expect from late skaldic poetry; thus the NBC places it in the late 11th century. The only additional linguistic feature that applies to *Am* is alliteration of **vr-* with *r-*, but this can only confirm that the poem is later than the 10th century.

Guðrúnarhvǫt (Ghv): Finnur Jónsson, Einar Ol. Sveinsson, and Jónas Kristjánsson consider this an early poem, composed perhaps in the early 11th century, while de Vries, Dronke (1969), and von See et al. argue largely on stylistic grounds that it dates to the 12th. The result of the NBC suggests that the poem is from the early 11th century. This is corroborated by its rate of V1/V2 violations in main clauses, which at 4.6% is in line with other Eddic poems of that period.

Hamðismál (Hm): Many scholars see this poem as archaic and as a source for *Ghv* and thus date it earlier than that poem, to the 9th or 10th century. Only von See et al. argue that *Ghv* is the source for similarities between the two poems; if correct, *Hm* must be from quite late in the 12th century. However, *Hm* is dated by

the NBC to the 10th century, which suggests that it is the older of the two. This is supported by the fact that *Hm* violates the V1/V2 rule in 5.7% of independent clauses, which is higher than in *Ghv*.

Baldrs draumar (Bdr): This poem is attested along with some other mythological poems in the 14th-century manuscript AM 748 I b 4°. Finnur Jónsson and Einar Ól. Sveinsson consider this an early poem, while de Vries and von See et al. date it to the late 12th or possibly 13th century. Linguistically, *Bdr* has a high rate of *of/um* and no instances of *eigi*, and as a result the NBC dates it to the 10th century. The early date is also supported by the evidence from alliteration, as *Bdr* alliterates **vr-* words with *v-*.

***Rígsþula* (*Rþ*)**: Finnur Jónsson and Einar Ól. Sveinsson see this as a quite old poem, perhaps from the early 10th century. Most scholars, however, now view the poem as a late, antiquarian work, being influenced not only by other poems but also by 13th-century sagas. The linguistic evidence is problematic, as there are no relative clauses or sentential negation in the poem, leaving the particle *of/um* as the only dating criterion in the NBC. Thus the NBC's dating of *Rþ* to the 13th century cannot be considered certain. A late date for the poem, however, does find support in its very low rate of V1/V2 violations in independent clauses.

***Hyndluljóð* (*Hdl*)**: This poem has been dated by Finnur Jónsson to the 10th century, by Einar Ól. Sveinsson to the late 11th or 12th century, and by de Vries to the 13th. According to the NBC, *Hdl* is a relatively late poem, from the late 11th century. This is confirmed by its lowish rate of verb-late in main clauses.

Grottasǫngr (Grt): This is widely considered to be an early poem, claimed by Einar Ól. Sveinsson to date to the 9th century and by others to be from the 10th or 11th century. An extremely early date for *Grt* is belied by its low rate of the particle *of* and robust use of *eigi*, thus the NBC dates it to the early 11th century. This is compatible with its 4.4% of independent clauses with V1/V2 violations, about the average for other texts dated by the NBC to the early 11th century.

Svipdagsmál (Svm): As proposed by Finnur Jónsson, the NBC places *Fjǫlsvinnsmál* in the 10th century and *Gróugaldr* in the early 11th. This is supported by the evidence from alliteration, as *Fjm* has a possible instance of alliteration with *v-*, while *Grg* attests only *r-*. Other than the fact that these are only transmitted in late, paper manuscripts, there is no compelling evidence for late dates of composition of these poems. My model vindicates the claim by Heide (1997) that *Fjm* is an old, mythological poem and that *Grg* may be a somewhat later work. Moreover, the model suggests that the two parts were not originally composed as a unified poem.

8.4 Discussion and conclusion

The age of Eddic poetry has been one of the perennial questions in Old Norse studies since the beginning of modern scholarship. As discussed in Chapter 2, attempts to date the poems on literary grounds are subjective and have led to many contradictory claims. In this book, I have argued that linguistic and metrical features offer more objective criteria for the dating of these poems, and that one can approximate absolute dates for Eddic poetry by comparing these criteria to those in datable skaldic poems.

In Chapters 3 and 4, I re-examined two linguistic criteria for dating Eddic poetry: the particle *of/um* and the rise of the negator *eigi*. With some modifications to the way these are counted, and with the correct statistical tests, I determined that the two features change over time in both Eddic and skaldic poetry. In addition, Chapter 6 presented and validated a new dating criterion: the increasing use of *sá* as a relative pronoun. On the other hand, the present study has found that other features are not good dating criteria for Eddic poems, because they do not change over time in this corpus: verb position in subordinate clauses, the distribution of Sievers' five types, and heavy dips. Of the metrical criteria, only alliteration with **vr-* has shown any validity for dating Eddic poetry, and due to its rarity even this criterion only serves as a confirmation of the more robustly attested criteria.

In this chapter, I have introduced a novel statistical technique for dating Eddic poetry: the Naïve Bayes Classifier. This study has shown that, with carefully selected linguistic criteria as the input, the NBC can be used successfully to assign absolute dates to Eddic poems on comparison with skaldic verse. The validity of this method is shown first of all by the fact that the range of dates assigned to the Eddic corpus is compatible with what is known about the transmission of the poems: CR was produced around 1260, probably based on an older exemplar, and none of the poems of CR were classified by the NBC to the 13th century. Secondly, most individual poems are dated in line with other scholars' proposals. The exceptions are *Grp*, which I date earlier than most, and the Helgi poems, which I date later than most. However, these datings based on the NBC, which contradict the conventional wisdom, are also supported by evidence from alliteration and the rate of V2 violations in main clauses.

The most important finding of this study is that, based on the linguistic criteria in the NBC (and largely corroborated by alliteration and V2 violations), nearly all Eddic poems are dated to the 10th or 11th century. This is generally in agreement with the traditional view (represented e.g. by Finnur Jónsson) that these poems reflect an oral tradition of the Viking Age. The alternative theory, that some Eddic poems are a product of the learned milieu of 12th and 13th century Iceland (e.g.

von See et al.), does not find support in the linguistic evidence. Thus the great majority of Eddic poems reflect the religious and narrative traditions of pre-literate Scandinavia, representing the era of paganism, conflicts between paganism and Christianity, and a few early attempts at syncretism.

Methodologically, this study has shown the effectiveness of using the NBC to assign texts to dating periods, an extension of text classification that potentially has broad implications for philological work. Most immediately, this method can be applied to other dating problems in Old Norse, e.g. the disputed poetry transmitted in some of the sagas. However, the method need not be limited to dating poetry: with careful selection of linguistic features and a robust set of comparison documents, NBCs could be used to determine the dates or other aspects of virtually any historical text whose origins are unknown.

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APPENDIX 1

The meters of Eddic and skaldic poetry

This is only a brief overview of the main meters used in Eddic and skaldic poetry. Of course, there are many intricacies that are not discussed here; details about Old Norse metrics in general and the properties of specific meters can be found in works such as Gade (1995, 2005, 2012), Vésteinn Ólason & Sverrir Tómasson (2007); Myrvoll (2014); Suzuki (2014), and Fulk (2016).

Eddic poetry uses only three meters: *fornyrðislag, málaháttr*, and *ljóðaháttr*, all of which are straightforward developments of the common Germanic alliterating long line (Fulk 2016: 252). *Fornyrðislag* 'old story meter' is the meter for narrative Eddic poetry, being used in many of the mythological poems and all of the heroic ones (except *Am*). This meter bears the most resemblance to the alliterative verse of Old English and Old Saxon but is more regular in two ways (Gade 2002: 859). Firstly, *fornyrðislag* poems, like all Old Norse poetry, are stanzaic. Typically, a *fornyrðislag* stanza consists of eight half-lines, although there may be as few as four and as many twelve. The stanzas usually divide into two halves (ON *helmingar*), each of which is syntactically independent. Secondly, unstressed positions contain fewer syllables than in *Beowulf* or the *Hêliand*, for instance.

In Sievers' (1893) formulation, each line in *fornyrðislag* has two stressed syllables ('lifts,' indicated in bold in the example below) and two syllables that are unstressed or have secondary stress ('dips'). The distribution of lifts and dips occurs in specific patterns or Types, discussed in detail in Chapter 7. The rules for alliteration are much the same as in the other Germanic verse traditions: a word beginning in a consonant (including certain clusters) only alliterates with a word beginning with the same consonant (or cluster), but a word beginning in a vowel alliterates with a word beginning in any vowel. One or both lifts in the odd line alliterates with the first lift in the even line, and the second lift in even lines does not alliterate. These properties can all be seen in the second stanza of *Vǫluspá* (with stressed syllables in boldface):

(1) ***Ec*** *man* ***iotna***, ***ár*** *um* ***borna***,
I remember giants early PRT born
Þá er ***forð****om* ***mic fædda*** ***hǫfðo;***
sá REL formerly me nurtured had
nío *man* *ec* ***heima***, ***nío*** ***íviði***,
nine remember I worlds nine giant-woman
miot=*við* ***mæra****n* *fyr* ***mold*** ***neð****an.*
measure=wood noble for earth below
'I remember giants born early in time, who nurtured me long ago; I remember nine worlds, I remember nine giant-women, the mighty Measuring-Tree below the earth.'
(*Vsp* 2)

In the first two lines, we see vowel alliteration between both lifts in the odd line (*ec* and *iotn-*) with the first lift in the even line (*ár*). In the next pair of lines, we see that only one lift in the odd line (*forð-*) alliterates with the first lift of the even line (*fædd-)*. Finally, in the last odd line both lifts in *m-* alliterate with the first lift of the even line (*mold*).

The second most common meter in Eddic poetry is *ljóðaháttr* ('song meter' or 'chant meter'), which is associated with mythological wisdom poetry, as well as wisdom passages in a few heroic poems. Each stanza in *ljóðaháttr* consists of six lines, divided into two half-stanzas: a *helmingr* in *ljóðaháttr* consists of two half-lines followed by a so-called full line. The half-lines follow similar metrical and alliterative patterns as in *fornyrðislag* (for some differences, see Gade 2002: 862), but the full line has either two or three lifts that alliterate only within the full line. This can be illustrated by the second stanza of *Hávamál*:

(2) ***Gef**endr **hei**lir!* ***gestr** er **inn** **kom**inn*,
givers blessed guest is in come
*hvar scal **sit**ia **siá?***
where shall sit this
mioc** er **bráðr *sá er á **brǫnd**um **scal***
very is hasty sá REL at fire shall
***síns** um **freista** **frama**.*
his PRT try luck
'Blessed be the givers! A guest has come in, where is he going to sit? He's in great haste, the one who by the log-stack is going to try his luck.' (*Háv* 2)

Besides Eddic poetry proper, *ljóðaháttr* is used in a small number of skaldic poems (Fulk 2016: 262).

Málaháttr ('speech meter') is an expanded version of *fornyrðislag*, and only one Eddic poem (*Atlamál*) is composed in this meter. However, two other Eddic poems alternate between *fornyrðislag* and *málaháttr* (*Atlakviða* and *Hamðismál*). This alternation may represent a transitional stage in the development of the expanded meter or may be a sign that these poems are particularly archaic, having been composed before the number of positions in *fornyrðislag* was consistent (Turville-Petre 1976: xiv). The alliteration is as in *fornyrðislag*, but this meter has five metrical positions per line (i.e., two lifts and three dips) instead of four:

(3) ***Ǫl**værir **urðo*** *oc **elda** **kyndo**,*
welcoming became and fires stoked
*hugðo **vætr** **véla*** *er þeir **vóro** **komn**ir;*
thought nothing treacheries when they were come
***tóco** þeir **fórn**ir,* *er þeim **fríð** **send**i,*
took they gifts REL them beautiful sent
***hengð**o á **súl**o,* ***hugð**o=ð þat **varð**a.*
hung on pillar thought=NEG that suspicious
'They became welcoming and stoked the fires, they perceived no treachery when they had come; they accepted the gifts which the beautiful lady sent them, hung them on the hall-pillar, did not think that significant.' (*Am* 5)

Skaldic poetry can be found in any of the three Eddic meters, but more frequently occurs in meters that are unique to skaldic poetry, primarily *dróttkvætt*. The uniquely skaldic meters share stanzaic structure and the rules of alliteration with Eddic poetry, but they involve stricter counting of metrical positions and/or elaborate patterns of rhyme in addition to alliteration. According to Gade (1995: 232ff), *dróttkvætt* and *kviðuháttr* evolved from the *fornyrðislag* meter; the former by expansion of metrical positions, the latter by reduction. In turn, the skaldic meters may have

influenced Eddic poetry in its extant form, namely the eight-line stanza and syllable counting of poems such as *Gðr I* and *Am* (Turville-Petre 1976: xiv). The following discussion is limited to the meters that are attested in my skaldic database: *kviðuháttr, runhent, hrynhent*, and *dróttkvætt*; additional meters are discussed in Gade (2002) and other works referenced above.

The most similar of the skaldic meters to *fornyrðislag* is *kviðuháttr* ('poem meter'). Rather than the loosely four-position lines of *fornyrðislag*, we find strictly three-syllable odd lines and strictly four-syllable even lines (with resolution of unstressed syllables under certain conditions). This can be seen in the following stanza from the 9th-century poet Þjóðólfr ór Hvini's *Ynglingatal*:

(4) *Varð* ***framgengt*** *þars* ***Fróði bjó***,
was fulfilled where Fróði lived
feigðarorð, *es at* ***Fjǫlni kom***.
doom-word REL to Fjǫlnir came
Ok ***sikling*** ***svigðis geira***
and prince bull's spears'
vágr vind*lauss* *of* ***viða skyldi***.
sea windless PRT destroy should
'The word of doom that fell upon Fjǫlnir was fulfilled where Fróði lived. And the windless sea of the spears of the bull [i.e. beer] would destroy the prince.' (Þjóð *Yt* 1)

In this example, one can also see two other salient properties of the skaldic art. First, note that within a four-line *helmingr*, words can be displaced from their normal prose positions: in the second *helmingr*, the finite verb appears at the end of the clause (rather than verb-second), the subject *vágr* is quite late in the clause, and the adjective that modifies the subject (*vindlauss*) appears after it rather than before it. Secondly, this poem has a four-component kenning: *svigðis geira* 'bull's spears' means 'horn,' and the windless sea of the (drinking) horn refers to 'beer.'

Another skaldic meter, *runhent* ('end-rhymed'), is simply *fornyrðislag* with the addition that odd and even lines rhyme. Gade (2002) illustrates this with the following stanza by the 12th-century Einarr Skúlason:

(5) ***Fun****i kyndisk* ***fljótt***, *en* ***flýði skjótt***
fire kindled-REFL quickly and fled fast,
Hís*ingar* ***herr***, *sás* ***hafði verr***.
Hisingen people REL had worse
'Fire was kindled quickly, and the people of Hisingen, who had the worst of it, fled fast.' (Esk *Run* 4)

The most elaborate meter, which represents the majority of skaldic stanzas, is *dróttkvætt* ('court meter'). Space does not permit a full discussion of the many constraints in this meter (see Gade 1995 for a book-length treatment). The most salient properties are that each line in *dróttkvætt* consists of six syllables: four syllables resembling a *fornyrðislag* line plus a cadence consisting of a lift and a dip. In addition to alliteration, each line has complex internal rhyme. This can be illustrated with a half-stanza from Bjǫrn krepphendi's *Magnússdrápa*:[1]

1. Example from Gade (2012). I have underlined the internal rhyme.

(6) ***Vík**inga* ***lætr*** ***veng**is*
vikings makes meadow's
vall**baugs* ***hati ***fall**a;*
field-ring's hater fall
vítt *rýðr* ***jǫrn*** *á* ***ýt**um*
widely reddens iron on men
Óláfs ***mǫgr*** *in* ***fǫgr**u*.
Óláfr's son the fair
'The hater of the meadow of the field ring [i.e. the generous man] makes the vikings fall; far and wide Óláfr's son [= Magnús] reddens the fair weapons on men.'
(Bkrepp *Magndr* 4)

Internal rhyme in odd lines only requires identical codas of the rhyming syllables (*-ing-* with *veng-* in line 1; *vítt* with *ýt-* in line 3). In even lines, the rhyming syllables have identical nuclei and codas (*vall-* and *fall-*, *mǫgr* and *fǫgr-*). Here, too, we see displacement from normal word order (*in fǫgru* modifies *jǫrn*), and an elaborate kenning: *vallbaugr* ('field-ring') is a nonce compound meaning 'snake,' the 'meadow of the snake' means 'gold' (referencing the Sigurðr legend), and the 'hater of gold' is a generous man, because a generous leader shares wealth with his followers.

APPENDIX 2

Summaries of the Eddic poems

The arrangement of the poems in the CR, beginning with the most general mythological poems, and moving toward those about specific gods, before turning to heroic material, appears to have been a conscious choice by whomever the compiled the manuscript (or its exemplar). See Kellogg (1991) for a study of the "Compiler."

The division of the text into individual poems is indicated by the scribes' use of capitals and in some cases titles. The scribe(s) marked the first line of each poem with a large capital, except for the verses about young Sigurðr, which have been divided by modern scholars into *Rm, Fm*, and *Sd*. Aside from *Vsp*, all of the mythological poems are given titles in the manuscript; many of the heroic poems are also titled, while others have a prose introduction that delineates them from the surrounding poems. *Háv* additionally has medium-sized capitals at the beginning of stanzas 111 and 137, "plainly intended to mark the beginning of new sections" (Evans 1986: 1). Poems are further divided into stanzas by the use of smaller capitals. Bugge's numbering of the strophes (based mostly on the capitals, but with some additional divisions that the scribe neglected to capitalize) is the basis for the numberings in most editions.

Besides the poetry itself, some poems have explanatory prose, which serves to fill in narrative missing from the poems and to explain customs or assumptions that might have been obscure to 13th-century audiences (Clunies Ross 2016: 25). Some of the poems in dialogue form also have interpolated phrases to indicate who is speaking. The interspersion of poetry and prose (prosimetrum) is characteristic of 13th-century Icelandic saga writing, also occurring in Snorri's works and in the *fornaldarsögur* (Clunies Ross 2016: 26).

The first poem in CR, *Vǫluspá* ('Seeress's Prophecy'), offers an expansive overview of Old Norse cosmology, which serves to frame subsequent poems: a *vǫlva* ('seeress' or 'sibyl') describes to Óðinn the creation of the world and its inhabitants, several episodes involving the gods, and the destruction of the world (*Ragnarǫk*).[1] The second poem, *Hávamál* ('Sayings of the High One'), is also the longest poem, and it represents a mixture of proverbs and scenes concerning Óðinn that might have originally been separate works: proverbs recited by Óðinn in the "Gnomic Poem" (stanzas 1–103) and *Loddfáfnismál* (111–137), Óðinn's theft of the mead of poetry (104–110) and his hanging (138–145), and a list of spells (146–164) (Larrington 2002a: 27). The following two poems, *Vafþrúðnismál* ('Vafþrúðnir's Sayings') and *Grímnismál* ('Grímnir's Sayings'), likewise involve Óðinn displaying his wisdom and knowledge of cosmology, in the former as a wisdom contest against the giant Vafþrúðnir, and in the latter as a monologue in which the mysterious Grímnir gradually reveals that he is Óðinn in disguise.

The next five poems are episodes involving particular gods, especially the popular Þórr. In *Skírnismál* ('Sayings of Skírnir'), Freyr sends his servant Skírnir on a quest to woo the giantess Gerðr. In *Hárbarðsljóð* ('Hárbarðr's Song'), Þórr and Óðinn, again in disguise, trade

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1. See Acker & Larrington (2002, 2013) or Gunnell (2005) for more detailed summaries of each poem.

insults. *Hymiskviða* ('Hymir's Poem') relates Þórr's attempt, with the giant Hymir, to catch the World-Serpent (*Miðgarðsormr*). In *Lokasenna* ('Loki's Quarrel'), Loki interrupts a divine banquet and insults each of the gods in turn. *Þrymskviða* ('Þrymr's Poem') is a comic tale of Loki and Þórr's journey to the realm of giants in order to retrieve Þórr's hammer and thwart Þrymr from marrying the goddess Freyja.

Vǫlundarkviða ('Poem of Vǫlundr'), the legend of Weland the Smith's search for a swan-maiden and his revenge on King Níðuðr for capturing and maiming him, seems out of place in this line up as there are no gods in the narrative (Gunnell 2005: 87; Abram 2011: 18), although Grimstad (1983) argues that Vǫlundr is an elf, rather than a hero of the Helgi/Sigurðr type. Finally, *Alvíssmál* ('All-wise's Sayings') centers around a dwarf, who offers Þórr knowledge of poetic vocabulary.

Following the final mythological poem, "the scribe skips a line and begins a new poem with an oversized red capital letter A…" (Acker & Larrington 2013: 1) This first heroic poem, *Helgakviða Hundingsbana I*, begins with "Ár var alda", echoing *Vsp* 3, the first poem in the mythological section (Acker & Larrington 2013: 1). This, together with the arrangement of the heroic poems into a chronologically-ordered cycle from the beginning of the Vǫlsung dynasty in Helgi Hundingsbani to its end at the hands of Atli and Jǫrmunrekkr, suggests that the Eddic poems of CR were selected and organized with care (Acker & Larrington 2013: 6). Unfortunately this cycle is broken by an eight-page lacuna (including the end of *Sigrdrífumál*, the beginning of *Brot*, and unknown poem(s) between), which must have narrated many of the exploits of the central figure, Sigurðr, episodes that are otherwise known only from prose sources such as the *Vǫlsunga saga*.

In the two *Helgakviða Hundingsbana* poems ('First' and 'Second Poem of Helgi Hundingsbani'), Helgi, the half-brother of Sigurðr, kills Hundingr, marries the valkyrie Sigrún, and in a foreshadowing of Sigurðr's fate is killed by Sigrún's brother Dagr. *Helgakviða Hjǫrvarðssonar* ('Poem of Helgi Hjǫrvarðsson') is about an earlier Helgi, who defeats his father's enemy, meets the valkyrie Sváva, is killed in battle, and will be reborn (presumably as Helgi Hundingsbani).

The remaining poems in CR treat the group of legendary figures including Sigurðr, Brynhildr, Guðrún and her brothers, and Atli. The narratives in these poems are told at greater length in prose form in *Vǫlsunga saga*, which seems to have Eddic poetry as its primary source. Many of the stories are also familiar from the Middle High German *Nibelungenlied*. The first poems in this group introduce Sigurðr (Siegfried in German). *Grípisspá* ('Grípir's Prophecy') offers Sigurðr a preview of his death, setting the scene for the remaining Sigurðr poems (Gunnell 2005: 89). In *Reginsmál* ('Sayings of Reginn'), Sigurðr is advised by the dwarf Reginn, in *Fáfnismál* ('Sayings of Fáfnir'), he has a dialog with the dying dragon Fáfnir and learns from birds that Reginn has betrayed him, and in the fragmentary *Sigrdrífumál* ('Sayings of Sigrdrífa'), a valkyrie gives him wisdom about runes and heroic behavior. Then the "great lacuna" leaves out the middle of Sigurðr's story.

After the lacuna, the poems focus on the aftermath of Sigurðr's death, especially women's elegies for him. *Brot af Sigurðarkviðu* ('Fragment of a Poem about Sigurðr') tells of the plot to kill him, the grief of his wife Guðrún (called Kriemhild in the *Nibelungenlied*) at his death, and the exultation of the jilted Brynhildr. *Guðrúnarkviða I* ('First Poem of Guðrún') expresses the grief of other women as they try to console her. *Sigurðarkviða in skamma* ('Short Poem of Sigurðr') summarizes the events before and after his murder, culminating in Brynhildr's suicide. *Helreið Brynhildar* ('Brynhildr's Ride to Hel') tells Brynhildr's story from her own perspective and suggests that she had been a valkyrie (perhaps a confusion with Sigrdrífa).

In *Guðrúnarkviða II* ('Second Poem of Guðrún') the scene begins to shift as in the aftermath of Sigurðr's death, Guðrún prepares to marry Brynhildr's brother Atli (loosely based on the historical Attila), and in *Guðrúnarkviða III* ('Third Poem of Guðrún'), she must prove that she did not have an affair with Atli's follower Þjóðrekr (Theoderic/Dietrich). *Oddrúnargrátr* ('Oddrún's Lament') is about the sister of Brynhildr and Atli, who longs to marry Gunnarr. *Atlakviða* ('Poem of Atli') is a lively narration of Guðrún's forced marriage to Atli, her warnings to Gunnarr and Högni, their deaths, and Guðrún's revenge by serving Atli their sons to eat. *Atlamál in grœnlenzku* ('Greenlandic Sayings of Atli') narrates the same events in longer form, with more focus on the recriminating dialog between Guðrún and Atli.

The last two heroic poems tell of Guðrún's third marriage and the fate of her children. In *Guðrúnarhvǫt* ('Whetting of Guðrún'), she incites her sons Hamðir and Sǫrli to avenge their half-sister Svanhildr, who has been killed by her husband Jǫrmunrekkr (a name cognate to the historical Gothic king Ermanaric), and she recounts all the troubles of her tragic life. After repeating some of this whetting, *Hamðismál* ('Speech of Hamðir') follows Hamðir and Sörli on their quest to kill Jǫrmunrekkr; they succeed but are overcome in the end by Jǫrmunrekkr's men, bringing the cycle to an end.

Turning to the Eddic poems outside CR that are included in my corpus, *Baldrs draumar* ('Baldr's Dreams', attested in the 14th-century manuscript AM 748 I b 4°) again features Óðinn consulting a seeress, this time to learn that his son's dreams foreshadow the doom of Baldr and all the gods. *Rígsþula* ('List of Rígr') is found in the *Codex Wormianus* (AM 242 fol., ca. 1350), which like AM 748 also contains Snorri's *Prose Edda*; this poem covers very different material from the other Eddic poems, explaining how the different social classes were fathered by the god Heimdallr, named Rígr here. *Hyndluljóð* ('Song of Hyndla'), which is found only in the compendium *Flateyjarbók* (GKS 1005 fol.; ca. 1387–95), consists of two parts: a dialogue between Freyja and a giantess to learn the genealogy of Freyja's favorite, Óttarr, and *Vǫluspá in skamma* ('The Short *Vǫluspá*'), another sibyllic prophecy which is quoted by Snorri in *Gylfaginning* (Quinn 2002). *Grottasǫngr* ('Song of Grotti'), found in two manuscripts (Codex Regius, GKS 2367 4°, ca. 1300–25, and Codex Trajectinus, Traj 1374, ca. 1595) as part of Snorri's *Prose Edda*, tells of King Fróði's enslavement of the giantesses Fenja and Menja and their revenge. Finally, *Svipdagsmál* ('The Sayings of Svipdagr') appears only in late, paper manuscripts, and is usually divided into two component poems – *Gróugaldr* 'The Spell of Gróa' and *Fjǫlsvinnsmál* 'The Lay of Fjǫlsviðr' – which may describe two parts of a quest to woo Menglǫð. In the first poem, Svipdagr asks his dead mother to chant spells which will protect him on the journey, and in the second Svipdagr engages in a wisdom contest with the giant guard Fjǫlsviðr in order to enter Menglǫð's hall.

APPENDIX 3

Instances of the particle *of/um* in the corpora

Note that in Appendices 3–6, stanza and line numbers for all Eddic poems except *Svm* refer to the Neckel/Kuhn edition. Stanza/line numbers for the skaldic poems are as reported in the *Skaldic Project*.

Particle *of* in my Eddic corpus

Examples from the CR poems are as counted by Olsen (2019), who finds two examples exceeding the numbers reported in Fidjestøl (1999). See Olsen's Appendix 2 for a discussion of the interpretation and scholarship of each particle.

Vǫluspá, 17 particles: 1:8, 2:2, 4:2, 6:6, 10:2, 10:6, 12:8, 24:2, 26:4, 27:2, 30:2, 31:5, 32:6, 33:3, 33:5, 47:8 (in Hauksbók only), 55:6

Hávamál, 33 particles:[1] 2:6, 4:4, 8:2, 9:2, 14:5, 17:5, 18:3, 29:6, 38:6, 58:5, 59:4, 65:3, 67:2, 72:2, 74:5, 84:6, 100:3, 100:6, 101:2, 101:3, 104:2, 105:1, 106:2, 109:7, 123:3, 129:9, 140:4, 145:6, 145:8, 145:9, 150:6, 154:2, 163:5

Vafþrúðnismál 12 particles (plus 10 repetitions):[2] 11:3 (repeated in 13:3, 15:3, 17:3), 20:4 (repeated with variation in 22:4, 24:4, 26:4, 36:4, 38:4), 21:2 (repeated with variation in 29:2, 35:2), 34:4, 34:5, 35:4, 35:6, 36:6, 41:6, 43:4, 44:3, 52:6

Grímnismál, 11 particles (plus 2 repetitions; only 12 total according to Fidjestøl): 4:6, 5:3 (repeated in 12:3, 16:3), 8:3, 17:4 (not counted by Fidjestøl), 22:6, 34:3, 35:3, 40:2, 41:6, 52:2, 53:3

Skirnismál, 5 particles (plus 1 repetition): 4:1, 13:5, 13:6, 17:4 (repeated in 18:4), 42:3

Hárbarðsljóð, 3 particles: 18:8, 19:8, 33:2

Hymiskviða, 8 particles (according to Olsen; only 7 in Fidjestøl): 3:8, 4:4, 14:6 (not counted by Fidjestøl), 26:1, 32:5, 32:8, 37:8, 38:6

Lokasenna, 12 particles (plus 1 repetition): 8:6, 12:5, 14:3, 21:5, 26:6, 31:3, 33:5, 33:6, 34:3 (repeated in 35:3), 48:3, 57:6, 65:3

Þrymskviða, 15 particles (plus 7 repetitions): 1:4, 2:2 (repeated in 3:4, 9:10, 12:4), 7:8 (repeated in 8:2), 8:6 (repeated in 11:6, 18:8), 10:6, 10:8, 14:8, 21:2, 24:2, 25:8, 26:3 (repeated in 28:3), 27:8, 31:4, 32:4, 32:5

Vǫlundarkviða, 8 particles (plus 2 repetitions): 3:6, 11:8, 16:3 (repeated in 30:3), 17:4, 22:4, 24:4 (repeated in 34:8), 28:4, 37:4

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1. Dal (1930) also counts 21:6, but this is considered a preposition by Kuhn (1929).

2. Fidjestøl (1999) only counted 9 repetitions; he seems to have overlooked 29:2. Olsen (2019) counts 16 repetitions, because he accepts Bugge's restoration of a missing half-stanza in 40:4–6 (duplicating the attested particle in 41:6) and reconstructions of the particle in 46:3, 48:3, 50:3, 52:3, and 54:3 (attested in 52:6).

Alvíssmál, 4 particles (plus 12 repetitions): 4:3, 8:3, 9:2 (repeated in 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33), 35:6
Helgakviða Hundingsbana I, 3 particles: 2:4, 3:5, 30:3
Helgakviða Hjǫrvarðssonar, 3 particles: 38:5, 38:6, 38:8
Helgakviða Hundingsbana II, 2 particles: 22:2, 44:12
Grípisspá, 3 particles: 9:2, 20:3, 28:7
Reginsmál, 3 particles: 2:3, 16:8, 21:2
Fáfnismál, 4 particles: 1:2, 23:3, 36:8, 42:6
*Sigrdrífumá*l, 10 particles: 12:4, 12:5, 12:6, 13:4, 13:5, 13:6, 20:2, 20:6, 26:6, 37:6
Brot af Sigurðarkviðu, 5 particles: 4:6, 4:8, 6:4, 5:8, 19:1
Guðrúnarkviða I, 8 particles: 3:8, 7:4, 8:5, 21:3, 21:6, 23:6, 25:5, 27:7
Sigurðarkviða in skamma, 13 particles (plus 1 repetition): 3:7, 8:2, 10:4, 15:3 (repeated in 56:9), 23:1, 36:4, 39:6, 42:4, 45:7, 49:6, 51:4, 58:9, 61:8
Helreið Brynhildar, 2 particles: 4:6, 12:4
Guðrúnarkviða II, 6 particles: 4:7, 6:3, 7:5, 7:8, 9:4, 21:5
Guðrúnarkviða III: 9:3
Oddrúnargrátr, 12 particles: 1:3, 2:8, 3:5, 3:10, 4:6, 5:2, 11:4, 11:8, 17:8, 29:10, 34:3, 34:7
Atlakviða, 6 particles: 16:14, 26:6, 30:3, 30:4, 32:6 36:4
Atlamál, 3 particles: 1:2, 7:8, 93:4
Guðrúnarhvǫt, 5 particles: 2:8, 11:4, 12:4, 13:7, 21:6
Hamðismál, 8 particles: 1:8, 3:2, 3:4, 14:3, 18:6, 19:8, 29:3, 29:6
Baldrs draumar, 5 particles: 3:4, 7:2, 10:6, 11:5, 11:7
Grottasǫngr: 17:4
Rígsþula, 3 particles: 9:2, 28:3, 44:3
Hyndluljóð, 4 particles: 19:8, 37:1, 37:2, 44:6
Svipdagsmál/Grógaldr, 2 particles: 10:4, 16:6
Svipdagsmál/Fjǫlsvinnsmál, 6 particles: 3:5, 6:2, 8:1, 16:2, 18:5, 46:6

Particle *of* in my skaldic corpus

Bragi inn gamli Boddason (ca. 825), 8 particles: *Rdr* 3:8, 4:4, 8:6, 10:8, *frag* 5:1, *Þórr* 1:4, 3:4, 5:3
Þjóðólfr or Hvini (850), 41 particles: *Haustl* 1:6, 3:5, 8:5, 8:6, 9:5, 13:5, 14:1, 14:2, 16:1, 17:7, 19:7, 20:6, *Yt* 1:8, 3:6, 5:12, 6:4, 6:8, 7:12, 8:4, 8:14, 10:8, 11:2, 11:4, 11:12, 12:2, 12:3, 12:8, 13:4, 13:20, 14:12, 15:16, 16:4, 16:12, 18:4, 19:12, 20:16, 24.8, 25:16, 26:12, 26:4, 27:8
Þorbjǫrn hornklofi (900), 2 particles: *Harkv* 7:6, *lv* 1:1
Glúmr Geirason (970), 4 particles: *Gráf* 3:7, 5:4, 8:5, *lv* 1:3
Eyvindr skaldaspillir Finnsson (985), 14 particles: *Hák* 2.7, 9.2, 10.6, 15.6, 18.3, 19.2, 21.6, *Hál* 8:8, 10:5, *lv* 6:6, 8:8, 9:6, 12:3, 13:7
Einarr skálaglamm Helgason (986), 11 particles: *Hardr* 1:4, *Vell* 8:4, 10:3, 14:3: 21:4, 24:3, 25:6, 25:8, 30:7, 32:3 34:4
Tindr Hallkelsson (987): *Hákdr* 9:1
Eilífr Goðrúnarson (1000), 3 particles: *Þdr* 19:2, 20:7, 21:8

Hallfreðr vandræðaskáld Óttarsson (1001), 6 particles: *Óldr* 4:3, *ErfÓl* 6:7, 11:3, 19:2, 22:4, 28:1

Þórðr Kolbeinsson (1014), 3 particles: *Eirdr* 1:7, 7:3, 13:2

Óttarr svarti (1026), 7 particles: *Hfl* 7:5, 7:6, 8:5, 15:3, 17:4, 18:5

Þórarinn loftunga (1032): *Glækv* 9:5

Sigvatr Þórðarson (1040), 16 particles: *Sigv Nesv* 3:4, 10:7, *Austv* 3:3, 19:3, *Erlfl* 5:8, 8:5, *Berv* 10:4, *Knútdr* 5:1, *ErfÓl* 17:6, 26:2, *Víkv* 13:8, *lv* 4:7, 5:7, 7:3, 14:2, 25:2

Þorleikr fagri (1051), 2 particles: *Sveinn* 6:7, 9:1

Haraldr harðráði Sigurðarson (1054): *Gamv* 1:3

Þjóðólfr Arnórsson (1066), 7 particles: *Magn* 2:3, 3:6, 6:3, *Magnfl* 14:4, 19:3, *Run* 3.1, *frag* 2:3

Arnórr jarlaskáld Þórðarson (1070), 6 particles: *Hryn* 9:3, 11:7, 13:8, 14:8, *Magndr* 8:1, *Rǫgndr* 2:3

Markús Skeggjason (1106): *frag* 1:4

Einarr Skúlason (1159), 6 particles: *Øxfl* 4:3, 10:3, *Geisl* 62:4, 64:2, *Eystdr* 2:4, *lv* 5:2

Gamli kanóki (1180), 7 particles: *Has* 2:8, 3:3, 16:1, 57:7, 58:4, *Jóndr* 3:6, 4:3

Hallar-Steinn (1200), 3 particles: *Rst* 6:6, 8:3, 8:6

Gunnlaugr Leifsson (1218), 4 particles: *Merl I* 49:6, *Merl* II 15:2, 18:4, 23:10

Bjarni biskup Kolbeinsson (1223), 4 particles (plus 5 repetitions): *Jóms* 1:6, 15:5 (repeated in in 19:5, 23:5, 27:5, 31:5, and 35:5), 34:5, 43:4

APPENDIX 4

Instances of negation in the corpora

Clitic *ne* in my Eddic corpus (29 instances)

Vǫluspá, 5 instances: 5:5, 5:7, 5:9, 18:1, 18:2
Hávamál, 6 instances: 93:5, 108:4, 121:9, 131:10, 133:5, 135:5
Vafþrúðnismál: 7:4
Grímnismál: 2:3
Skírnismál: 5:3
Lokasenna, 5 instances: 7:3, 23:2, 27:4, 37:4, 46:5
Helgakviða Hjǫrvarðssonar: 20:2
Grípisspá: 29:5
Fáfnismál, 2 instances: 24:6, 29:4
Sigrdrífumál: 23:2
Sigurðarkviða in skamma: 5:2
Guðrúnarkviða II: 22:4
Guðrúnarhvǫt: 13:5
Hamðismál, 2 instances: 7:7, 25:8

ne … *-at* in my Eddic corpus (13 instances)

Grímnismál: 20:5 *ne komit*
Lokasenna, 2 instances: 47:3 *né lezcaðu*, 47:6 *né manað*
Fáfnismál: 3:1 *né áttað*
Guðrúnarkviða II, 2 instances: 3:5 *ne máttut* 5:8 *ne lifðut*
Oddrúnargrátr: 25:8 *ne skyldut*
Atlakviða: 11:8 *ne kømrat*
Atlamál, 3 instances: 3:8 *ne komscat*, 58:8 *né ynðit*, 99:8 *né áttið*
Hamðismál, 2 instances: 8:8 *né stríddit*, 9:8 *né fœrat*

Clitic *-at* in my Eddic corpus (246 instances)

Vǫluspá: 3:3 *vara*
Hávamál, 37 instances (plus 1 repetition): 6:2 *scylit*, 10:2 *berrat*, (repeated in 11:2), 11:5 *vegra*, 12:1 *Era*, 19:1 *Haldit*, 22:6 *era*, 27:7 *veita*, 30:2 *scala*, 30:5 *erat*, 31:4 *veita*, 35:2 *scalara*, 38:2 *scala*, 39:1 *Fanca*, 40:3 *scylit*, 50:3 *hlýra*, 52:2 *scala*, 53:5 *urðot*, 61:3 *seéð*, 61:8 *hafit*, 69:1 *Erat*, 75:1 *Veita*, 75:6 *scylit*, 89:7 *verðit*, 112:5 *rísat*, 113:6 *scalattu*, 114:4 *villat*, 124:6 *era*, 125:6 *scalattu*, 127:7 *gefat*,

129:6 *scalattu*, 133:4 *erat*, 146:2 *kannat*, 148:6 *bítað*, 150:4 *flýgra*, 152:4 *brennrat*, 158:4 *munað*, 158:6 *hnígra*

Vafþrúðnismál, 3 instances: 16:6 *veðrat*, 32:6 *hafðit*, 38:8 *varðað*

Grímnismál: 25:6 *knáat*

Skírnismál, 4 instances: 5:2 *hycca*, 18:1 *Emcat*, 22:1 *þiccac*, 22:4 *era*

Hárbarðsljóð, 6 instances: 3:4 *verðra*, 4:3 *veiztattu*, 8:5 *baðat*, 14:3 *fanntaðu*, 26:5 *þóttisca*, 35:1 *emcat*

Hymiskviða, 4 instances: 14:1 *sagðit*, 18:2 *mynit*, 28:5 *qvaðat*, 37:1 *Fóroð*

Lokasenna, 14 instances: 15:2 *scalattu*, 16:5 *qveðira*, 18:1 *qvedca*, 18:6 *vilcat*, 22:5 *scyldira*, 28:5 *sérat*, 30:3 *era*, 36:3 *munca*, 36:6 *era*, 42:6 *veizta*, 49:2 *munattu*, 56:5 *koma*, 60:6 *þóttisca*, 62:6 *máttira*

Þrymskviða: 25:55 *sáca*

Vǫlundarkviða, 8 instances: 16:5 *Era*, 18:9 *sécca*, 19:3 *bíðca*, 22:5 *segita*, 26:7 *Þoriga*, 33:7 *qveliat*, 37:1 *Mæltira*, 37:5 *erat*

Alvíssmál, 4 instances: 1:6 *scalat*, 2:6 *ertattu*, 4:4 *varca*, 8:2 *muna*

Helgakviða Hundingsbana I, 5 instances: 12:1 *Létað*, 29:3 *varðat*, 40:1 *varattu*, 46:1 *Þicciat*, 50:10 *muna*

Helgakviða Hjǫrvarðssonar, 8 instances: 3:1 *Kiósattu*, 10:1 *Ertattu*, 13:6 *knegoð*, 18:6 *koemið*, 23:1 *Munca*, 23:4 *era*, 41:2 *grátattu*, 42:5 *mundliga*

Helgakviða Hundingsbana II, 12 instances: 2:3 *era*, 12:1 *varca*, 17:1 *nama*, 24:1 *Þiccit*, 28:5 *vanntattu*, 29:3 *vinnat*, 32:1 *Scríðiat*, 32:3 *rennia*, 33:1 *Bítia*, 33:11 *hefðira*,[1] 36:1 *Sitca*, 41:1 *era*

Grípisspá, 11 instances:

21:5 *emca*, 22:5 *scalattu*, 23:1 *era*, 26:1 *Vilcat*, 29:7 *gáraðu*, 31:7 *mantattu*, 34:8 *angraðit*, 37:8 *lýgrat*, 42:8 *eroð*, 52:5 *munat*, 53:2 *Munat*

Reginsmál, 7 instances: 1:3 *kannat*, 6:5 *verðra*, 7:2 *gaftattu*, 7:3 *gaftattu*, 11:3 *getrað*, 12:4 *era*, 16:7 *munat*

Fáfnismál, 8 instances: 2:4 *ácca*, 13:3 *eigoð*, 16:6 *fannca*, 36:1 *Erat*, 37:6 *kannat*, 39:1 *Verðra*, 40:3 *era*, 44:5 *máat*

Sigrdrífumál, 11 instances: 7:3 *velit*, 10:7 *era*, 21:1 *munca*, 21:3 *emca*, 24:3 *deilit*, 28:5 *látaðu*, 28:6 *teygiattu*, 29:5 *scalattu*, 32:4 *teygiat*, 36:2 *hyggiat*, 37:4 *þicciomcac*

Brot af Sigurðarkviðu, 2 instances: 9:1 *væria*, 17:1 *Mantattu*

Guðrúnarkviða I, 2 instances: 1:5 *gerðit*, 21:5 *mana*

Sigurðarkviða in skamma, 16 instances: 12:3 *scalat*, 18:1 *Vitoma*, 25:5 *Gráttaðu*, 26:3 *kannat*, 27:1 *Ríðra*, 31:3 *Hlæraðu*, 33:1 *Frýra*, 34:5 *varðcat*, 39:5 *varat*, 40:3 *biótat*, 43:2 *léta*, 45:3 *Letia*, 47:6 *vara*, 51:5 *Vilcat*, 53:5 *muna*, 56:5 *munað*

Helreið Brynhildar: 13:6 *vildigac*

Guðrúnarkviða II, 7 instances: 3:8 *létut*, 11:4 *gerdiga ek*, 28:1 *Hirðaðu*, 29:1 *Máca*, 31:1 *Hirða*, 31:9 *Muncað*, 40:3 *vildigac*

Guðrúnarkviða III, 5 instances: 8:1 *Kemra*, 8:2 *kalliga*, 8:2 *sécca*, 11:1 *sáat*, 11:2 *sáat*

Oddrúnargrátr, 6 instances: 10:1 *Hnécað*, 12:5 *qvaðattu*, 16:5 *qvaða*, 18:5 *vara*, 25:6 *scyldoð*, 32:7 *máttigac*

1. Another ms. has *hefðir eigi*, so this line is counted twice in my study.

Atlakviða, 5 instances: 6:7 *ættima*, 26:8 *lifira*, 37:1 *Kallaraðu*, 37:5 *Séraðu*, 40:4 *varnaðit*

Atlamál, 31 instances: 2:2 *scyldoat* 5:8 *hugðoð*, 6:7 *fellzcað*, 7:7 *níttit (H)*, 12:2 *mácað*, 13:2 *áca*, 13:3 *vilca*, 26:7 *gerðit*, 28:3 *vært*, 29:3 *forðomca*, 31:4 *létoat*, 32:5 *Veitcað*, 37:7 *gerðot*, 40:5 *Hirða*, 47:2 *ypþit*, 47:3 *fóra*, 49:7 *varat*, 51:2 *reisat*, 56:2 *mácac*, 56:4 *cnaáca*, 61:7 *lifira*, 62:2 *helta*, 70:1 *kannca*, 79:3 *sciptit*, 86:6 *vissoð*, 90:7 *emca*, 92:2 *værið*, 93:3 *varða*, 96:6 *gerðirat*, 96:9 *fannca*, 101:1 *Komtaðu*

Guðrúnarhvǫt, 4 instances: 2:3 *tregrað*, 3:1 *Urðoa*, 11:2 *sácað*, 12:3 *máttigac*

Hamðismál, 5 instances: 2:1 *Vara*, 9:3 *Vilcat*, 17:8 *varat*, 18:4 *gørðut*, 20:3 *beiddiskat*

Baldrs draumar, 4 instances (plus 2 repetitions): 8:1 *Þegiattu* (repeated in 10:1, 12:1), 13:1 *Ertattu*, 13:5 *Ertattu*, 14:3 *komit*

Grottasǫngr, 4 instances: 8:1 *Vartattu*, 10:1 *kœmia*, 20:1 *Munat*, 20:7 *Eroma*

Svipdagsmál/Grógaldr, 3 instances: 12:5 *megit*, 13:4 *megit*, 15:3 *standit*

Svipdagsmál/Fjǫlsvinnsmál, 4 instances (plus 1 repetition): 2:6 *áttattu*, 3:3 *býðrat*, 9:5 *sáat*, 20:6 *fellirat* (repeated in 21:6)

eigi/ekki in my Eddic corpus (42 instances)

Hávamál: 114:2

Hárbarðsljóð: 55:2

Lokasenna: 12:4

Vǫlundarkviða: 14:1

Helgakviða Hundingsbana I, 2 instances: 9:7, 20:1

Helgakviða Hjǫrvarðssonar, 6 instances: 3:5, 7:7, 10:8, 26:9, 33:1, 43:2

Helgakviða Hundingsbana II, 4 instances: 18:1, 33:11, 51:1, 18:8

Grípisspá,3 instances: 37:8, 40:5, 47:3

Fáfnismál: 8:4

Sigrdrífumál: 2:5

Sigurðarkviða in skamma, 4 instances: 14:3, 17:3, 58:4, 62:2

Helreið Brynhildar, 2 instances: 1:2, 3:1

Guðrúnarkviða II, 4 instances: 4:4, 27:1, 27:5, 34:5

Oddrúnargrátr: 26:3

Atlamál, 5 instances (plus 1 repetition): 11:6, 14:6, 34:6, 48:6, 80:4 (repeated in 91:1)

Guðrúnarhvǫt: 18:7

Hamðismál: 29:1

Hyndluljóð, 2 instances: 27:5, 48:3

Grottasǫngr: 7:3

Clitic *ne* in my skaldic corpus (17 instances)

Þorbjǫrn hornklofi: *Harkv* 2:2

Einarr skálaglamm Helgason, 3 instances: *Hardr* 2:1, *Vell* 5:1, 19:5

Eilífr Goðrúnarson: *Þdr* 7:3

Hallfreðr vandræðaskáld Óttarsson: *ErfÓl* 19:1
Þórðr Kolbeinsson: *Eirdr* 15:3
Sigvatr Þórðarson, 6 instances: *lv* 3:1, *Víkv* 2:2, *Nesv* 13:1, *Austv* 17:7, *Erlfl* 4:6, 5:3
Einarr Skúlason, 3 instances: *Sigdr I* 1:7, *Geisl* 51:5, *frag* 18:1
Hallar-Steinn: *Rst* 7:6

ne … -at in my skaldic corpus (2 instances)

Óttarr svarti: *Knútdr* 11:5 *né svaltat*
Arnórr jarlaskáld Þórðarson: *Hardr* 15:2 *né sérat*

Clitic *-at* in my skaldic corpus (86 instances)

Bragi inn gamli Boddason, 4 instances: *Rdr* 9:1 *Bauða*, 10:1 *Letrat, Þórr* 6:1 *Vildit, lv* 1:7 *fæddirat*
Þjóðólfr or Hvini, 6 instances: *Haustl* 3:7 *vasat*, 16:1 *Þyrmðit*, 17:5 *Varðat, Yt* 7:1 *Kveðkat*, 11:9 *Vasa, lv* 2:1 *Fariða*
Glúmr Geirason: *Gráf* 12:3 *réðat*
Eyvindr skaldaspillir Finnsson, 3 instances: *lv* 2:1 *Samira*, 10:4 *biðkat*, 4:1 *Baðat*
Einarr skálaglamm Helgason, 8 instances: *Vell* 7:1 *Vasat*, 12:1 *Hvarfat*, 12:4 *Varðat*, 19:7 *vægðit*, 27:1 *Vasat*, 30:4 *bara*, 34:4 *hléðut, lv* 1a:4 *Komkat*
Eilífr Goðrúnarson: *Þdr* 8:3 *gatat*
Hallfreðr vandræðaskáld Óttarsson, 5 instances: *Hákdr* 3:4 *héðut, ErfÓl* 3:4 *baðat*, 14:1 *Mundit*, 18:1 *Veitkat*, 22:7 *kannka*
Óttarr svarti, 3 instances: *Knútdr* 3:3 *hykkat, lv* 1:7 *niðrat*, 3:4 *frýrat*
Sigvatr Þórðarson, 9 instances: *Austv* 2:6 *sákat*, 5:1 *Gakkat*, 8:5 *fannka*, 14:5 *Skyldit, Berv* 3:5 *Vasat, Knútdr* 9:1 *Létat, Nesv* 12:1 *Frýrat, ErfÓl* 15:6 *náðit, Vestv* 3:4 *vildit*
Þorleikr fagri: *Sveinn* 6:4 *veitat*
Haraldr harðráði Sigurðarson, 2 instances: *Gamv* 5:1 *munat, lv* 13:6 *hefkat*
Þjóðólfr Arnórsson, 7 instances: *Magn* 1:3 *fregnat, Magnfl* 2:5 *Vægðit*, 10:3 *mundit, Sex* 3:5 *Vasat*, 18:4 *vildit, lv* 10:1 *Skalka*, 10:5 *Skínnat*
Arnórr jarlaskáld Þórðarson, 8 instances: *Hardr* 4:1 *Gekkat*, 6:1 *Eymðit*, 11:1 *Hafðit, Magndr* 1:5 *Vasat*, 4:5 *Létat*, 7:7 *bráskat*, 13:5 *Létat, Þorfdr* 11:2 *bráskat*
Steinn Herdísarson, 2 instances: *Nizv* 3:3 *gerðit, Óldr* 7:7 *þarfat*,
Markús Skeggjason, 2 instances: *Eirdr* 29:3 *beiðat*, 30:3 varðat
Rǫgnvaldr jarl Kali Kolsson, 3 instances: *lv* 6:3 *verðrat*, 21:1 *Skalkak*, 30:1 *Villat*
Einarr Skúlason, 9 instances: *frag* 18:2 *hykkat, Geisl* 21:3 *munat*, 24:2 *munat*, 57:4 *ríðrat, Ingdr* 2:5 *gatat*, 4:1 *Myndit, Sigdr I* 3:3 *esat, lv* 4:7 *gladdit*, 4:8 *vasat*
Gamli kanóki, 5 instances: *Has* 8:3 *barkat*, 33:1 *munat*, 38:2 *vildat*, 43:1 *esat*, 61:1 *Verðrat*
Gunnlaugr Leifsson, 6 instances: *Merl I* 51:7 *verðrat*, 74:3 *esat*, 100:7 *esat, Merl II* 2:7 *vasat*, 37:7 *esat*, 54:2 *veitat*
Bjarni biskup Kolbeinsson: *Jóms* 24:3 *varat*

eigi/ekki in my skaldic corpus

Einarr skálaglamm Helgason: *lv* 2a:4
Óttarr svarti, 2 instances: *Hfl* 15:1, *Knútdr* 8:5
Sigvatr Þórðarson, 8 instances: *Erlfl* 4:1, 7:5, 8:1, *Berv* 8:6, *ErfÓl* 20:1, *frag* 1:4, *lv* 8:1, 10:3
Haraldr harðráði Sigurðarson: *lv*14:2
Þjóðólfr Arnórsson: *Magnfl* 15:3
Arnórr jarlaskáld Þórðarson, 5 instances: *Hryn* 5:3, 17:1, *Magndr* 17:1, *Þorfdr* 15:3, *Hardr* 13:1
Steinn Herdísarson, 4 instances: *Nizv* 5:1, 6:4, 7:1, *Óldr* 8:5
Markús Skeggjason: *lv* 2:2
Rǫgnvaldr jarl Kali Kolsson, 5 instances: *lv* 3:5, 11:6, 13:5, 21:4, 35:1
Einarr Skúlason, 3 instances: *Øxfl* 2:1, *lv* 1:3, 13:7
Gamli kanóki, 5 instances: *Jóndr* 1:2, *Has* 3:5, 16:4, 34:5, 55:5
Hallar-Steinn: *Rst* 10:7
Gunnlaugr Leifsson, 6 instances: *Merl I* 71:4, 75:7, 94:3, *Merl II* 27:3, 53:8, 65:6
Bjarni biskup Kolbeinsson, 3 instances: *Jóms* 11:7, 38:5, 43:5

APPENDIX 5

Verb order in subordinate clauses in the Eddic corpus

In this appendix, the line number refers to the location of the conjunction.

Verb-first (98 instances)

Vafþrúðnismál, 14 clauses: 15:5, 16:2, 17:5, 18:2, 22:5, 24:5, 29:2, 31:3, 35:2, 37:2, 48:5, 50:6, 51:3, 52:6
Grímnismál, 8 clauses: 4:6, 6:5, 25:2, 26:2, 28:12, 39:2, 42:3, 42:6
Skirnismál, 2 clauses: 31:7, 37:5
Hárbarðsljóð, 3 clauses: 1:2, 2:2, 8:4
Lokasenna, 4 clauses: 41:3, 45:5, 46:6, 55:5
Vǫlundarkviða, 2 clauses: 10:5, 21:7
Alvíssmál, 7 clauses (not including repetitions): 9:3, 9:5, 15:5, 25:5, 27:5, 31:5, 33:5
Helgakviða Hundingsbana I: 34:5
Helgakviða Hjǫrvarðssonar, 2 clauses: 26:2, 27:5
Helgakviða Hundingsbana II: 27:7
Reginsmál: 1:2
Fáfnismál, 5 clauses: 4:6, 6:5, 14:5, 24:2, 33:4
Sigrdrífumál, 8 clauses: 11:6, 18:2, 19:9, 26:2, 27:2, 27:6, 33:4, 36:6
Guðrúnarkviða I: 18:5
Sigurðarkviða in skamma, 2 clauses: 29:5, 65:9
Helreið Brynhildar: 13:7
Guðrúnarkviða II, 3 clauses: 2:3, 11:9, 26:2
Oddrúnargrátr: 25:7
Atlamál, 24 clauses: 1:8, 2:8, 8:4, 9:10, 11:6, 12:4, 19:6, 21:4, 21:6, 29:6, 40:4, 43:2, 48:6, 52:4, 62:6, 64:3, 66:6, 68:8, 71:4, 73:6, 91:4, 99:6, 104:4, 105:4
Guðrúnarhvǫt, 2 clauses: 3:4, 15:7
Hamðismál: 2:7
Baldrs draumar, 2 clauses: 1:7, 14:5
Hyndluljóð: 17:7
Grottasǫngr, 2 clauses: 10:7, 24:4

Verb-second (148 instances)

Vafþrúðnismál, 4 clauses: 4:5, 7:2, 32:6, 46:6
Grímnismál, 6 clauses: 2:5, 23:6, 29:7, 38:6, 50:2, 51:4
Skirnismál, 10 clauses: 2:3, 4:4, 9:5, 9:6, 13:3, 14:2, 23:3, 25:3, 38:3, 40:2
Hárbarðsljóð, 15 clauses: 7:4, 8:10, 13:7, 15:4, 20:3, 25:3, 27:3, 28:2, 42:4, 43:3, 47:3, 47:6, 49:2, 56:6, 59:4
Lokasenna, 17 clauses: 4:5, 5:6, 16:4, 20:3, 21:3, 33:4, 35:2, 38:6, 40:3, 42:4, 47:2, 47:4, 51:1, 52:3, 58:5, 61:6, 64:3
Þrymskviða: 13:9
Vǫlundarkviða, 3 clauses: 6:3, 17:2, 27:3
Alvíssmál, 2 clauses: 7:2, 8:6
Helgakviða Hundingsbana I: 16:5
Helgakviða Hjǫrvarðssonar, 10 clauses: 16:5, 18:5, 18:6, 21:5, 22:5, 24:3, 25:1, 27:2, 36:7, 41:3
Helgakviða Hundingsbana II, 5 clauses: 21:2, 30:3, 31:3, 33:7, 36:4
Grípisspá, 5 clauses: 3:4, 12:2, 32:5, 36:5, 53:8
Reginsmál, 8 clauses: 2:6, 3:6, 7:6, 8:6, 11:3, 21:2, 22:6, 24:2
Fáfnismál, 6 clauses: 6:6, 10:4, 17:6, 25:3, 30:3, 39:4
Sigrdrífumál, 10 clauses: 4:7, 6:2, 7:2, 8:5, 10:2, 13:2, 15:2, 19:5, 32:2, 35:2
Guðrúnarkviða I, 2 clauses: 1:1, 22:3
Sigurðarkviða in skamma, 4 clauses: 1:1, 8:5, 18:9, 25:3
Helreið Brynhildar: 10:7
Guðrúnarkviða II, 5 clauses: 3:3, 12:7, 20:5, 28:6, 33:4
Oddrúnargrátr, 5 clauses: 9:5, 10:3, 18:7, 19:7, 29:7
Atlamál, 17 clauses: 5:4, 10:6, 12:5, 14:2, 17:6, 32:8, 40:7, 46:6, 53:2, 57:10, 60:8, 78:8, 79:8, 80:8, 88:8, 96:4, 105:2
Guðrúnarhvǫt, 3 clauses: 1:5, 18:9, 19:5
Hamðismál, 4 clauses: 5:7, 10:7, 27:2, 29:3
Baldrs draumar: 5:3
Hyndluljóð, 2 clauses: 6:5, 7:3
Grottasǫngr: 18:6

Clause-final (295 instances)

Vǫluspá, 9 clauses: 2:3, 4:1, 4:3, 7:3, 21:3, 26:4, 47:7, 59:7, 61:5
Vafþrúðnismál, 2 clauses: 6:5, 47:3
Grímnismál, 7 clauses: 2:3, 8:2, 20:5, 24:5, 33:2, 36:2, 49:5
Skirnismál, 10 clauses: 5:3, 7:6, 11:2, 24:5, 24:7, 26:5, 28:2, 36:6, 39:2, 41:2
Hárbarðsljóð, 12 clauses: 3:6, 5:4, 6:2, 8:2, 8:8, 18:2, 18:4, 19:6, 33:2, 38:2, 39:4, 50:4
Hymiskviða, 6 clauses: 3:7, 4:5, 12:7, 17:3, 17:6, 25:3
Lokasenna, 16 clauses: 7:3, 15:5, 18:6, 19:5, 20:5, 21:4, 22:5, 23:2, 27:6, 43:1, 44:2, 47:6, 50:6, 51:3, 54:2, 54:5

Þrymskviða, 3 clauses: 29:3, 31:3, 32:3
Vǫlundarkviða, 14 clauses: 5:9, 8:4, 14:5, 14:7, 18:4, 18:6, 21:4, 22:8, 23:8, 28:2, 28:3, 31:8, 37:2, 37:6
Alvíssmál: 4:5
Helgakviða Hundingsbana I, 8 clauses: 2:3, 24:7, 28:5, 29:5, 36:3, 41:7, 43:3, 51:9
Helgakviða Hjǫrvarðssonar, 15 clauses: 2:5, 5:10, 6:6, 17:6, 20:2, 20:5, 21:2, 22:6, 30:6, 33:10, 35:3, 37:7, 38:5, 41:5, 42:3
Helgakviða Hundingsbana II, 18 clauses: 4:3, 4:9, 8:4, 12:7, 18:8, 21:7, 28:7, 34:7, 40:2, 40:5, 41:2, 42:3, 42:9, 45:8, 47:7, 48:5, 49:7, 50:7
Grípisspá, 16 clauses: 6:3, 8:4, 10:4, 12:4, 16:7, 17:3, 19:6, 30:4, 32:7, 34:7, 40:8, 41:4, 43:6, 46:3, 47:3, 47:5
Reginsmál, 2 clauses: 15:3, 24:3
Fáfnismál, 13 clauses: 3:1, 8:6, 15:5, 21:6, 29:4, 29:5, 32:7, 35:8, 35:8, 36:3, 37:5, 40:8, 44:3
Sigrdrífumál, 5 clauses: 22:2, 23:2, 25:2, 33:2, 33:3
Brot af Sigurðarkviðu, 8 clauses: 6:7, 8:7, 9:5, 10:7, 13:8, 15:7, 17:3, 17:7
Guðrúnarkviða I, 5 clauses: 2:3, 3:7, 8:7, 23:5, 26:1
Sigurðarkviða in skamma, 18 clauses: 3:1, 3:8, 11:2, 14:5, 32:3, 35:2, 35:3, 36:9, 44:9, 45:5, 46:3, 51:1, 52:4, 57:3, 64:3, 65:7, 68:5, 71:3
Helreið Brynhildar, 7 clauses: 2:6, 3:7, 5:4, 6:6, 6:7, 9:7, 12:3
Guðrúnarkviða II, 9 clauses: 1:5, 3:7, 10:7, 13:3, 23:8, 26:4, 28:8, 30:6, 31:10
Guðrúnarkviða III, 5 clauses: 2:5, 3:5, 3:7, 7:3, 10:7
Oddrúnargrátr, 12 clauses: 10:6, 10:7, 10:9, 11:3, 11:7, 12:3, 14:8, 17:7, 21:8, 25:6, 26:3, 27:3
Atlakviða, 7 clauses: 5:8, 8:4, 9:4, 30:2, 34:3, 38:6, 38:10
Atlamál, 44 clauses: 4:4, 5:6, 7:2, 7:4, 9:2, 12:8, 16:4, 17:4, 30:12, 31:2, 32:4, 33:4, 33:6, 34:5, 37:8, 46:2, 49:2, 49:8, 51:2, 52:10, 57:8, 58:8, 62:10, 63:8, 63:10, 69:4, 70:8, 72:10, 74:2, 74:4, 80:6, 82:2, 85:2, 85:6, 86:6, 89:4, 91:6, 92:4, 98:8, 99:8, 101:2, 101:3, 102:8, 103:6
Guðrúnarhvǫt, 9 clauses: 5:4, 10:7, 11:5, 15:3, 17:2, 17:6, 17:10, 19:3, 21:5
Hamðismál, 4 clauses: 9:8, 18:5, 26:4, 28:4
Hyndluljóð, 3 clauses: 4:4, 45:7, 46:7
Grottasǫngr, 7 clauses: 3:6, 4:3, 6:7, 8:4, 15:3, 17:7, 21:3

Line-final (63 instances)

Vǫluspá: 1:5
Grímnismál, 3 clauses: 29:5, 30:8, 50:4
Skirnismál, 4 clauses: 8:2, 9:2, 19:5, 35:2
Hymiskviða, 2 clauses: 30:1, 38:7
Lokasenna, 7 clauses: 4:1, 27:1, 28:2, 28:5, 29:2, 31:2, 52:5
Þrymskviða: 29:7
Vǫlundarkviða: 12:2
Alvíssmál, 2 clauses: 4:2, 8:4
Helgakviða Hjǫrvarðssonar, 3 clauses: 14:5, 26:9, 43:5
Helgakviða Hundingsbana II, 2 clauses: 8:5, 37:5

Grípisspá, 2 clauses: 1:7, 8:7
Reginsmál, 2 clauses: 12:5, 15:5
Fáfnismál, 6 clauses: 7:1, 18:2, 24:6, 26:2, 36:5, 37:2
Sigrdrífumál, 4 clauses: 2:5, 9:2, 31:2, 37:2
Brot af Sigurðarkviðu, 3 clauses: 1:3, 2:6, 9:2
Guðrúnarkviða I: 27:7
Sigurðarkviða in skamma: 40:7
Guðrúnarkviða II, 2 clauses: 12:3, 32:3
Guðrúnarkviða III: 10:3
Oddrúnargrátr, 3 clauses: 8:7, 31:3, 33:5
Atlakviða, 6 clauses: 3:6, 8:2, 15:2, 14:14, 16:2, 40:6
Guðrúnarhvǫt: 12:5
Hamðismál, 3 clauses: 3:3, 6:5, 21:2
Hyndluljóð, 2 clauses: 7:8, 9:6

Clause-late (31 instances)

Vafþrúðnismál: 35:5
Grímnismál, 2 clauses: 6:2, 42:4
Skirnismál: 5:4
Hymiskviða, 2 clauses: 6:3, 26:3
Lokasenna, 5 clauses: 1:2, 5:2, 26:4, 49:4, 50:1
Þrymskviða: 3:7
Vǫlundarkviða: 29:3
Helgakviða Hjǫrvarðssonar: 4:5
Helgakviða Hundingsbana II: 34:3
Fáfnismál: 30:4
Sigrdrífumál, 2 clauses: 12:2, 24:2
Brot af Sigurðarkviðu: 15:5
Guðrúnarkviða I: 21:9
Sigurðarkviða in skamma, 5 clauses: 3:3, 24:7, 30:5, 58:9, 60:7
Helreið Brynhildar: 13:3
Guðrúnarkviða II: 24:7
Guðrúnarkviða III: 4:7
Guðrúnarhvǫt, 2 clauses: 2:5, 8:7
Grottasǫngr: 12:3

Ambiguous order (344 instances)

Vǫluspá, 18 clauses: 1:8, 3:2, 8:5, 10:8, 14:5, 19:6, 20:4, 22:2, 22:5, 26:8, 28:2, 32:2, 33:3, 39:5, 42:8, 45:10, 53:3, 65:4

Vafþrúðnismál, 12 clauses: 10:2, 10:6, 11:5, 12:2, 13:5, 14:2, 20:2, 22:2, 44:5, 47:5, 49:5, 54:5

Grímnismál, 13 clauses: 4:2, 5:2, 9:2, 10:2, 11:2, 12:5, 22:2, 32:2, 34:8, 38:5, 53:6, 54:8, 54:8

Skirnismál, 4 clauses: 8:5, 16:5, 21:2, 21:5

Hárbarðsljóð, 14 clauses: 5:2, 12:2, 15:2, 16:4, 22:2, 23:4, 23:6, 24:6, 26:9, 29:3, 40:2, 42:3, 49:1, 49:4

Hymiskviða, 18 clauses: 1:4, 6:1, 7:4, 7:8, 11:5, 14:2, 15:6, 18:2, 18:7, 22:2, 22:6, 25:2, 29:2, 32:3, 33:2, 35:2, 37:2, 39:4

Lokasenna, 14 clauses: 2:5, 6:5, 8:4, 11:5, 13:5, 14:1, 14:2, 23:1, 29:5, 30:5, 35:5, 39:5, 64:6, 65:5

Þrymskviða, 8 clauses: 1:2, 2:5, 5:3, 9, 17:5, 24:8, 26:3, 28:3

Vǫlundarkviða, 14 clauses: 7:8, 11:2, 16:6, 18:3, 21:6, 24:6, 26:4, 33:7, 33:12, 34:2, 35:2, 37:9, 40:2, 41:2

Alvíssmál, 7 clauses: 4:6, 5:2, 13:5, 17:5, 19:5, 21:5, 23:5

Helgakviða Hundingsbana I, 23 clauses: 1:2, 3:3, 5:4, 10:3, 10:7, 13:3, 14:2, 17:5, 22:6, 28:2, 32:4, 33:6, 34:2, 35:5, 40:4, 46:7, 47:8, 53:2, 53:8, 54:4, 55:5, 55:7, 56:10

Helgakviða Hjǫrvarðssonar, 11 clauses: 3:6, 9:4, 11:3, 22:2, 23:2, 28:9, 29:2, 34:2, 35:2, 35:6, 43:7

Helgakviða Hundingsbana II, 19 clauses: 1:7, 2:4, 3:3, 10:6, 11:2, 11:4, 13:3, 19:2, 24:7, 29:5, 30:7, 32:2, 32:6, 33:2, 38:7, 39:8, 43:5, 45:3, 50:2

Grípisspá, 13 clauses: 6:5, 10:7, 11:3, 16:3, 20:2, 21:8, 22:3, 24:7, 25:6, 37:6, 38:4, 5:51, 53:4

Reginsmál, 13 clauses: 3:2, 4:3, 4:5, 5:2, 9:3, 10:3, 18:2, 19:5, 20:2, 22:2, 23:6, 25:4, 26:6

Fáfnismál, 15 clauses: 1:4, 8:2, 11:5, 12:5, 17:5, 19:6, 21:3, 22:5, 23:5, 31:6, 34:6, 35:2, 37:4, 38:5, 39:2

Sigrdrífumál, 10 clauses: 7:3, 12:2, 12:8, 13:8, 15:5, 19:8, 21:6, 23:3, 34:2, 34:5

Brot af Sigurðarkviðu, 3 clauses: 4:5, 12:6, 18:2

Guðrúnarkviða I, 5 clauses: 1:3, 13:7, 16:3, 16:8, 21:3

Sigurðarkviða in skamma, 16 clauses: 1:4, 31:10, 36:3, 39:2, 41:1, 44:7, 47:7, 49:2, 58:8, 60:3, 61:5, 64:5, 68:4, 69:5, 70:1, 70:7

Helreið Brynhildar, 2 clauses: 10:8, 13:6

Guðrúnarkviða II, 10 clauses: 3:1 *r*, 6:3, 15:2, 16:6, 24:2, 28:3, 36:4, 38:4, 39:2, 40:3

Guðrúnarkviða III, 2 clauses: 1:7, 11:2

Oddrúnargrátr, 9 clauses: 2:3, 3:3, 4:8, 15:4, 18:4, 20:4, 24:4, 28:3, 32:7

Atlakviða, 18 clauses: 6:7, 9:6, 11:4, 11:8, 12:8, 13:6, 20:2, 23:7, 23:8, 23:10, 24:2, 25:7, 25:8, 25:10, 26:3, 27:4, 31:3, 42:2

Atlamál, 27 clauses: 1:2, 4:8, 6:6, 7:6, 7:8, 12:6, 16:2, 20:4, 20:6, 32:2, 35:4, 36:2, 38:4, 38:6, 39:2, 44:2, 55:2, 60:1, 64:4, 66:4, 73:4, 81:2, 83:4, 86:10, 93:4, 96:2, 97:10

Guðrúnarhvǫt, 4 clauses: 3:7, 4:5, 13:8, 16:3

Hamðismál, 7 clauses: 8:8, 19:3, 22:5, 25:4, 27:4, 28:2, 29:5

Baldrs draumar, 5 clauses: 2:8, 4:3, 11:7, 12:6, 13:2

Rígsþula, 3 clauses: 12:3, 37:4, 39:4

Hyndluljóð, 5 clauses: 1:4, 7:5, 8:6, 13:3, 14:6

Grottasǫngr, 2 clauses: 2:7, 14:6

APPENDIX 6

Relative markers in the corpora

Relative clauses with only *er* in my Eddic corpus (142 instances)

Vǫluspá: 26:8
Hávamál, 11 clauses: 12:5, 22:5, 27:2, 40:2, 54:6, 55:6, 62:5, 93:5, 94:2, 119:9, 142:5
Vafþrúðnismál, 6 clauses: 10:2, 12:2, 14:2, 16:2, 18:2, 37:2
Grímnismál, 12 clauses: 2:5, 4:3, 6:5, 22:2, 24:5, 25:2, 26:2, 28:12, 32:2, 39:2, 50:2, 54:8
Skirnismál, 12 clauses: 8:5, 9:2, 9:5, 9:6, 14:2, 21:5, 23:4, 25:4, 26:5, 35:2, 39:2, 41:2
Hárbarðsljóð, 10 clauses: 5:2, 8:4, 9:2, 9:4, 15:4, 22:4, 23:4, 39:4, 40:2, 43:3
Hymiskviða, 3 clauses: 7:4, 30:4, 32:3
Lokasenna, 6 clauses: 2:5, 13:5, 20:3, 30:5, 39:5, 65:5
Þrymskviða, 2 clauses (plus 1 repetition): 2:5, 26:3 (repeated in 28:3)
Vǫlundarkviða, 8 clauses (plus 2 repetitions): 7:8, 8:4, 16:4, 21:6, 24:6 (repeated in 35:2), 26:3, 37:2, 40:2 (repeated in 41:2)
Alvíssmál: 7:2
Helgakviða Hundingsbana I, 2 clauses: 5:4, 55:5
Helgakviða Hjǫrvarðssonar, 11 clauses: 5:10, 14:5, 16:5, 18:5, 22:5, 24:3, 25:1, 26:2, 27:5, 28:9, 35:3
Helgakviða Hundingsbana II, 9 clauses: 2:4, 11:4, 12:7, 18:8, 27:7, 29:5, 38:7, 40:2, 41:2
Grípisspá, 2 clauses: 32:7, 40:8
Reginsmál, 3 clauses: 5:2, 8:6, 23:6
Fáfnismál, 5 clauses: 1:4, 5:6, 7:5, 35:8, 37:5
Sigrdrífumál: 4:7
Brot af Sigurðarkviðu, 2 clauses: 1:3, 12:6
Guðrúnarkviða I, 2 clauses: 16:8, 23:5
Sigurðarkviða in skamma: 1:4
Helreið Brynhildar: 9:7
Guðrúnarkviða II: 32:3
Guðrúnarkviða III: 3:7
Oddrúnargrátr: 10:6
Atlakviða, 4 clauses: 5:8, 23:7, 25:7, 38:6
Atlamál, 7 clauses: 1:8, 6:6, 20:4, 32:2, 52:4, 62:10, 105:2
Guðrúnarhvǫt, 2 clauses: 10:7, 15:3
Hamðismál, 3 clauses: 9:8, 10:7, 28:4
Baldrs draumar, 3 clauses: 5:3, 12:6, 14:5
Hyndluljóð, 3 clauses: 1:4, 7:8, 8:6
Svipdagsmál/Gróugaldr: 2:5
Svipdagsmál/Fjǫlsvinnsmál, 5 clauses: 1:5, 3:2, 14:5, 31:5, 50:2

Relative clauses with adjacent *sá er* in my Eddic corpus (172 instances)

Vǫluspá, 10 clauses: 1:8, 2:3, 4:3, 7:3, 19:6, 39:5, 42:8, 59:6, 61:5, 65:4
Hávamál, 39 clauses: 2:5, 3:2, 3:6, 4:2, 5:2, 5:5, 13:2, 18:6, 28:6, 29:2, 31:2, 31:5, 37:5, 40:5, 44:2, 45:2, 50:2, 50:5, 58:2, 59:2, 59:5, 63:3, 74:2, 80:4, 84:3, 90:2, 92:2, 94:3, 103:8, 108:6, 119:6, 133:2, 134:8, 134:11, 147:3, 164:5, 164:6, 164:7, 164:8
Vafþrúðnismál, 3 clauses: 22:5, 24:5, 49:5
Grímnismál, 4 clauses: 9:2, 10:2, 33:2, 42:6
Skirnismál, 3 clauses: 8:2, 21:2, 31:5
Hárbarðsljóð, 4 clauses: 9:8, 19:8, 24:6, 42:4
Hymiskviða, 5 clauses: 3:8, 11:5, 22:2, 22:4, 39:4
Lokasenna, 5 clauses: 22:5, 23:2, 35:5, 55:5, 64:3
Þrymskviða: 24:8
Vǫlundarkviða, 5 clauses: 12:2, 18:3, 29:3, 33:12, 34:2
Alvíssmál, 2 clauses: 8:6, 13:5
Helgakviða Hundingsbana I, 11 clauses: 2:3, 3:3, 10:7, 13:3, 24:7, 32:4, 33:6, 35:5, 51:9, 54:4, 55:7
Helgakviða Hjǫrvarðssonar, 6 clauses: 2:6, 3:6, 9:4, 11:3, 39:3, 43:7
Helgakviða Hundingsbana II, 4 clauses: 18:10, 19:2, 30:7, 31:3
Grípisspá, 9 clauses: 1:7, 10:7, 11:3, 16:7, 17:3, 19:6, 20:2, 21:8, 22:3
Reginsmál, 3 clauses: 10:3, 15:3, 26:6
Fáfnismál, 5 clauses: 29:5, 33:4, 34:6, 38:5, 44:3
Sigrdrífumál, 7 clauses: 11:6, 15:2, 18:2, 23:3, 27:6, 34:2, 36:6
Brot af Sigurðarkviðu: 15:7
Guðrúnarkviða I, 3 clauses: 1:1, 2:3, 3:7
Sigurðarkviða in skamma, 5 clauses: 1:1, 5:5, 49:2, 65:9, 70:7
Helreið Brynhildar, 2 clauses: 10:7, 10:8
Guðrúnarkviða II, 4 clauses: 15:2, 16:6, 26:2, 40:3
Guðrúnarkviða III: 9:7
Oddrúnargrátr, 3 clauses: 10:9, 18:4, 28:3
Atlakviða, 3 clauses: 6:7, 9:4, 38:10
Atlamál, 9 clauses: 16:2, 39:2, 86:6, 86:10, 87:4, 92:4, 97:10, 99:6, 104:4
Guðrúnarhvǫt: 18:9
Hamðismál, 2 clauses: 3:3, 29:5
Baldrs draumar: 2:8
Hyndluljóð: 14:6
Svipdagsmál/Grógaldr, 3 clauses: 3:3, 5:2, 6:5
Svipdagsmál/Fjǫlsvinnsmál, 7 clauses: 22:5, 25:5, 27:5, 29:5, 30:3, 39:5, 41:5

Relative clauses with ***sá*** distant from *er* in my Eddic corpus (78 instances)

Vǫluspá, 2 clauses: 20:4, 32:2
Hávamál, 20 clauses: 8:5, 9:2, 18:2, 28:2, 46:2, 60:2, 65:2, 92:6, 95:2, 124:4, 133:3, 136:2, 138:8, 146:2, 147:2, 151:5, 153:2, 160:2, 163:2, 163:8
Vafþrúðnismál, 6 clauses: 7:2, 11:4, 13:4, 15:4, 17:4, 48:5
Grímnismál, 2 clauses: 6:2, 12:5
Hárbarðsljóð, 4 clauses: 1:2, 2:2, 16:4, 44:1
Lokasenna, 2 clauses: 11:5, 44:2
Alvíssmál, 3 clauses (plus 9 repetitions): 4:6, 5:2, 9:5 (repeated in 15:5, 17:5, 19:5, 21:5, 23:5, 25:5, 27:5, 31:5, 33:5)
Helgakviða Hundingsbana II, 3 clauses: 32:2, 32:7, 33:2
Grípisspá, 2 clauses: 3:4, 46:3
Reginsmál: 1:2
Fáfnismál, 5 clauses: 12:5, 14:5, 21:3, 23:5, 24:6
Sigrdrífumál, 3 clauses: 12:8, 13:8, 15:5
Sigurðarkviða in skamma: 32:2
Helreið Brynhildar: 13:6
Guðrúnarkviða II: 24:2
Atlakviða: 42:2
Atlamál, 10 clauses: 5:6, 7:8, 11:6, 12:3, 30:12, 38:4, 66:6, 96:4, 99:8, 101:2
Svipdagsmál/Fjǫlsvinnsmál, 11 clauses: 9:5, 13:5, 19:5, 20:5, 21:6, 23:5, 28:5, 33:5, 35:5, 37:5, 49:5

Other relative clauses in my Eddic corpus

hinn adjacent or distant to *er* (8 instances)

Hávamál, 4 clauses: 7:2, 8:2, 27:8, 75:2
Grímnismál: 11:2
Lokasenna, 2 clauses: 20:5, 38:6
Þrymskviða: 29:3 (repeated in 32:3)

hverr adjacent or distant to *er* (11 instances)

Hávamál, 2 clauses: 76:6, 124:2
Vafþrúðnismál: 10:6
Grímnismál: 42:3
Skirnismál: 13:3
Lokasenna: 47:6
Sigrdrífumál: 19:5
Helreið Brynhildar: 7:4
Guðrúnarkviða III: 11:2
Atlamál: 20:6
Svipdagsmál/Fjǫlsvinnsmál: 48:6

sem (4 instances)

Fáfnismál: 31:6
Atlamál, 2 clauses: 82:2 (repeated in 85:6), 105:5
Baldrs draumar: 13:2

Relative clauses with only *er* in my skaldic corpus (27 instances)

Þjóðólfr or Hvini, 3 clauses: *Yt* 1:4, 20:13, 27:5
Þorbjǫrn hornklofi, 4 clauses: *Harkv* 10:6, 13:6, 19:11, 2:8,
Hallfreðr vandræðaskáld Óttarsson: *ErfÓl* 22:5
Þórðr Kolbeinsson: *Eirdr* 8:5
Óttarr svarti: *Hfl* 19:3
Sigvatr Þórðarson, 5 clauses:*Ást* 1:3, *ErfÓl* 17:4, 23:6, 24:8, *Erlfl* 9:2
Haraldr harðráði Sigurðarson: *Lv* 8:6
Þjóðólfr Arnórsson: *Sex* 20:6
Arnórr jarlaskáld Þórðarson, 2 clauses: *Hardr* 2:2, *Magndr* 3:2
Steinn Herdísarson: *Óldr* 2:8
Markús Skeggjason: *Eirdr* 3:7
Einarr Skúlason: *Geisl* 12:7
Hallar-Steinn: *Rst* 2:6
Gunnlaugr Leifsson, 4 clauses: *Merl I* 21:7, 44:7, 84:6, *Merl II* 7:8

Relative clauses with adjacent *sá er* in my skaldic corpus (157 instances)

Þjóðólfr or Hvini, 2 clauses: *Haustl* 7:3, 9:3
Þorbjǫrn hornklofi, 8 clauses: *Harkv* 1:6, 5:2, 15:2, 16:3,18:6, 20:4, 21:2, 21:10
Eyvindr skaldaspillir Finnsson, 4 clauses: *Hák* 14:5, *Hál* 12:1, *lv* 13:7, 14:3
Einarr skálaglamm Helgason: *Hákdr* 1:3
Tindr Hallkelsson: *Hákdr* 8:3
Eilífr Goðrúnarson: *Þdr* 15:3
Hallfreðr vandræðaskáld Óttarsson, 4 clauses: *ErfÓl* 3:1, 11:2, 26a:1, 26a:5
Þórðr Kolbeinsson, 4 clauses: *Eirdr* 3:7, 4:5, 16:1, 16:5
Óttarr svarti, 3 clauses: *Hfl* 3:7, 16:7, 18:8
Þórarinn loftunga: *Tøgdr* 7:5
Sigvatr Þórðarson, 31 clauses: *Austv* 5:6, 6:1, 13:1, 16:2, 19:6, *Berv* 2:1, 3:1, 6:7, 10:2, 10:5, 14:1, *ErfÓl* 4:1, 5:1, 8:5, 23:5, 24:1, 27:3, *Erlfl* 8:4, *Knútdr* 8:5, 10:2, *Lv* 14:3, 19:1, 21:7, 27:1, *Nesv* 1:7, 6:6, 13:3, *Óldr* 1:2, *Vestv* 4:3, *Víkv* 2:7, 4:3
Þorleikr fagri, 3 clauses: *Sveinn* 3:7, 9:3, 10:1
Haraldr harðráði Sigurðarson: *Lv* 12:5
Þjóðólfr Arnórsson, 6 clauses: *Lv* 3:3, *Magn* 13:6, *Sex* 5:1, 18:2, 18:5, 30:3

Arnórr jarlaskáld Þórðarson, 10 clauses: *Hardr* 3:1, 5:1, 5:4, 10:3, 12:2, 12:5, 14:3, *Hryn* 9:1, 15:1, *Þorfdr* 12:4
Steinn Herdísarson: *Nizv* 7:7
Gísl Illugason, 2 clauses: *Magnkv* 9:6, 10:6
Markús Skeggjason, 3 clauses: *Eirdr* 3:4, 19:3, *Lv* 2:2
Ívarr Ingimundarson, 4 clauses: *Sig* 10:4,, 14:4, 23:7, 40:3
Rǫgnvaldr jarl Kali Kolsson, 3 clauses: *Lv* 9:3, 13:1, 32:6
Einarr Skúlason, 31 clauses: *Geisl* 1:3, 2:1, 6:5, 7:3, 8:7, 12:6, 14:1, 16:5, 23:7, 26:3, 30:7, 38:3, 41:5 *ok þeim, es vel vakði*, 43:3,, 44:1, 45:1, 46:2, 46:5, 50:3, 51:1, 56:7, 57:1, 59:5, 61:1, 61:7, 67:6, 68:5,, *Eystdr* 2:1, *Run* 2:8, 4:4, *Sigdr I* 2:1
Gamli kanóki, 16 clauses: *Has* 2:7, 3:3, 11:3, 24:3, 25:3, 38:1, 46:3, 46:8, 52:7, 54:7, 55:1, 55:5, 58:7, 61:4, 64:1, *Jóndr* 4:4
Hallar-Steinn: *Rst* 1:8
Gunnlaugr Leifsson, 14 clauses: *Merl I* 2:3, 14:2, 34:1, 37:2, 45:10, 95:2, 95:10, 101:2, 103:2, *Merl II* 1:5, 7:3, 8:3, 8:5, 26:3
Bjarni biskup Kolbeinsson, 2 clauses: *Jóms* 18:2, 43:6

Relative clauses with *sá* distant from *er* in my skaldic corpus (14 instances)

Þjóðólfr or Hvini: *Yt* 3:12
Glúmr Geirason: *Gráf* 8:3
Eyvindr skaldaspillir Finnsson: *Hák* 19:3
Tindr Hallkelsson: *Hákdr* 11:2
Sigvatr Þórðarson, 2 clauses: *Lv* 15:3, *Víkv* 15:6
Haraldr harðráði Sigurðarson: *Lv* 1:2
Þjóðólfr Arnórsson: *Run* 4:2
Arnórr jarlaskáld Þórðarson: *Hryn* 13:3
Gísl Illugason: *Magnkv* 7:6
Gamli kanóki: *Jóndr* 2:1
Gunnlaugr Leifsson, 3 clauses: *Merl I* 9:2,, 46:7, 47:2

Other relative clause types in the skaldic corpus

hinn adjacent or distant to *er* (27 clauses)

Bragi inn gamli Boddason, 2 clauses: *Frag* 2:1, Þórr 6:3
Þjóðólfr ór Hvini, 2 clauses: *Yt* 11:2, 12:2
Þorbjǫrn hornklofi, 5 clauses: *Harkv* 2:4, 9:2, 9:4, 14:6, 23:6
Eyvindr skáldaspillir Finnsson, 2 clauses: *Hál* 1:9, 9:2
Einarr skálaglamm Helgason: *Vell* 33:4
Hallfreðr vandræðaskáld Óttarsson, 2 clauses: *ErfÓl* 20:2, *Hákdr* 4:2

Sigvatr Þórðarson, 4 clauses: *Berv* 14:5, *ErfÓl* 17:6, *Erl* 1:7, *Knútdr* 1:2
Þorleikr fagri: *Sveinn* 6:4
Þjóðólfr Arnórsson: *Lv* 9:8
Arnórr jarlaskáld Þórðarson: *Hardr* 9:3
Steinn Herdísarson, 2 clauses: *Nizv* 1:1, 2:3
Markús Skeggjason: *Eirdr* 3:7
Einarr Skúlason: *Lv* 5:4
Gunnlaugr Leifsson: *Merl II* 14:1
Bjarni biskup Kolbeinsson: *Jóms* 15:7

hverr adjacent or distant to *er* (8 clauses)

Þórarinn loftunga: *Glækv* 1:8
Sigvatr Þórðarson, 3 clauses: *Austv* 18:3, 18:5, *Lv* 27:5
Einarr Skúlason, 2 clauses: *Geisl* 66:7, 67:5
Gamli kanóki, 2 clauses: *Has* 17:1, 64:5

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This book offers new dating of the poems of the Old Norse *Poetic Edda*, perhaps our best sources about the mythology and legends of the Viking Age. This study compares the anonymous Eddic poems to dated skaldic poems with respect to five phenomena that develop diachronically in early Old Norse: the expletive particle of, types of negation, word order, types of relative clause, and metrical criteria. After examining these dating features individually, the three most reliable criteria – the particle of, negation, and relative clause type – are combined into a multifactorial analysis using a Naïve Bayes Classifier. The classifier assigns a date to each Eddic poem, and these proposed dates have interesting implications for our understanding of these texts as sources for the medieval history, mythology, linguistics, and literature of the Germanic peoples. This book will have broad interdisciplinary interest, not just to historical linguists and philologists but also to scholars of Norse history, literature, and mythology.

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