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## Metrical evidence for the evolution of English syntax<sup>1</sup>

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Kuhn (1933) proposed that the evolution of Germanic syntax began with a need to restore acceptable sentence rhythm after a shift to fixed initial stress. Kuhn found support for his hypothesis in ‘laws’ for word placement that applied in alliterative poetry but not in prose. Kuhn assumed that his laws were syntactic rules of Proto-Germanic maintained by conservative poets. Here I argue that Kuhn’s Laws were rules of poetic meter that obscured basic word order. Adopting the universalist approach in Russom (2017), I integrate Kuhn’s Laws with the metrical constraints observed by Sievers (1893) and explore the interaction between meter and syntax. When there are no adverse metrical consequences, subject-object-verb order is employed with remarkable consistency in *Beowulf*, our most valuable source of poetic evidence. My analysis receives independent support from Smith (1971), a study of the earliest Germanic texts that focuses primarily on prose.

**Keywords:** diachronic syntax, language typology, Kuhn’s Laws, alliterative meter, Proto-Germanic

### 1 Placement of unstressed constituents in Germanic verse

Kuhn’s First Law (henceforth K1) restricts the placement of high-frequency words that are major constituents of the clause, e.g. sentence conjunctions, sentential adverbs, pronoun subjects and objects, ‘be’ verbs and finite auxiliaries.<sup>2</sup> Kuhn called such words *Satzpartikeln* ‘sentence particles’. I will call them SPs. According to Kuhn, an unstressed SP must appear before the first or second stress of a clause; otherwise, the SP acquires stress. When there are two or more SPs, they must all be placed in just one of the two permissible locations. SPs contrast with constituents of small phrases, e.g. unstressed prefixes, prepositions, determiners, conjunctions that link small phrases, and adverbs that modify adjectives or other adverbs. Kuhn called these *Satzteilpartikeln* ‘sentence-part particles’. I will call them STPs. According to Kuhn’s Second Law (henceforth K2), any STP before the first stress of the clause must be accompanied by an SP. Many of Kuhn’s *Partikeln* are not ‘particles’ in the current technical sense of the

<sup>1</sup> Thanks to Ann Dodge and the staff of the John Hay Library for help with equipment that enabled me to read a faint microfilm copy of Smith (1971).

<sup>2</sup> For discussion of finite verbs that can appear without metrical stress see Russom (2017: 117–26).

term: ‘an invariable item with a grammatical function, especially one that does not readily fit into a standard definition of parts of speech’ (Crystal 1985: 222). I use ‘SP’ and ‘STP’ to avoid confusion.

Item (1) shows how Kuhn’s Laws apply in *Beowulf*, the oldest long poem in a Germanic language with Germanic narrative content (c. 700 CE).<sup>3</sup> The clause in (1a) consists of three half-lines called VERSES, which are designated by the line number followed by ‘a’ for the first verse of the line (the A-VERSE) or ‘b’ for the second (the B-VERSE). The midline caesura is represented by extra spaces. Alliterating syllables are in boldface.<sup>4</sup> All syllables before the first alliteration of the verse are treated like unstressed syllables in Old English poetry (Russom 1998: 128–34).

- (1) (a) þæt hine on ylde eft gewunigen  
       **wil**-gesīþas (22a–23a)  
       ‘so that in old age afterwards willing companions would accompany him’
- (b)                               \***wil**-gesīþas  
       hine on ylde eft gewunode (constructed)  
       ‘willing companions accompanied him in old age’

Item (1b) has acceptable verse patterns and the most common word order in the poem but the order of verses puts the unstressed SP *hine* in the second verse of the clause, violating K1. In item (1a), *hine* and the unstressed SP *þæt* occupy the same permissible location, in accord with K1, and the prepositional STP *on* is accompanied by these SPs, in accord with K2.

## 2 Evolutionary scenarios for Germanic syntax

The critique of Kuhn’s Laws in Smith (1971: 1–14) provides a survey of previous work available to Kuhn, which can be summarized briefly. Ries (1880: 91–111) argued that the original word order in Common Germanic was subject first, verb last and everything else in between. Behaghel (1897: 7–33) basically agreed. According to Erdmann (1886: 191–5), the key factor was placement of the verb relative to all other words in the sentence. Braune (1894: 34–51) thought that placement of the verb in first or second position was the first step toward syntactic patterning in a proto-language with originally free word order. Wackernagel (1892: 333–436) thought that verb-second order in Modern German was a direct reflex of IE syntax. Just after Smith wrote, Vennemann (1974: 368) hypothesized that Proto-Germanic verbs stood in second position between topics and complements. This hypothesis was rejected by Antonsen (2002: 294), who maintained that Germanic inscriptions in the oldest runic alphabet had SOV order. I will not critique later publications that posit verb-second order in Proto-Germanic, whether

<sup>3</sup> See Neidorf (2014) for the dating evidence.

<sup>4</sup> *Beowulf* is cited from Fulk, Bjork & Niles (2008), with some changes in formatting for clarity. Sentence-initial caps are not used because sentence boundaries are under scrutiny here. When alliteration falls on a resolved sequence of two short syllables, I bold the whole sequence.

crucially or incidentally. Instead I will focus on showing that verb-second order is ruled out by metrical evidence.<sup>5</sup>

Following Wackernagel, Kuhn (1933: 61) assumed that SPs were enclitic to the first stressed word of the clause in the immediate ancestor of Proto-Germanic. When word stress shifted to the first syllable in late Proto-Germanic, he argued, the result would be falling rhythm at the level of both word and clause, something he found *unschöne und unbequeme* ‘unlovely and unpleasant’ (Kuhn 1933: 22). The problem was supposedly mitigated by reanalysis of enclitic SPs as proclitics to the second stressed word. These created precedents for proclitics to the first stressed word and a second location for unstressed SPs developed.<sup>6</sup>

### 3 German ‘Partikeln’ and English ‘clitics’

Kuhn’s clitic SPs were subordinated within the clause but were not ‘clitics’ in the current technical sense, which designates closely bound STPs that cannot stand alone in a normal sentence (Crystal 1985: 51). To form a natural syntactic constituent, a clitic like Modern English *the* must be accompanied by its stressed noun host. Pronoun subjects and objects are SPs but they stand alone as well-formed noun phrases and are obviously not clitics in the technical sense. Finite ‘be’ verbs and auxiliaries in early Proto-Germanic were certainly not like the enclitic SPs in *I’m* and *I’ll*, which have been incorporated into their hosts. They were probably more like *am* or *will* in constructions like *if you aren’t willing, I am* or *if you won’t do it, Fred will*. In such constructions the verbal SPs are subordinated to the preceding stressed word but sufficiently prominent to prevent contraction. A rare instance of contraction in a popular song is obviously for laughs: *I’m bidin’ my time / ‘Cause that’s the kind of guy I’m*. As Campbell emphasizes (1959: 35), we have evidence only for stress as governed by metrical rules, which can show when one word was subordinated to another but provide little help in distinguishing weak phrasal stress from zero stress.

### 4 Language typology and generative syntax

Since 1933 our understanding of basic word order has been enhanced by the typological approach introduced in Greenberg (1966) and extended to an even wider variety of languages in Croft (2003) and Dryer (2007). Smith (1971) draws on Greenberg and on available generative analyses of deletion, which obscures basic order (Ross 1970; Jackendoff 1971; Maling 1972). Greenberg defines basic order as a single order of subject (S), direct object (O) and verb (V). Kuhn’s theory looks odd typologically because he posits sentence rhythm as the determinant of word order, whereas the usual

<sup>5</sup> For studies of the prose evidence from different perspectives see van Kemenade (1987), Traugott (1992: 168–289) and Pintzuk (1999).

<sup>6</sup> I use ‘location’ rather than ‘dip’, the term for a weak metrical position in Sievers (1893), because I analyze many syllables in Sievers’ dips as extrametrical (Russom 2017: 55–6).

determinant in typology is the normal order in a declarative sentence with a lexical subject, a lexical direct object and a finite main verb.

Smith (1971: 1–3) adopts the consensus view that Indo-European was an SOV language. His hypothesis is that Proto-Germanic retained its inherited SOV constructions and evolved in a typologically plausible way toward SVO syntax, with gradual loss of SOV constructions in the daughter languages. Smith's hypothesis is based on his study of syntactic evolution in chronologically stratified corpora of early Germanic texts, which include runic inscriptions, archaic laws and the Gothic prose least likely to be influenced by a source language. To my knowledge this contribution to historical syntax is available only in Smith's dissertation, which may explain why recent publications on Germanic word order do not mention it.<sup>7</sup> Lehmann (2005–7) does not cite Smith in his Proto-Germanic grammar but provides generative arguments that support Smith's hypothesis.

### 5 Metrical constraints versus linguistic constraints

Kuhn (1933: 55–6) argued that his laws were exceptionless linguistic rules in prehistory but exerted weaker influence when the earliest prose texts were composed. He attributed stricter application of the laws in poetry to the conservatism of formulaic poets. The evidence is equally consistent, however, with the possibility that Kuhn's Laws were rules of poetic meter (cf. Stockwell & Minkova 1994).

In considering why SPs are restricted to the first verse of the clause we need to distinguish SPs that are movable from those that are not. Sentential adverbs are not closely bound to any constituent of the clause and move quite freely. Conjunctions that link one clause to another also qualify as SPs because they modify a whole clause rather than any constituent within it. Unlike SP adverbs, however, SP conjunctions are restricted to clause-initial position by purely linguistic rules (Mines 2002: 349). Restriction of clause markers to the first verse of the clause can hardly be attributed to Kuhn's Laws, which would incorrectly permit them to appear between the first and second stressed words. Kuhn does not adequately distinguish metrical constraints from constraints of ordinary language (cf. Kendall 1991: 20; Getty 1997; Orton 1999; Blockley & Cable 2000; O'Neal 2018).

### 6 Kuhn's concept of the verse clause

Analysis of verbal SPs is complicated by the fact that they sometimes alliterate in the same locations occupied by metrically unstressed SPs. Kuhn (1933: 50–1) argued that some clauses with problematic alliteration were rightward constituents of a larger VERSE CLAUSE consisting of clauses with no obvious syntactic connection that were closely connected in meaning. Applying within this larger clause, K1 would assign stress to

<sup>7</sup> Smith (1971) is cited in the concise runic grammar by his dissertation director (Antonsen 1975: 24–5) and in Bean (1983: 45–50), which deals primarily with the transition from Old to Middle English.

any verb in a rightward subclause. Mitchell (1985: section 3947) identifies serious problems with this maneuver. For more recent analysis of dependent and independent clauses in Old English poetry see Blockley (2001), who undertakes the fresh study called for by Mitchell. Momma (1997: ch. 3) reviews criticisms of Kuhn's distinctions between SPs and STPs, which are sometimes blurred to defend against counterexamples.

Some adherents of Kuhn's Laws have adopted a method for dealing with the remaining problematic verbs. Bliss (1967: ch. 2) cuts the Gordian knot by claiming that these verbs had 'ornamental' alliteration when unstressed (cf. Lucas 1987; Kendall 1991). However, as Griffith (2016: 105) observes, Bliss' only apparent reason for positing this peculiar form of alliteration is 'to explain away the inconvenient fact that many verbs alliterate where his view of the syntax predicts that they ought not to do so'. Getty (2002: 61) finds Bliss' approach unacceptable because 'alliteration is biased toward robustly lexical verbs' (i.e. toward prominent main verbs of low frequency).

Here I propose a more straightforward concept of the verse clause as THE DOMAIN OF THE FINITE VERB. This domain includes infinitive clauses governed by the finite verb of a main clause in sentences like *Beowulf decided to help him*. In an equivalent Old English sentence the pronominal SP *him* would lie within the domain of *decided*. In sentences like *Beowulf heard that he needed help*, on the other hand, the subordinate clause constitutes a second finite-verb domain, and the SP *he* does not lie within the domain of *heard*.

## 7 Word placement and syntactic movement

The requirement that unstressed SPs must be placed in the first verse of the clause can be formulated as an SP MOVEMENT RULE (SPMR). This rule restricts the placement of an SP moved from its underlying syntactic position to a position normally occupied by unstressed constituents. It does not prevent an SP from remaining in a stressed position or moving to a stressed position.

SPMR. *In order to appear without metrical stress, an SP must move to the first verse of the clause from any rightward verse.*

Although the SPMR does not apply in prose, the kind of movement it requires is very common. SP movement reflects a universal tendency toward rightward placement of long, heavy, complex constituents and leftward placement of short, light, easily processed constituents (Croft 2003: 70–1). K1 represents stress on late-placed SPs as something assigned to a normally unstressed SP. This implies rightward movement of the SP to a stressed position, which is more difficult to explain than leftward movement of an SP to a position where stress is reduced or lost. Pintzuk & Kroch (1989), who regard Old English as a verb-final language, formulate SP movement as a rule that 'floats' SPs upward and leftward from lower-level constituents toward the beginning of the clause. I assume that movement of SPs from the first verse to a rightward unstressed position is blocked by a purely linguistic requirement that movement of constituents to unstressed positions must be leftward.

## 8 Prominence differences among unstressed constituents

Unstressed constituents vary in psychological prominence and Old English meter is sensitive to such variation (Russom 2017: ch. 2). SPs are more prominent than STPs; and within each category, constituents with higher token frequency and lower information content are less prominent. Lower prominence can be detected independently of the meter as greater vulnerability to reduction, contraction, deletion or loss from the language. In Anttila, Dozat, Galbraith & Shapiro (2020), MEANINGFUL PROMINENCE in unstressed constituents is distinguished from MECHANICAL PROMINENCE assigned by stress rules based on syntax. According to Kiparsky (2018), inflections are less prominent than STPs because an inflection contrasts with a stressed syllable in the smallest prosodic domain. The same principle might explain why SPs are more prominent than STPs, since STPs contrast with stressed constituents in smaller domains.

The least prominent verbal SPs are Old English finite auxiliaries and ‘be’ verbs, which have highest token frequency and lowest information content.<sup>8</sup> These SPs can have two metrical values.

- (2) (a) þæt hē **blō**de fāh **bū**gan sceolde  
 ‘that he, stained with blood, must fall’ (2974)
- (b) sceolde ofer **willan** **wīc** eardian  
 elles hwergen  
 ‘(he) must against his will occupy a dwelling elsewhere’ (2589a–90a)

In (2a) the finite auxiliary *sceolde* is placed after the second stress of the clause. Normal scansion is impossible here unless *sceolde* bears metrical stress. In (2b) *sceolde* appears without alliteration before the first alliterating word. Normal scansion is impossible if *sceolde* bears metrical stress. Campbell (1959: 35–6) follows Kuhn (1933) in his discussion of phrasal stress and represents stressed verbal SPs as ‘delayed’, i.e. moved rightward.

Adpositions are STPs but they scan like the verbal SPs in (2a, b). Normal scansion requires metrical stress on the verse-final adposition in (3a) and absence of metrical stress on the verse-initial adposition in (3b).

- (3) (a) **Scede**-landum in ‘in South Swedish lands’ (19b)  
 (b) in **Hrefnes** Holt ‘in Ravens’ Wood’ (2935a)

Item (3a) is discussed by Campbell (1959: 36), who formulates a rule for function words not governed by Kuhn’s laws: ‘Proclitic words receive a full stress if they are removed from their natural position immediately before the governed word.’ Important generalizations are missed with these assumptions about naturalness and movement. The stressed SPs in (2a) and (3a) appear in typical SOV constructions with weakly

<sup>8</sup> As used here, ‘auxiliary’ refers to *don* ‘do’ when used with infinitives; *habban* ‘have’ when used with participles; the pre-modals *agan* ‘ought’, *cunnan* ‘can’, *durran* ‘durst’, *magan* ‘may’, *sculan* ‘shall’ and *willan* ‘will’; plus *motan* ‘may’ and *purfan* ‘need’, which perform similar functions to *magan* and *durran*. Pre-modals and similar light verbs are discussed in Mitchell (1985: section 990).

accented words placed after their hosts (Dryer 2007: 42, 72). In SOV languages, finite auxiliaries normally follow the more prominent main verb, as in (2a). Adpositions are normally postpositions, as in (3a), rather than prepositions, as in (3b). The simplest explanation for the metrical facts is that the verse-final words in (2a) and (3a) retained a late Proto-Germanic phrasal stress that was sufficiently prominent to be interpreted as metrical stress, and that such words lost metrical stress when moved leftward to positions normally occupied by unstressed words.

### 9 Metrical and linguistic distinctions among finite verbs

As we have seen (section 6), it is difficult to reconcile Kuhn's Laws with alliteration on verbal SPs in locations normally occupied by unstressed SPs. The SPs primarily responsible for the difficulty are finite main verbs of relatively high frequency and correspondingly low prominence, e.g. verbs of motion, cognition and speaking (Russom 2017: 119–23). Such verbs have three metrical realizations, as shown in item (4).

- (4) (a) *ðā him Hrōþgār gewāt* 'then Hrothgar took himself [outside]' (662a)  
 (b) *gewāt him hām þonon* 'he took himself home from there' (1601b)  
 (c) *gewāt þā ofer wæg-holm* '(the boat) went then over the billowy sea' (217a)

The non-alliterating realizations in (4a, b) are like those in (2a, b) and (3a, b). In (4c) the finite main verb is placed like the verb in (4b) but alliterates before an alliterating noun. There is nothing comparable to (4c) with an alliterating auxiliary or 'be' verb.

Only five verses in *Beowulf* have an alliterating auxiliary or 'be' verb followed by a word that does not alliterate. Four of these are like (5a, b).

- (5) (a) *hyt ne mihte swā* 'it could not (be) that way' (2091b, cf. 762b, 797b)  
 (b) *hwæt syndon gē* 'what are you?' (237a)

Given the universal association between alliteration and stress (Kiparsky 1973: 231), we would expect the verbs in (5a, b) to be significantly more prominent than the following words; and this expectation is confirmed by the evidence of ANACRUSIS (addition of extrametrical syllables before the first foot in verses of Sievers' types A and D). As we shall see (sections 14 and 16), anacrusis favors STPs with very low prominence, especially unstressed prefixes. SPs like *swā* and *gē* appear occasionally in anacrusis but finite 'be' verbs and auxiliaries never do so (Russom 2017: 91–2). Alliteration in (5a, b) conforms to Sievers' RULE OF PRECEDENCE, which requires alliteration on a word with significantly greater prominence than any other word in the same verse. This requirement does not apply to verses with a lexical noun modified by a lexical adjective or by another lexical noun, since Sievers (1893: 41–6) posits approximately equal stress on the constituents in these constructions. With regard to level stress in adjective-noun constructions see Redford (2003: 176–7). Item (6) is similar to (5a, b) but in this case the verbal SP has been separated from its host by interjected constituents.



- (6) **wes** þenden þū lifige,  
**æþeling, ēadig** (1224b–25a)  
 ‘be while you live, nobleman, blessed’

Interjection has similar effects in Modern English, where it adds perceptible stress, preventing contraction. We can say *John’s perfectly welcome* or *John is, after all, perfectly welcome*, but not *\*John’s, after all, perfectly welcome*.

In (7a) the finite main verb *forgrand* alliterates before an alliterating word.

- (7) (a) **forgrand gramum** ‘(he) ground down the attackers’ (424a)  
 (b) **ðā gebēah** cuning ‘then fell the king’ (2980b)

The vast majority of finite main verbs are like *forgrand*, with lower frequency and higher prominence than *gewāt*. Low-frequency main verbs appear in verses like (4a) and (4c) but never before the first alliteration in verses like (4b). Even the most prominent finite verbs are less prominent than lexical nouns and adjectives (Campbell 1959: 35–6). When the first alliteration falls on a finite verb, a following noun or adjective normally alliterates also, as in (7a). A few exceptions like (7b) occur under special conditions (Fulk, Bjork & Niles 2008: 334).

## 10 Verb fronting in ancient Indo-European languages

In the Indo-European (IE) languages surveyed by Luraghi (1995: 359), ‘initial verbs tend to some extent to occur in clusters, in cases where a number of subsequent sentences can be singled out as constituting a textual sub-unit. Uniformity in word order highlights the coherence of the sub-unit’. Smith (1971: 64–5, 92) is aware of the IE linking function and discusses fronted verbs that perform the same function in early runic prose. Luraghi’s textual sub-units bear some resemblance to the verse clauses posited by Kuhn to explain alliteration on fronted verbs (section 6). Smith and Luraghi represent the linked sentences as discourse units rather than as syntactic constituents, however; and linkage was only one of the functions performed by fronted verbs. Luraghi (1995: 364) adds ‘presentative’ sentences in which fronted verbs highlight a change of topic and subsequent sentences in the discourse unit use a different word order for linkage. Smith (1971: 64) regards verb fronting as normal in early Germanic sentences with ‘heavy emphasis on the verb’. These include questions, imperatives, optatives with imperative force and clauses with dramatic or pathetic force (Smith 1971: 92). Given the relation between verb fronting and emphasis, it seems very unlikely indeed that fronted verbs could be metrically unstressed when they alliterated. Like other IE languages, Proto-Germanic must have permitted fronting of verbs with prominent semantic content to a position where stress was maintained or augmented.<sup>9</sup>

<sup>9</sup> According to Griffith (2016: 108–11), finite verbs that alliterate in initial position were uncommon in prose and often confined to poetry. With their high information content, these verbs would be especially suitable for emphatic fronting. Bredehoft (2005: 24–5, 39–40) assigns such verbs to a metrical position of intermediate prominence rather than allowing their metrical interpretation to vary.



Varying alliteration on fronted main verbs like *gewāt* is predictable from their intermediate prominence. If the available landing sites for these verbs are (i) an alliterating S position suitable for more prominent main verbs or (ii) a non-alliterating x position suitable for less prominent auxiliaries and ‘be’ verbs, neither position is entirely suitable for high-frequency main verbs and neither is entirely unsuitable. We should not be surprised to find that these main verbs can be fronted to either kind of position. It is worth emphasizing that the alliterative evidence in item (4) is entirely independent of the evidence for intermediate linguistic prominence in verbs like *gewāt*: higher token frequency and lower information content by comparison with other main verbs and, by comparison with ‘be’ verbs or auxiliaries, lower token frequency, higher information content and greater resistance to reduction, contraction or deletion. See Getty (1997: 162–5) on syntactic earmarks of verbs with intermediate prominence.

### 11 A universalist theory of poetic meter

In Russom (2017) I proposed a universalist theory that derives the rules of a given meter from general principles of verse construction. Although originally formulated to explain rules that have nothing to do with K1, 2, principles P1–9 also do the work of Kuhn’s Laws.

P1. *Metrical constituents are abstracted from constituents of the language in which the meter originates and are realized as those constituents in the unmarked case.* Old English meter employs metrical positions abstracted from syllables, feet abstracted from words, verses abstracted from phrases and lines abstracted from sentences.

P2. *Norms for metrical constituents are abstracted from norms for the corresponding linguistic constituents.* These norms are ranked, like the universal tendencies formulated as violable rules in Optimality Theory (Prince & Smolensky 2004). When two norms conflict, as for example with P5 and P8, the higher-ranking norm exerts more influence (see Russom 2016, 2018).

P3. *Extrametrical positions have no metrical prominence and are normally not occupied by syllables.* Constituents of very low prominence are the least unsuitable occupants of extrametrical positions.

P4. *When two norms conflict in constituents of different size, the norm for the larger constituent ranks higher* (Youmans 1989: 376; Russom 2017: 58).

P5. *Long and heavy metrical constituents are normally placed toward the end of a larger metrical constituent.* This is called WINNOWING in Finnish alliterative verse (Leino 1986: 133–4).

P6. *Departure from metrical norms causes metrical complexity.*

P7. *A competent poet normally exploits opportunities to reduce metrical complexity, restricting the frequency of complex metrical constituents.*

P8. *Metrical complexity inhibits the placement of a metrical constituent toward the end of a larger metrical constituent* (the principle of CLOSURE).

P9. *Metrical complexity is ADDITIVE.* Each departure from a norm adds to complexity. Two lower-ranking norms can exert more influence than a single higher-ranking norm.

Like the violable rules of Optimality Theory, Principles P1–9 usually permit departure from norms, but some norms of very high rank never come into conflict with higher-ranking norms and apply categorically. In Germanic meters norms for alliterative line patterns outrank all other line-level norms. Since conflict can take place between norms for the same constituent as well as between norms for different constituents, it does not follow from principle P4 that the line will stay closer to all of its norms than the verse. Consider the most conspicuous formulaic technique in *Beowulf*: employment of modified constituents where no modifier would be used in ordinary speech. Semantically inessential modifiers provide the obligatory alliteration, allowing for use of their modified constituents in grammatical constructions that the poet wants to use (Fulk, Bjork & Niles 2008: cxii–iv; Russom 2010: 71–4). These modifiers make it easier to construct two-word verses but they tend to expand the clause beyond its ideal size of a single line. Lines accordingly depart from ideal syntactic realization more often than verses do, but the line-level syntactic norm is overridden by the line-level alliterative norm, not by the verse-level syntactic norm.

## 12 The SPMR as a metrical constraint

Old English meter has strict constraints on ENJAMBMENT, a kind of complexity resulting from mismatch between verse boundaries and phrase boundaries. A verse is optimally realized as a small phrase with no extraneous words, in accord with P1, 2. Since SPs are not constituents of small phrases, they are often extraneous at verse level. Consider items (1a, b), repeated here as (8a, b).

- (8) (a) þæt hine on ylde eft gewunigen  
       **wil**-gesīþas (22a–3a)  
       ‘so that in old age afterwards willing companions would accompany him’
- (b)                                \***wil**-gesīþas  
       hine on ylde eft gewunode  
       ‘willing companions accompanied him in old age’

The second verse in (8b) is not a natural syntactic constituent. The pronoun SP *hine* has a closer syntactic relation to *gewunode* in the third verse than to *on ylde* in the second verse. If the verse clause is a metrical domain, leftward movement of SPs like *hine* is explained by general principles of verse construction. By P1, P2 and P6, syntactic complexity will correspond to metrical complexity in metrical constituents abstracted from syntactic constituents. By P7, the poet will exploit opportunities to avoid syntactic complexity in these metrical constituents. By P8, unavoidable syntactic complexity will be concentrated toward the beginning of a larger metrical constituent.<sup>10</sup> Within the line,

<sup>10</sup> The complexity added by extrametrical constituents is also managed by SP movement. The SP pronoun *hit* would be extrametrical in *Beowulf* 117b if not moved leftward, though 117b would be a natural syntactic constituent with or without *hit*. Automatic SP movement provides a readily internalized formulaic technique. According to Donoghue (2018: ch. 2), Old English scribes used less punctuation for poetry than for prose because constraints on SPs marked clause boundaries so well.

P8 strongly promotes concentration of metrical complexity in the a-verse (Russom 2018: 13–15). By P4, P8 will exert even stronger influence within a verse clause that extends beyond a line. SPs that cause metrical complexity will be concentrated in the b-verse if it is the first verse of the clause.

### 13 Line patterns and typological sentence patterns

If alliterative lines were abstracted from SOV sentences in late Proto-Germanic, SOV order should be reflected in line patterns. This turns out to be the case. The least prominent constituent in a typologist's SOV, SVO or VSO sentence is the finite verb. In such sentences the verb is subordinated to an adjacent stressed argument (Gussenhoven 1992; Truckenbrot 2006). The subordinate verb in an SOV sentence corresponds to a subordinate metrical position in the b-verse, a position on which alliteration is ruled out in all the cognate Germanic meters. Moreover, one of the most influential norms in *Beowulf* is placement of the finite verb at the end of the line, the metrical equivalent of the end of the sentence (Russom 2018: 10–11).

As a representative sentence from the oldest runic inscriptions, Antonsen (2002: 75) cites the earliest surviving line of alliterative verse, dated *c.* 300 CE.<sup>11</sup>

(9) ek **hlewagastiz holtijaz horna** tawido

'I, Hlewagast, descendant of Holt, made the horn'

The principles of line construction are already observed in (9), which has SOV order. The a-verse is a subject noun phrase with two prominent alliterating nouns in apposition to a pronoun. The b-verse is a verb phrase with an alliterating object followed by a less prominent finite verb that does not alliterate. Neither verse contains a syntactically extraneous constituent. The b-verse realizes each foot as a word, in accord with P1. The a-verse has an extrametrical pronoun *ek*, which stands in anacrusis before the first foot. In accord with the principle of closure (P8), the complexity caused by anacrusis occurs in the a-verse.

The *Beowulf* poet adheres to SOV syntax at clause level with remarkable consistency when there are no adverse metrical consequences. Verbs are fronted primarily where fronting is expected in SOV languages. In small phrases the poet adheres less consistently to SOV constructions that were obsolescent in Old English, e.g. postpositional phrases. These syntactic archaisms have important metrical functions in *Beowulf*, as shown in section 17, but they have lower frequency than the corresponding innovative constructions. In accord with standard typological practice, I define clause-initial and clause-final positions by reference to the order of major sentence constituents, excluding irrelevant constituents like vocatives and appositives (cf. Smith 1971: v–vii). The subject is clause-initial in *Jack, you're a rat!* and the verb is clause-final in constructions like *Jack snatched, the rat!*

<sup>11</sup> Antonsen critiques earlier readings that posit 'ng' rather than 'j' in the second alliterating word. The relevant aspects of meter and syntax are the same on either reading.

#### 14 Freedom of patterning and constraints on mismatch

To assess the role of SOV syntax we need a closer look at Old English metrical constituents. A metrical ‘S’ position is abstracted from syllables with primary word stress, an ‘s’ position from syllables with subordinate word stress and an ‘x’ position from unstressed syllables. Every Old English word has a corresponding metrical foot, except for large compounds that fill two feet. The nine permissible foot patterns correspond to words like *mid* ‘with’ (x), *ofer* ‘over’ (xx), *hār* ‘old’ (S), *rincas* ‘men’ (Sx), *tryddode* ‘trod’ (Sxx), *swāt-fāh* ‘blood-stained’ (Ss), *won-sālig* ‘ill-fated’ (Ssx), *hilde-rinc* ‘fighting man’ (Sxs) and *sibbe-ge-driht* ‘band of friends’ (Sxxs). The normative foot has the most common word pattern, the trochaic Sx pattern of *rincas*. The normative verse is a two-word phrase consisting of two normative feet, notated Sx/Sx. Such two-word phrases have remarkably higher frequency in poetry than in prose (Russom 2016: 95–7). Extrametrical unstressed constituents can appear before the first or second foot. In accord with P3, these constituents are normally unstressed prefixes, the Germanic STPs most vulnerable to loss, as shown by massive loss of unstressed prefixes in Old Norse (Kuhn 1929; Russom 1998: 13–14, 49–50).

Iambic pentameter has a single foot pattern (xS) and a single line pattern (xS/xS/xS/xS/xS). Since the underlying metrical pattern is predictable, poets can depart rather far from it to provide metrical variety. In alliterative meter, adequate variety is provided by the many permissible foot patterns and verse patterns. This freedom of patterning imposes compensatory restrictions on departure from patterns. The *Beowulf* poet adheres to principles OE1–5, which apply less strictly or not at all in iambic pentameter.

- E1. *Avoid confusion between large foot patterns and small verse patterns.*
- E2. *Avoid confusion between extrametrical syllables and light feet.*
- E3. *Avoid confusion about the location of foot, verse and line boundaries.*
- E4. *When feet are realized as word groups, restrict departure from the morphological structure of the foot.* Application of this principle is especially strict when the foot pattern corresponds to an unusual word pattern.
- E5. *Restrict departure from norms established by the unmarked realization of the verse (two-word Sx/Sx).*

The relation between feet and words stands out with particular clarity in feet abstracted from compounds like *hilde-rinc* (Sxs) and *sibbe-gedriht* (Sxxs). These feet are severely restricted by OE4 because they have the least common compound patterns. Most Old English compounds end with an unstressed inflection and have no unstressed syllables internally. Only two kinds of unstressed syllables occur inside Old English compounds: infixed prefixes like *-ge-* in *sibbe-gedriht* and syllables like *-e-* in *hilde-rinc*. In the vast majority of word groups occupying an Sxs or Sxxs foot, x positions are filled by an unstressed prefix or a final syllable of the first constituent (Russom 2017: 75–80). These x positions are filled occasionally by an STP conjunction or adverb, but are filled by an SP only three times in *Beowulf* (verses 272b, 455b and 525a).

15 Placement of the verb in *Beowulf*

Items (10a, b) have the most common type B and C patterns, with a light foot followed by a compound foot. The compound foot in type C has the Ssx pattern of *won-sēlig*. In type B the compound foot has the Sxs pattern of *hilde-rinc* or the Sxxx pattern of *sibbe-gedriht*. The boundary between feet is notated with a slash in numbered examples and in notations for verse patterns. The examples in (10a–d) are complete one-verse clauses. A parenthesized ‘x’ indicates that one or more extrametrical constituents have been added to complete the clause.

- |          |  |             |
|----------|--|-------------|
| (10) (a) | <i>hē mē / āþas swōr</i> ‘he swore oaths to me’ (472b)             | x(x)/Sxs: B |
| (b)      | <i>gif mec / dēað nimeð</i> ‘if death takes me’ (447b)             | x(x)/Ssx: C |
| (c)      | <i>ðū þē / lær be þon</i> ‘you learn for yourself by that’ (1722b) | x(x)/Sxs: B |
| (d)      | <i>ond nō / mearn fore</i> ‘and did not mourn therefore’ (136b)    | x(x)/Ssx: C |

Among 313 one-verse clauses like (10a–d) in *Beowulf*, 299 end with a finite verb as in (10a, b). There are only 14 instances of verb-fronting and all have metrical explanations. A change to SOV syntax would have adverse metrical consequences in (10c, d) and in two similar instances (740a and 1218b). There are no clear cases in *Beowulf* of a verse like \**ðū be þon þē lær* or \**ond fore nō mearn* (Fulk, Bjork & Niles 2008: 330). It is worth adding that in 1218b and (10c) the fronted verb is imperative and stands in its normal SOV location.

Final placement of the verb would cause a different metrical problem in seven b-verses like (11a) with a stressed SP adverb in final position

- |          |                                    |                           |
|----------|------------------------------------|---------------------------|
| (11) (a) | <i>ond ge- / læste swā</i> (2090b) |                           |
|          | ‘and (he) performed accordingly’   |                           |
| (b)      | * <i>ond swā ge- / læste</i>       | (unacceptable in b-verse) |

The SP adverb would be unstressed in (11b), the corresponding SOV construction, classified by Sievers as type A3.<sup>12</sup> With its single stress, type A3 represents an extreme departure from the norm of two syllables with primary word stress and is severely restricted by the principle of closure (P8). In *Beowulf*, P8 restricts all 295 instances of type A3 to the a-verse. The type A3 pattern in (11b) is not a permissible alternative for b-verses like (11a). Things are different in the a-verse.

- |          |  |
|----------|--|
| (12) (a) | <i>hī hyne þā æt- / bæron</i> ‘They carried him <u>then</u> ’ (28a)        |
| (b)      | <i>þæs ne / wendon ær</i> ‘They did not expect that <u>before</u> ’ (778a) |

Item (12a), with adverbial *þā* before the verb, is one of eight a-verses with verb-final word order.<sup>13</sup> Item (12b) is the only comparable a-verse with the adverb in final position. Where type A3 is permissible, the usual preference for SOV syntax prevails. The type B pattern

<sup>12</sup> Adverb fronting would create the same problem in 538b, 762b, 797b, 1396b, 2091b and 2855b.

<sup>13</sup> Cf. 47a, 415a, 463a, 520a, 750a, 1095a and 1142a.

of (12b) has much higher frequency than the A3 pattern of (12a). The poet will employ a more complex pattern to place the verb in final position.

The poet rarely resorts to VS or VO order simply to obtain the required alliteration. This occurs in only three one-verse clauses, two of which are identical.

- (13) (a) þonne / **h**niton fēþan ‘when foot-troops clashed together’ (1327b, 2544b)  
 (b) þæt ge- / **b**earh fēore ‘it (a mail-coat) protected life’ (1548b)

Here a lexical noun without alliteration follows an alliterating finite verb. Verse-final placement of the alliterating verb would create an anomalous type B verse lacking alliteration on the first metrical stress. A handful of such anomalies in *Beowulf* are emended out by editors (Fulk, Bjork & Niles 2008: 330–1).

Normative two-word realizations of type A1 provide a unique opportunity for study of unmarked word order. There is a rich sample of 244 normative realizations with a finite verb, including 85 instances with a finite auxiliary and 11 with a finite ‘be’ verb. These natural constituents of two stressed words are easily analyzed and the pattern Sx/Sx is unchanged when the order of feet is reversed.

- (14) (a) **b**ēagas / dælde ‘(he) distributed rings’ (80b)  
 (b) **h**ēolde / lange ‘(he) had (it) for a long time’ (2344b; cf. 1728b, 2008a)

Of the 244 total instances, 241 have grammatical structures characteristic of SOV languages, with the finite verb at the end, as in (14a). In the three remaining instances like (14b), verb-final order would create an otherwise unattested realization of type A3 (Russom 1998: 50). In 2008a the fronted verb is imperative.

## 16 Metrical reasons for SP placement within the verse

Kuhn misses important generalizations by ignoring differences among verse types and focusing on the first two stresses of the clause (cf. Russom 1998: 54–63). In types A3 and C the only location for an unstressed SP is before the first stress. In type B this location is vastly preferable because an SP after the first stress creates a rare mismatch in an Sxs or Sxxs foot (section 14), whereas an SP before the first stress avoids confusion between the light foot and anacrusis, in accord with OE2. In the remaining verse types the location before the first stress is the extrametrical anacrusis position, which is not normally filled. In a given verse, SPs appear in just one location, as K1 requires, but only because alternative locations are metrically unsuitable or nonexistent. An STP is usually accompanied by an SP before the first stress, as K2 requires, but that would be expected for other reasons. SPs outnumber the ideal locations for them before the first stress and there are fewer STPs than SPs (Mines 2002: 350–2, 354–5). In types A3, B and C we would not expect to find many STPs in locations unoccupied by SPs. Exceptions to K2 in these types, though relatively few, have special weight.<sup>14</sup>

<sup>14</sup> Exceptions to K2 in types A3, B and C: 34a, 197a, 202a, 363a, 507a, 639a, 928a, 1030a, 1110a, 1307b, 1309a, 1408a, 1480b, 1492a, 1684a, 1717b, 1870a, 2345a, 1561a, 2669a and 3156a.

In the remaining types the verse-initial anacrusis position, when filled at all, is normally occupied by an unaccompanied prefix that violates K2.

### 17 SOV as the unmarked word order in *Beowulf*

In verses with subject and object pronouns before the first stress, the order of pronouns is not governed by metrical constraints or by Kuhn's Laws and the unmarked word order can emerge. *Beowulf* contains 41 verses with a subject pronoun, a direct object pronoun and a finite verb. All 41 have SOV order, like (15a).<sup>15</sup>

- (15) (a) ic ēow / **wī**sige 'I (will) guide you' (292b)  
 (b) syðþan hē hine tō / **gū**ðe ge- / **gy**red hæfde  
 'after he had prepared himself for combat' (1472)

An additional 16 verses have pronoun subjects and accusative pronoun objects, with the finite verb in a later verse. In all 16 the subject stands before the object, as in (15b).<sup>16</sup>

OS order does occur in verses with a stressed verse-initial subject. There are 36 instances like (16a–f), where a direct object pronoun stands before a stressed subject that provides the mandatory alliteration. Items (16d–e) are followed by a finite verb in a later verse.

- (16) (a) ðā mec / **sā**e oþbær 'then the sea bore me' (579b) x(x)/Sxs  
 (b) ac hyne / **ecg** fornam 'but the sword took him' (2772b) x(x)/Sxs  
 (c) hīe / **wyrd** forswēop 'fate swept them away' (477b) x/Sxs  
 (d) sumne / **Gēata** lēod 'the man of the Geats (shot) one' (1432b) xx/Sxs  
 (e) þæt hit / **sā**e-līðend 'that seafarers (will name) it' (2806a) (x)x/Ssx  
 (f) þæt / **mā**g-wine // **mī**ne / gewræcan (2479) x/Ssx // Sx/Sx  
 'beloved kinsmen of mine avenged that'

A change to SOV order in (16a–f) would create unnecessarily complex or impermissible departures from norms in sections 11 and 14. Item (17) provides an example for each unacceptable departure and the number of instances that would result in *Beowulf*.

- (17) (a) ?ðā / **sā**e mec oþbær SPs are rare on x in Sxs and Sxxs (9X)  
 (b) \*ac / **ecg** hyne fornam \*x/Sxxxx (6X)  
 (c) \***wyrd** hīe for- / swēop \*Sxx/S (6X)  
 (d) \***Gēata** lēod / sumne Complex foot violates winnowing (11X)  
 (e) \*(þæt) **sā**e-līðend / hit Unacceptable anacrusis (8X)  
 (f) ?**mā**g-wine / þæt // **mī**ne / gewræcan Rare kind of enjambment (5X)

<sup>15</sup> SOV with pronoun subject and object before the first stress: 28a, 47a, 109b, 203b, 290a, 292b, 346b, 372a, 435a, 446b, 517b, 535a, 540b, 560b, 632a, 681b, 722b, 798a, 809a, 967a, 1185b, 1392a, 1625b, 1671a, 1705b, 1722b, 1826a, 1832b, 1833b, 1933a, 1994b, 2005b, 2300b, 2427b, 2638b, 2713b, 2787b, 2790b, 2875b, 2973a, 2976a and 3103b.

<sup>16</sup> SO order with pronoun subject and object in clauses with the finite verb in a later verse: 43a, 347a, 677a, 679a, 961a, 963a, 1345a, 1472a, 1628a, 1655a, 1998a, 2124a, 2148a, 2641a, 2707a and 2089a.



If changed to SOV order, (16a) and eight other instances would have an SP on an internal x in an Sxs or Sxxs foot, as in (17a).<sup>17</sup> As we have observed (section 14), this occurs only three times in *Beowulf*. Six instances like (16b) would have a compound foot with more than two internal x positions, as in (17b).<sup>18</sup> Since there are no Old English compounds with such patterns, verses like (17b) are ruled out by P1. Six instances like (16c) would have patterns with initial and final S positions separated by x positions, as in (17c).<sup>19</sup> These patterns violate OE1, which excludes verse patterns that could be confused with foot patterns. Item (17c) would look too much like an Sxxs foot (Russom 1987: 26–7). Editors regard the pattern of (17c) as vanishingly rare if not unmetrical (Fulk, Bjork & Niles 2008: 332). For verses like (16d) the equivalent SOV alternatives would be like (17d), which has more than the usual number of stresses and also violates the winnowing constraint, creating unacceptable additive complexity.<sup>20</sup> An alternative analysis with the acceptable pattern Sx/Ssx is unavailable for (17d) because the internal foot boundary of the verse must coincide with the major syntactic break (Russom 1987: 84–6). This constraint avoids confusion about the location of the verse-internal foot boundary, in accord with OE3. Eight verses like (16e) would have an unacceptable form of anacrusis, like (17e).<sup>21</sup> The remaining five verses like (16f) would have a rare kind of enjambment, as in (17f), where a verse-final object pronoun is split from its governing verb by the caesura.<sup>22</sup> The only comparable instance in *Beowulf* is 955b.

Although SVO syntax predominates in the *Beowulf* poet's small phrases, small SOV phrases are still used to avoid enjambment between a verse-final STP and a noun host at the beginning of the next verse. When STPs like quantifiers, possessive adjectives and possessive pronouns stand in verse-final position, the noun host normally precedes them in an SOV construction, avoiding enjambment. Item (18) provides examples of these archaic constructions in several verse types.

- |   |             |
|---|-------------|
| (18) (a) hlāford / þinne 'thy lord' (267b)                | Sx/Sx: A1   |
| (b) ūht-hlem / þone 'that morning-noise' (2007b)          | Ss/Sx: A2   |
| (c) ond / þegna gehwylc 'and each of the thanes' (1673a)  | x/Sxxs: B   |
| (d) wæs / þēaw hyra '(it) was their custom' (1246b)       | x/Ssx: C    |
| (e) metod / manna gehwæs 'creator of each of men' (2527a) | S/(x)Ssx: D |
| (f) gūð-beorna / sum 'one of the fighting men' (314b)     | Ssx/S: E    |

## 18 Conclusions

A theory that abstracts metrical constituents from linguistic constituents provides convenient metrical evidence for linguistic research. Such a theory makes it possible to

<sup>17</sup> Cf. 441b, 447b, 452b, 545b, 1481b, 1491b, 2629b and 2872b.

<sup>18</sup> Cf. 1291b, 1436b, 1886b, 2230b and 2883b.

<sup>19</sup> Cf. 232b, 1205b, 1939a, 1985b and 2784b.

<sup>20</sup> Cf. 381b, 461b, 510b, 1106a, 1509b, 1716a, 1763a, 1939a, 2184a and 2428b.

<sup>21</sup> Cf. 116b, 1658b, 1827a, 1828a, 2050b, 2514b and 2916a.

<sup>22</sup> Cf. 904b, 2274b, 2379b and 2437a.

explain constraints observed by Kuhn (1933) and Sievers (1893) with the same set of universal principles. It then becomes clear that departures from verb-final placement in *Beowulf* have purely metrical explanations and provide no evidence for a Proto-Germanic ancestor with verb-second order, free word order or an order based on sentence rhythm. *Beowulf* represents a stage in the evolution of English at which SVO constructions had become predominant in small phrases but an SOV order inherited from Proto-Germanic was still predominant at clause level.

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