Verb seconding in Old English: verb movement to Infl

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1. Introduction

Recent studies of Old English syntax have proposed that the position of the finite verb in main clauses is derived by verb seconding, while the position of the verb in subordinate clauses is derived by other processes. Van Kemenade (1987) and Kiparsky (1990), for example, claim that Old English is a verb second language like Modern German and Modern Dutch, with verb seconding moving finite verbs leftward to Comp in main clauses only. Under these analyses, the Old English main clause in (1) is a verb second clause, while the subordinate clauses in (2) through (4) are not, even though the finite verb is in second position in all four clauses: (2) is derived by verb raising, (3) by verb projection raising, and (4) by postposition of the NP, all well-attested processes in Germanic languages that move constituents rightward over the finite verb.\(^3\)

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1. This paper is based in part on chapter 3 of my doctoral dissertation. Thanks are due to Beatrice Santorini and to two anonymous reviewers for The Linguistic Review for detailed suggestions on earlier versions. All mistakes and shortcomings are of course my own.
2. The possibility of CP-recursion for (2) through (4) does not arise, since these three clauses are not complements of bridge verbs. See section 1.1 for further discussion.
4. As shown in (1) through (4), most analyses of Old English assume that the VP is head-final; but see note 9. See the Appendix for a list of the abbreviated forms of titles cited in the examples.

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(1) Verb seconding

God's servants should preserve harmlessness

'God's servants should preserve harmlessness ...' (ÆLS 25.846)

(2) Verb raising

so that the earthly man should prosper

'So that the earthly man should prosper ...' (ECHom i.12.26)

(3) Verb projection raising

how any man might build such a city

'... how any man might build such a city ...' (Or 43.19-20)

(4) Postposition

when wind stirs up grievous storms

'... when the wind stirs up grievous storms ...' (Beo 1374-1375)

Other studies propose leftward movement of the finite verb to a clause-medial functional head in Old English subordinate clauses, but do not explicitly relate that movement to verb seconding in main clauses: see, for example, Cardinaletti and Roberts (1991), Haeberli (1991, 1992), Haeberli and Haegeman (1992), Higgins (1991), Koopman (1985), Lightfoot (1991), and Tomaselli (1990).

In this article, evidence is presented to contradict both hypotheses of the verb second constraint as verb movement to Comp analysis for Old English: it is demonstrated that in the general case, verb seconding in Old English main clauses involves verb movement to clause-medial Infl rather than to Comp, and that verb seconding to Infl applies not only in main clauses but also in subordinate clauses.

The article is organized as follows. The remainder of this section provides an overview of the verb second constraint, and specifies the terminological conventions used. Section 2 presents the double base hypothesis, the view that Old English exhibits synchronic variation in the underlying position of Infl, clause-medial versus clause-final. Section 3 provides evidence for the existence of both Infl-medial and Infl-final phrase structure in Old English subordinate clauses. Section 4 discusses topicalization in Infl-medial subordinate clauses. Section 5 provides evidence for variation in the underlying position of Infl in Old English main clauses, and demonstrates that verb seconding in these clauses is movement to clause-medial Infl rather than to Comp in all but a small subset of exceptional clause types. The proposed analysis is based upon an investigation of data collected from sixteen Old English texts.5

1.1. The verb second constraint

The verb second constraint, a phenomenon common to all Germanic languages except Modern English,6 requires the finite verb to be the second constituent of the clause, regardless of the grammatical category of the first constituent. The effect of this constraint is most apparent in clauses where the first constituent is not the subject: In verb second languages like Modern German, the subject obligatorily inverts with the finite verb in such clauses, as shown in (5). In contrast, in non-verb second languages like Modern English, the subject generally appears before the finite verb, as shown in (6):

(5) a. Wahrscheinlich wird Karl zu Hause bleiben.
   probably will Karl at home stay
   'Probably Karl will stay home.'
      probably Karl will at home stay
      intended meaning: 'Probably Karl will stay home.'

(6) a. *Probably will Karl stay home.
   b. Probably Karl will stay home.

Following the work of den Besten (1977), it has been assumed that verb seconding involves the fronting of the finite verb to the position of the complementizer, Comp, with topicalization of some constituent to SpecCP. This analysis captures the contrast between main clauses and subordinate clauses exhibited by asymmetrical verb second languages: In Modern German, for example, as shown in (7) through (9), the finite verb appears in second position in main clauses, where Comp is empty at D-structure, but in final position in most subordinate clauses with overt complements.

5. For sampling techniques and information about the texts included in the database, see Appendix B.

6. The verb second phenomenon is not limited to Germanic languages; see, for example, Adams (1987) for Old French, Fontana (in progress) for Old Spanish.
Subject-initial main clause, finite verb in second position
Der Junge hat das Buch gekauft.
the boy has the book bought
'The boy bought the book.'

Non-subject-initial main clause, finite verb in second position
Das Buch hat der Junge gekauft.
the book has the boy bought
'The boy bought the book.'

Subordinate clause, finite verb in final position
daß der Junge das Buch gekauft hat.
that the boy the book bought has
'... that the boy bought the book.'

The verb second phenomenon, however, is not limited to main clauses (see, for example, Diesing 1990; de Haan and Weerman 1986; Rögnvaldsson and Thráinnsson 1990, Santorini 1989, Thráinnsson 1986, Vikner 1991). Languages that permit embedded verb seconding are of two types: those like Frisian and the mainland Scandinavian languages, in which the phenomenon is limited to the complements of positive, realis bridge verbs; and those like Modern Yiddish and Icelandic, in which verb seconding applies freely in almost all types of subordinate clauses. I will follow Iatriodou and Kroch (1992), among others, and assume that embedded verb seconding of the first type involves CP-recursion, with verb movement to the lowest Comp and topicalization to the lowest SpecCP; while embedded verb seconding of the second type involves verb movement to Infl and topicalization to SpecIP. The contrast in grammaticality and structure is illustrated below.7 In Danish, as shown in (10) and (11), verb seconding in the complement of a bridge verb is possible but not obligatory when that verb is positive, but not possible when the matrix clause verb is negated.

Verb seconding with topicalization of object
Hun sagde [CP₁ at [CP₂ kaffe] [CP₃ Peter ikke t₁ t₇]]
she said that coffee drinks Peter not
'She said that Peter doesn’t drink coffee.'

a. **Hun sagde ikke at Peter ikke drikker kaffe.**
she said not that Peter not drinks coffee
'She didn’t say that Peter doesn’t drink coffee.'

b. **Hun sagde ikke at Peter drikker ikke kaffe.**
she said not that Peter drinks not coffee
intended meaning: 'She didn’t say that Peter doesn’t drink coffee.'

c. **Hun sagde ikke at kaffe drikker Peter ikke.**
she said not that coffee drinks Peter not
intended meaning: 'She didn’t say that Peter doesn’t drink coffee.'

In contrast, verb seconding to Infl in Yiddish subordinate clauses is possible (and in fact obligatory) whether the matrix clause verb is positive or negated, as shown in (12):

a. **Ikh meyn (nit) [CP₁ az [IP [dos yingl] t₁ t₇ t₄ gekoyft]**

b. **Ikh meyn (nit) [CP₁ az [IP [dos bukh₇] [IP [dos yingl] t₁ t₄ gekoyft]**

c. **Ikh meyn (nit) [CP₁ az [IP [dos yingl] t₁ t₄ gekoyft]**

Given the availability of clause-medial Infl as a landing site for the finite verb in Yiddish and Icelandic subordinate clauses, the word order in main clauses is consistent with either verb movement to Comp or verb movement to Infl. The structural ambiguity is illustrated in (13) and (14) for Yiddish:

Verb movement to Comp

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Verb movement to Infl

\[ [p \text{ dos bukh}, \text{ hot}, \text{ vp dos yingt, gekoyft}] \]

the book has the boy bought

For Yiddish and Icelandic, there is no empirical motivation for choosing one landing site over the other in main clauses. For Old English, however, evidence does exist that supports an analysis of verb movement to Infl rather than to Comp for all but a small subset of exceptional clause types. That evidence will be presented in section 5.

1.2. Terminological conventions

In the remainder of this article, I use the following terminological conventions. The terms *verb movement* and *verb fronting* are used for any syntactic process that moves finite verbs from their base-generated position to Infl or Comp. The term *verb second* is used in the traditional sense to refer to the constraint that requires the finite verb to be the second constituent of the clause, regardless of the grammatical function of the first constituent. The process that generates this surface word order is called *verb seconding*. Clauses that exhibit this surface word order are called *verb second clauses*, and languages that exhibit the phenomenon are called *verb second languages*.

Phrase structure in which Infl precedes VP is called *Infl-medial* structure; phrase structure in which Infl follows VP is called *Infl-final* structure. These terms are also used to refer to clauses or surface word orders that are unambiguously derived from the relevant underlying structures.

The terms *clause-initial*, *clause-medial*, and *clause-final* are used to refer to the surface position of constituents in the clause (=IP). Similarly, the terms *verb-initial*, *verb-medial*, and *verb-final* are used to refer to clauses (=IPs) with the finite verb in initial, medial, or final position.

I use the term *auxiliary verb* for expository convenience to refer to those verbs that take infinitival or participial complements in Old English. Although these verbs do not form a homogeneous group with respect to all syntactic properties and behavior, the differences are not relevant for the topics discussed here.

The terms *verb raising* and *verb projection raising* are used to describe the word order phenomenon involving the permutation of auxiliary verbs and their infinitival or participial complements in Infl-final clauses. I distinguish between the phenomenon itself and the structural analysis of that phenomenon: I will not propose a structural analysis for verb raising or verb projection raising in Old English, nor is it my intent to prejudice the discussion in favor of any particular analysis proposed in the literature.

The term *heavy constituent* is used for Old English PPs, non-pronominal NPs, and non-finite verbs, to distinguish them from *light constituents*, i.e., pronouns and adverbs. It is shown in Pintzuk (1991) that pronouns are often syntactic clitics in Old English, attaching to the left or right periphery of SpecIP; Pintzuk (1993) shows that some classes of adverbs appear adjoined to maximal projections like VP and IP.

In the citations from Old English texts, I refer to the sources by the method specified in Mitchell, Ball, and Cameron (1975, 1979); the abbreviations used are listed in Appendix A.

2. The double base hypothesis

As stated above, previous analyses have proposed that Old English is a verb second language, with movement of the finite verb to Comp in main clauses. This can be formalized in terms of uniform Infl-final phrase structure in both main and subordinate clauses, with obligatory movement of the finite verb to clause-final Infl to receive tense. According to this analysis, verb seconding applies in main clauses to further move the verb from Infl to Comp, with topicalization to SpecCP of a constituent base-generated within IP; in subordinate clauses, assuming no CP-recursion, movement from Infl to Comp is blocked by the presence of a base-generated complementizer or subordinate conjunction, and the finite verb remains in clause-final Infl. Various syntactic processes such as verb raising, verb projection raising, and postposition can apply to derive subordinate clauses with the finite verb in second position or in other non-final positions. Derivations under this analysis were illustrated in (1) through (4) above.

I claim that this hypothesis of a uniform Infl-final base is inadequate to fully account for the position of the finite verb in Old English clauses. I propose instead that Old English exhibits synchronic variation in the underlying position of Infl, clause-medial versus clause-final. Santorini (1992a), in her diachronic study of verb seconding in Yiddish subordinate clauses, dubs this analysis the double base hypothesis, and I adopt her terminology here. According to this analysis, IPs are variably head-initial or

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8. Allen (1975) shows that Old English does not have a syntactically defined class of auxiliary verbs.

9. In contrast to Pollock (1989), I assume a simple Infl node.
head-final, and the highest verb obligatorily moves to Infl to receive tense. For expository convenience, I assume that VPs in Old English are uniformly head-final. Following the VP-Internal Subject Hypothesis (see Fukui and Speas 1986; Kitagawa 1986; Sportiche 1988; inter alia), the subject of the clause is base-generated in a position dominated by the maximal projection of the verb; I will assume that this position is SpecVP. All Infl-medial clauses contain a topic position, SpecIP, which is an A position. Following the analysis of Santorini (1992b), in which the feature content of Comp, Infl, and Agr interact to determine which constituents may fill SpecIP in verb second and non-verb second languages, I assume that Infl is the highest [+1] category in Old English, and that Agr is inherently nominative. These assumptions permit both subjects and non-subjects in SpecIP in Infl-medial clauses; see further discussion in section 4.

The structures of Infl-medial and Infl-final clauses are illustrated in (15) and (16), where “Vf” is the finite verb:

(15) Infl-medial phrase structure
[IP [topic] [t Vf] [VP ... t ... t]]

(16) Infl-final phrase structure
[IP ... t [t Vf]]

According to the double base hypothesis as proposed by Santorini (1992a), variation in phrase structure exists at the level of the individual speaker, rather than at the level of the speech community. I will present evidence for synchronic variation in the underlying position of Infl in both main and subordinate Old English clauses in sections 3 and 5.

3. Evidence for phrase structure variation in subordinate clauses

In this section I demonstrate that Old English exhibited both Infl-final and Infl-medial phrase structure in subordinate clauses, with movement of the finite verb to Infl. Section 3.1 presents evidence for Infl-final phrase structure;

1. It is demonstrated in Pintzuk (1991) that Old English VPs as well as IPs are variably head-initial or head-final. Variation in the underlying position of V is not relevant for the topics discussed here.

11. The status of SpecIP in Infl-final clauses is not as easily determined, although there are indications that it is an A position as well. Since the status of SpecIP in Infl-final clauses is irrelevant for the topics discussed here, I will make no assumptions about it.

12. SpecIP is not shown in (16); see note 11.

3.1. Evidence for Infl-final phrase structure in subordinate clauses

The clearest cases of unambiguous Infl-final phrase structure are subordinate clauses with the finite verb in absolutely clause-final position, preceded by at least two heavy constituents. This word order is used throughout the Old English period, in clauses with auxiliary verbs and in clauses with finite main verbs. Examples are given in (17) and (18):

(17) *pa apollonius afaren was when Apollonius gone was ‘... when Apollonius had gone...’

(18) *swa pa apre ham comon as the others home came ‘... as the others came home ...’

For these clauses, I propose the Infl-final structure shown above in (16), with string-vacuous movement of the finite verb to Infl:

(19) [IP swa [IP pa apre ham t, comon]]

The finite verb can also appear clause-medially, preceded by two or more heavy constituents but before clause-final position. These clauses are derived from Infl-final phrase structure by processes such as verb raising, verb projection raising, and postposition; the existence of such clauses provides evidence for these processes in the language. Examples are given in (20) through (23):

(20) Verb raising
*swa swa sceap from wulfum & wildeorum t beo6 [v fornunene] just-as sheep by wolves and beasts are destroyed ‘... just as sheep are destroyed by wolves and beasts ...’ (Bede 46.23)

13. I have not shown the trace of verb movement to clause-final Infl in (20) through (23).
 Verb projection raising

(21) 
\[ \text{where any people might obtain peace from another ...} \] 
(Or 31.14-15)

(22) NP postposition

(23) PP postposition

\[ \text{when the wrathful Antiochus had commanded to be built there following the heathen ways.} \] 
(ÆLS 25.379-380)

3.2. Evidence for leftward verb movement in subordinate clauses

Given the availability of Infl-final phrase structure and of various processes shifting NPs, PP, Vs, and VPs rightward over the finite verb, many Old English subordinate clauses with the finite verb in clause-medial position are structurally ambiguous: they may be derived either by rightward movement of the post-verbal constituents, or by leftward movement of the finite verb. Examples of such clauses are given in (24) and (25).14 I have labeled the landing site of the fronted verb X in examples in this section, since in principle the verb could have moved either to the lower Comp in a CP-recursion structure or to Infl in an Infl-medial structure.

(24) a. \( \text{so that the earthly man should prosper} \)
   \[ \text{... so that the earthly man should prosper ...} \] 
   (ÆCHom i.12.26)
   b. verb raising
   \[ \text{so that the earthly man should prosper} \]
   c. leftward verb movement
   \[ \text{so that the earthly man} \]

14. Once again, I have not shown the trace of verb movement to clause-final Infl in (24b) and (25b).

However, not all Old English subordinate clauses with the finite verb in medial position can be derived by rightward movement of constituents over the finite verb: some clauses must instead be analyzed as unambiguous cases of leftward verb movement. Evidence for leftward verb movement is of three types: (i) the distribution of particles; (ii) the distribution of pronouns and monosyllabic adverbs; and (iii) apparent instances of verb projection raising that, on the basis of comparative evidence from other Germanic languages, must instead be derived by verb fronting.

3.2.1. The distribution of particles

The first type of evidence for leftward verb movement in Old English subordinate clauses is the distribution of particles.15 In uniformly Infl-final Germanic languages like Modern German and Modern Dutch, particles always immediately precede the main verb, and never appear postposed. Similarly, in Old English subordinate clauses that are uniformly Infl-final, particles always precede the main verb,16 as illustrated in (26) and (27):

(25) a. \[ \text{when wind stirs-up grievous storms} \]
   \[ \text{... when the wind stirs up grievous storms ...} \] 
   (Beo 1374-1375)
   b. postposition
   \[ \text{when wind} \]
   c. leftward verb movement
   \[ \text{when wind} \]

15. The database for this section consists of an exhaustive sample of the Old English subordinate clauses containing particles listed in the appendix of Hiltunen (1983), a detailed study of verb-particle combinations in prose texts from the Old English and Early Middle English periods. Hiltunen included toegordergardeor "together" in his study, but I did not. These words seem more like adverbs than particles: Certainly they are never listed with verbs as verb-particle combinations in Toller (1954, 1955). Clauses containing all of the other particles that Hiltunen studied were included. However, I excluded those clauses in which the particle could be analyzed as a preposition or as the modifier of a prepositional phrase. I also excluded clauses where the verb in the verb-particle combination was a gerund, since I have not investigated the syntax of this construction. And I supplemented Hiltunen's data by an exhaustive sample of clauses containing particles from two poetic texts, Beowulf and Maldon, and by a small number of clauses from prose texts that were not listed in Hiltunen's appendix.

16. I have found only one exception to this generalization out of 94 potential instances (1.1 percent).
(26) deah hit ar upahefen were
although it before up-raised was
'... although it was raised up before ...'
(CP 34.6)

(27) swa þæt se scinenda lig his locc up-ateah
so that the shining flame his locks up-drew
'... so that the shining flame drew his locks up.'
(AECHom ii.514.2-3)

In contrast, in subordinate clauses with the finite main verb in medial position — clauses that in principle could be derived either by rightward movement of post-verbal constituents or by leftward movement of the verb, like (25) above — particles appear post-verbally 36 times out of 134 potential instances (26.9 percent). Examples are given in (28) and (29):

(28) hu he siðode up
how he went up
'... how he went up ...'
(AELS 18.291)

(29) þæt he wearp þæt sweord onweg
so that he threw the sword away
'... so that he threw away the sword ...'
(Bede 38.20)

If these 36 clauses with post-verbal particles were derived by an early version of Modern English particle movement (as suggested by van Kemenade 1987), or by particle postposition or base-generation of the particle to the right of the verb as in Middle Dutch (see van den Berg 1991; Neeleman and Weerman 1991), we would expect the process to apply not only in clauses with the finite verb in medial position, but also in unambiguously Infl-final clauses like (26) and (27). But as stated above, this expectation is not fulfilled. I conclude from this distribution that particles in Old English are base-generated in pre-verbal position and cannot be postposed. Examples of particles in Infl-final clauses are given in (31) and (32):

(31) þæt he of þam campdome þe cuman moste
that he from the service then come might
'... that he might then leave military service.'
(EELS 31.100)

(32) þonne þæt bræst-liðende fyr on slæpe hi awrehte
when the crackling fire from sleep them aroused
'... when the crackling fire aroused them from sleep.'
(EELS 31.882–883)

In contrast, in subordinate clauses with the finite main verb in medial position — clauses that in principle could be derived either by rightward movement of post-verbal constituents or by leftward movement of the verb, like (25) above — pronominal objects and monosyllabic adverbs appear post-verbally seven times out of 123 potential instances (5.7 percent). Although the frequency of post-verb pronouns and adverbs is lower than the corresponding frequency for particles,18 the fact that pronouns and adverbs do appear in this position is significant, given that they are invariably pre-verbal in Infl-final clauses. I conclude that the seven clauses with post-verbal pronominal objects and monosyllabic adverbs are derived by leftward verb movement. Examples are given in (33) and (34):

(33) swa þe hy [x asettan] him upp on æne sid þe
so that they transported themselves inland in one journey
'... so that they transported themselves inland in one journey ...'
(ChronA 132.19 (1001))

(34) þæt martins [x come] þa into þære byrig þe
that Martin then came then into the town
'... that Martin then came into the town.'
(EELS 31.490–491)

3.2.2. The distribution of pronominal objects and monosyllabic adverbs

The second type of evidence for leftward verb movement in Old English subordinate clauses is the distribution of pronominal objects and monosyllabic adverbs. These constituents invariably precede the main verb in subordinate clauses that are unambiguously Infl-final.17 I conclude from this distribution that these elements, like particles, are base-generated in pre-verbal position and cannot be postposed. Examples of pronouns and adverbs in Infl-final clauses are given in (31) and (32):

(31) þæt he of þam campdome þa cuman moste
that he from the service then come might
'... that he might then leave military service.'
(EELS 31.100)

(32) þonne þæt bræst-liðende fyr on slæpe hi awrehte
when the crackling fire from sleep them aroused
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In contrast, in subordinate clauses with the finite main verb in medial position — clauses that in principle could be derived either by rightward movement of post-verbal constituents or by leftward movement of the verb, like (25) above — pronominal objects and monosyllabic adverbs appear post-verbally seven times out of 123 potential instances (5.7 percent). Although the frequency of post-verb pronouns and adverbs is lower than the corresponding frequency for particles,18 the fact that pronouns and adverbs do appear in this position is significant, given that they are invariably pre-verbal in Infl-final clauses. I conclude that the seven clauses with post-verbal pronominal objects and monosyllabic adverbs are derived by leftward verb movement. Examples are given in (33) and (34):

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so that they transported themselves inland in one journey
'... so that they transported themselves inland in one journey ...'
(ChronA 132.19 (1001))

(34) þæt martins [x come] þa into þære byrig þe
that Martin came then into the town
'... that Martin then came into the town.'
(EELS 31.490–491)

17. I have found no exceptions to this generalization in 222 potential instances.
18. The reason for this lower frequency is that pronouns and adverbs can move leftward out of the VP to adjoin to phrasal categories (see Pintzuk 1991, 1993), while particles remain in their base-generated position, never moving leftward.
3.2.3. Apparent instances of verb projection raising

Finally, let us consider subordinate clauses like (35a) below, with a pronominal object between the auxiliary verb in clause-medial position and the non-finite main verb. The word order in such clauses is apparently consistent with either rightward movement of the verb projection (verb projection raising) or leftward movement of the verb, as shown in (35b) and (35c):

(35)  
   a. *pat heo wolde hine lærar
       that she would him teach
       '... that she would teach him.'  (ÆLS 25.173)
   b. verb projection raising
       *pat heo t₁ wolde [hine lærar]₁
   c. leftward verb movement
       *pat heo [₇ wolde]₁ hine lærar t₁

However, comparative evidence from other Germanic languages indicates that (35b) is probably not the correct structure for (35a). Santorini (1992a), citing Kathrin Cooper (pers. comm.), states that in Zurich German, which allows the raising of verb projections containing full NPs, it is at best marginally acceptable to include pronominal objects in the raised verb projection; instead, pronominal objects generally move out of the projection before raising occurs. Santorini shows that the same constraint applies in Early Yiddish: pronouns are never included in the raised verb projection in unambiguous instances of verb projection raising. The effects of this constraint are illustrated in (36) for Zurich German (=Santorini 1992a: 13, her [27]):

(36)  
   a. *das er t₁ törf [VP en] is Huus bringe₁
       that he may him into-the house bring
       intended meaning:
       '... that he is allowed to bring him into the house.'
   b. das er en₁ t₁ törf [VP t₁ is] Huus bringe₁
       that he him may into-the house bring
       '... that he is allowed to bring him into the house.'

In Old English, pronominal objects occur freely between the auxiliary and main verb in subordinate clauses, as in example (35a) above. Under the reasonable assumption that the constraint exhibited by Zurich German and Early Yiddish also applies in Old English, these clauses must be analyzed as instances of leftward verb movement rather than verb projection raising.

3.3. Infl-medial phrase structure versus CP-recursion

I have demonstrated in section 3.2 that there is clear evidence for leftward verb movement in Old English subordinate clauses. There are two possibilities for the landing site of the fronded finite verb: if these clauses all involve CP-recursion, the landing site is the lowest Comp; otherwise, the landing site must be clause-medial Infl. These two possibilities are illustrated in (37) and (38):

(37)  
   a. [CP₁ ... [CP₂ topic₃ [V₃] [IP ... t₁ ... t₁ t₁]]]
   b. Infl-medial phrase structure
       [CP₁ ... [IP topic₃ [V₃] ... t₁ ... t₁]]

As discussed in section 1.1, CP-recursion and embedded verb seconding in Frisian and the mainland Scandinavian languages is licensed only in positive, realis complements to bridge verbs. In Old English, however, unambiguous cases of leftward verb movement occur in adjunct adverbial clauses, relative clauses, and other [+wh] subordinate clauses. I conclude, therefore, that the landing site for at least some cases of leftward movement in subordinate clauses is clause-medial Infl. Examples of such clauses are shown in (39) through (41):

(39)  
   a. *pat he [₁ wearp]₁ pat sword onweg t₁
       so that he threw the sword away
       '... so that he threw away the sword ...'  (Bede 38.20)
   b. gif hwa [₁ aslea]₁ his deowe oðde his deowenne
       if someone cuts his man-servant or his woman-servant
       *pat eage ut t₁
       the eye out
       'If someone cuts out the eye of his (male/female) servant, ...'
       (Laws Af 32.17–18)

(40)  
   Relative clause
       *dam munte ... se [₁ astihδ]₁ up t₁ dreo mila
       the mountain ... which rises up three miles
       on heannysse
       in height
       '... the mountain ... which rises to a height of three miles.'
       (ÆCHom ii.164.13–14)
The frequency of topicalization in English subordinate clauses is much lower than 6.5 percent. In contrast, Beatrice Santorini (pers. comm.) found that topicalization of non-subjects in Modern Yiddish subordinate clauses is much more frequent: in one Modern Yiddish text, in clauses with definite, non-postposed subjects, 23 percent of the topics in asserted complement clauses are non-subjects, and 12 percent of the topics in non-asserted subordinate clauses are non-subjects.

I conclude that the topicalization of non-subject constituents in Old English subordinate clauses is possible but limited. The conditions constraining such topicalization — syntactic and/or pragmatic — is a topic for future research.

5. Evidence for phrase structure variation in main clauses

In this section I demonstrate that Old English main clauses, like Old English subordinate clauses, also exhibit both Infl-final and Infl-medial phrase structure. And I will show that in the general case, the landing site for verb movement in main clauses is clause-medial Infl rather than Comp.
5.1. Evidence for Infl-final phrase structure in main clauses

The clearest cases of unambiguous Infl-final phrase structure in main clauses are once again clauses with the finite verb in absolutely clause-final position, preceded by at least two heavy constituents. This word order is used in main clauses throughout the Old English period, in clauses with auxiliary verbs and in clauses with finite main verbs, although at a lower frequency than in subordinate clauses. Examples are given in (43) and (44):

(43) him þær se gionga cyning þæs oferfeârædes forwiernan mehte
     him there the young king the crossing prevent could
     ‘... the young king could prevent him from crossing there.’
     (Or 44.19–20)

(44) se manfulla gast þa martine gehyrsumode
     the evil spirit then Martin obeyed
     ‘The evil spirit then obeyed Martin . . .’
     (ÆLS 31.1050)

For these main clauses, as for the analogous subordinate clauses, I propose Infl-final structure with movement of the finite verb to Infl, as shown in (45) for example (44):

(45) [IP se manfulla gast þa martine t, [t gehyrsumode,]]
     the evil spirit then Martin obeyed

As in subordinate clauses, the finite verb in main clauses can also appear clause-medially, preceded by two or more heavy constituents but before clause-final position. Such clauses are derived from Infl-final phrase structure by processes of postposition, verb raising, or verb projection raising. Examples are given in (46) through (48):

(46) Postposition
     her Cenwalh t, adrifen was [pp from Pendan cyninge],
     in-this-year Cenwalh driven-out was by Penda king
     ‘In this year, Cenwalh was driven out by King Penda.’
     (ChronA 26.19 (645))

(47) Verb raising
     Wilfrid eac swilce of breotan ealonde t, wes [onsend],
     Wilfred also from Britain land was sent
     ‘Wilfred was also sent from Britain.’
     (Chad 162.27–164.28)

(48) Verb projection raising
     on wope & on urotnesse & on sare his lichoma
     in weeping and in sadness and in pain his body
     t, sceal [her wuniian],
     must here remain
     ‘His body must remain here, in weeping and sadness and pain.’
     (BlHom 59.36–61.1)

5.2. Evidence for Infl-medial phrase structure in main clauses

As noted in section 1.1, the landing site of the finite verb in verb second main clauses is ambiguous in Modern Yiddish: the verb has moved either to clause-medial Infl or to Comp. In Old English, however, evidence exists that supports an analysis of verb movement to clause-medial Infl rather than to Comp for all but a small set of exceptional clause types. This evidence involves the position of subjects — in particular, pronominal subjects — with respect to the finite verb.

First, consider full-NP subjects in Old English main clauses. As illustrated in (49) below, subjects that are not topics normally appear after the finite verb, in the position characteristic of verb second languages:

(49) eow sceolon deor abitan
     you shall beasts devour
     ‘... beasts shall devour you.’
     (ÆLS 24.35)

In contrast, pronominal subjects that are not topics normally appear before rather than after the fronted finite verb, either before the topic or between the topic and the verb, as shown in (50) and (51).

22. Van Kemenade (1987) assumes that verb-final main clauses (which are Infl-final according to the analysis presented here) occur mainly in the earliest poetic texts, which ‘... are full of archaic, metrically influenced language’ (p. 64, note 5). This assumption, however, is not correct: for the data that I collected from prose texts written between 900 and 1100, there are 252 independent (i.e., non-conjunct) main clauses where the position of Infl can be determined, and 16 of these (6.3 percent) are Infl-final clauses, a frequency too high to be ignored.

23. Once again, the trace of verb movement to clause-final Infl is not shown in (46) through (48).

24. It is clear that the verbs have fronted in (50) and (51), because they are followed by a monosyllabic adverb and a pronominal object; see the discussion in section 3.2.
obligatorily syntactic clitics,25 which attach to either the left or the right periphery of the topic.

(50) & hiæ þæt geleastan swa
and they that fulfilled thus
‘... and they fulfilled it in that way.’ (ChronA 76.15 (878))

(51) oð þis ic campode þe
until this I fought (for) you
‘Until now I fought for you.’ (ÆLS 31.103)

Pronominal subjects appear after rather than before the finite verb only in a small set of well-defined clause types: direct questions, verb-initial declarative and imperative clauses, clauses with a clause-initial adverb,26 and some clauses with negated verbs.27 Examples are given in (52) through (56):

(52) Direct question
  hwí sceole we ofres mannes niman
  why should we another man’s take
  ‘Why should we take those of another man?’ (ÆLS 24.188)

(53) Verb-initial declarative main clause
  hæftón hi hiora onfangen
  had they them sponsored
  ‘They had sponsored them ...’ (ChronA 86.28–29 (894))

(54) Verb-initial imperative clause
  béo ðu on ofeste
  be you in haste
  ‘Be quick.’ (Beo 386)

(55) Main clauses with adverbs in initial position
   a. þæt ge-mette he scæðan
      then met he robbers
      ‘... then he met robbers ...’ (ÆLS 31.151)
   b. þonne magon ge þær eardungstowe habban
      then may you there dwelling-place have
      ‘... then you may have a dwelling-place there.’ (Bede 28.15)

I conclude from the distribution of pronominal subjects that there are two distinct landing sites for fronted finite verbs in Old English main clauses: clause-medial Inf in the general case, as in (50) and (51), and Comp in clauses like (52) through (56). I propose that the trigger for verb movement to Comp is an operator in SpecCP, which is lexically realized by a wh-phrase, a clause-initial adverb, or a topic in some clauses with negated verbs, but not lexically realized in other cases of verb movement to Comp.28

These two landing sites for fronted finite verbs are illustrated below in (57) and (58). The S-structure of (50) above, repeated as (57a), is shown in (57b). The pronominal subject clitic has adjoined to the left periphery of the topic in SpecIP, and the finite verb has moved to clause-medial Inf.

(57) Verb movement to Inf
   a. & hiæ þæt geleastan swa
      and they that fulfilled thus
      ‘... and they fulfilled it in that way.’ (ChronA 76.15 (878))

25. Non-subject pronouns are optionally rather than obligatorily clitics. When they do cliticize, they appear in the same positions as pronominal subject clitics.

26. The most common adverbs to appear in clause-initial position are þæt/þonne ‘then’, although other adverbs are used at varying frequencies in the different texts, as shown in (55a) through (55c).

27. I am grateful to Ans van Kemenade for pointing out this last type, and for providing me with example (56).

28. Van Kemenade (1987) also proposes an operator for a subset of these clauses in Old English, but it serves to block cliticization rather than to trigger verb movement to Comp. Diesing (1990) proposes an operator in SpecIP for Yiddish questions; the operator is not lexically realized in all question types.
In contrast, the S-structure of (55a) above, repeated as (58a) below, is shown in (58b). The finite verb \textit{ge-mette} has moved first to Infl and then to Comp; the adverb \textit{pa} has moved to SpecCP:\footnote{For the sake of concreteness, IP is shown as head-initial in (58), although it is impossible to determine the underlying position of Infl in these clauses. The subject pronoun is shown as the topic, although it is of course possible that the direct object \textit{sceadun} is the topic with \textit{he} a clitic attached to the left periphery of SpecIP.}

\begin{enumerate}
\item[(58)] Verb movement to Comp
\begin{enumerate}
\item a. \textit{pa} \textit{ge-mette he sceadun}
\textit{then met he robbers}
\textit{... then he met robbers ...}'
\item b. CP
\begin{itemize}
\item \textit{pa} \textit{ge-mette}\n\item Spec
\item C'
\item IP
\item Spec
\item I
\item VP
\item \textit{he}_k
\item \textit{sceadun}
\item \textit{t}_k \textit{t}_j \textit{t}_i
\end{itemize}
\end{enumerate}
\end{enumerate}

Since movement of the finite verb from Infl to Comp is blocked by an overt complementizer (except in CP-recursion structures), a direct consequence of this analysis is that there should not exist subordinate clauses with a lexically filled Comp node and the finite verb followed by a pronominal subject. As expected, I have found no instances of such subordinate clauses in the Old English texts I have examined.\footnote{It should be noted that verb-initial subordinate clauses do exist in Old English, although this word order is not common except in clauses with subject gaps, where the empty subject may occupy topic position. An example of a true verb-initial subordinate clause is given below (=Haegerli 1992: 22, his (15))

(i) \textit{he gesaeah }\textit{het waror frawa eleberian on ham trewom}
\textit{he saw that were few olives on the trees}
\textit{... he saw that few olives were on the trees ...}'
\textit{(GD(H) 50.26-27)}

If clauses like (i) are indeed instances of verb movement to Comp, rather than verb movement to clause-medial or clause-final Infl, then I agree with Haegerli in assuming that they involve CP-recursion.}

6. Summary and conclusions

In this article I have demonstrated that, contra earlier analyses of Old English, verb seconding involves leftward movement of the finite verb to clause-medial Infl rather than to Comp, and that verb seconding to Infl applies not only in main clauses but also in subordinate clauses. Evidence for verb seconding in subordinate clauses is provided by the distribution of particles, pronominal objects, and monosyllabic adverbs, and by clauses with pronominal objects between the auxiliary verb and the main verb. In main clauses, the position of pronominal subjects provides evidence for two distinct landing sites for finite verbs: in the general verb second case, the verb moves to clause-medial Infl, and pronominal subjects appear before the verb, on the left and right peripheries of the topic in SpecIP; only in exceptional clause types — direct questions, verb-initial declarative and imperative clauses, clauses with an adverb in clause-initial position, and some clauses with negated verbs — does the verb move to Comp, with pronominal subjects appearing after the verb.

\textit{(58a)}
Thus Old English can be regarded as a special type of verb second language, with two characteristics that distinguish it from other verb second languages: the verb second constraint is obeyed in Infl-medial clauses only; and the finite verb in verb second clauses is not necessarily the second constituent of the clause, since clitics may attach to the left or right periphery of the topic. Notice, however, that verb seconding in Old English is not an optional process in the usual sense of the term: movement of the finite verb to Infl is obligatory in all clauses, but it is only Infl-medial clauses that exhibit the word order patterns of verb second languages.

It should be emphasized that it is the general case of verb movement to Infl and not the special case of verb movement to Comp that derives verb second word order. Verb seconding in Old English is verb movement to clause-medial Infl; and verb movement to Comp is not just another type of verb seconding, but a distinct phenomenon. There are two major differences between verb movement to Infl and verb movement to Comp in Old English main clauses: first, verb movement to Infl, like verb seconding in other Germanic languages, applies categorically, regardless of the pragmatic/discourse context and regardless of the underlying position of Infl. In contrast, verb movement to Comp seems to be related to the pragmatic/discourse force of the clause: although the precise characterization of the discourse function of verb movement to Comp is a topic for future research, it is clear that the process applies in questions, imperatives, and narrative-advancing clauses, among other types of clauses, but not in ordinary declaratives. The second difference, which is presumably related to the first, is that the initial position in clauses with the finite verb in Comp is restricted to a small set of constituents, those that can realize the operator in SpecCP; in the general verb second case, the type of constituent that topicalizes to SpecIP is restricted only by pragmatic and discourse factors.

The hypothesis that there are two landing sites rather than just one provides a partial explanation of some of the changes that occurred between the Old English and the Modern English periods. Although Modern English is not a verb second language, it still shows remnants of verb fronting — in questions, and in a restricted set of declarative clauses with preposed, usually negative, constituents. If all cases of verb fronting in Old English were instances of verb movement to Comp, then it would be puzzling that verb fronting would be retained in some contexts in Modern English but lost in others. But if verb seconding in Old English is verb movement to Infl, then a different picture emerges: verb seconding was lost during the Middle English period; but verb fronting to Comp is still triggered in Modern English by the presence of certain operators in SpecCP. See Maling and Zaenen (1981) for an early formulation of this idea, and more recently Rizzi (1991).

In the process of demonstrating that the verb second constraint in Old English involves verb movement to Infl, I have shown that Old English exhibits synchronic variation in phrase structure, Infl-medial versus Infl-final, rather than a uniformly Infl-final base. This variation exists in the usage of individual speakers of Old English, not just at the level of the speech community: each text examined contains instances of unambiguously Infl-medial clauses and instances of unambiguously Infl-final clauses. It is shown in Pintzuk (1991) that Old English is a language in the process of change: the frequency of Infl-medial phrase structure in both main and subordinate clauses increases during the Old English period, with the base becoming uniformly Infl-medial early in the Middle English period.

Appendix A: Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AELS</td>
<td>Ælfric's Lives of Saints, Skeat 1881-1900.</td>
</tr>
<tr>
<td>Bede</td>
<td>The Old English Version of Bede's Ecclesiastical History of the English People, Miller 1890-1898.</td>
</tr>
<tr>
<td>Beo</td>
<td>Beowulf and the Fight at Finnsburg, Klaeber 1950.</td>
</tr>
<tr>
<td>BHom</td>
<td>The Blickling Homilies of the Tenth Century, Morris 1880.</td>
</tr>
<tr>
<td>Chad</td>
<td>The Life of St. Chad: An Old English Homily, Vleeskruyer 1953.</td>
</tr>
<tr>
<td>ChronA</td>
<td>Two of the Saxon Chronicles Parallel, Plummer 1892.</td>
</tr>
<tr>
<td>CP</td>
<td>King Alfred's West-Saxon Version of Gregory's Pastoral Care, Sweet 1871.</td>
</tr>
<tr>
<td>Laws Affiae</td>
<td>Die Gesetze der Angelsachsen, Liebermann 1903.</td>
</tr>
<tr>
<td>Or</td>
<td>The Old English Orosius, Bateley 1980.</td>
</tr>
</tbody>
</table>

Appendix B: Notes on the primary sources

Old English texts are listed in alphabetical order by a (non-standard) short title, followed by the abbreviation in brackets. I have relied upon the editor's notes for each edition, and also upon Bateley (1988) and Greenfield and Calder (1986), for the information contained in this appendix. Additional secondary sources, where used, are listed as item #5 for each text.

The first four items below are specified for each text; the fifth and sixth items are included only when necessary.
Elfric's Catholic Homilies [ECHOm].

Elfric's Lives of Saints [ELS].

Alfred's Laws [Laws Af].

Bede [Bede].
1. 875-900. 2. Mercian. 3. History, translated from the Latin source. 4. Miller 1890-1898. 5. Data from the table of contents were not included in the statistics presented in this article.

Beowulf [BEO].

Blickling Homilies [BILHom].

Chad [Chad].

Chronicle, Ms. A [ChronA].

Gospels [WS].
1. Ninth century. 2. West Saxon. 3. Gospels, translated from Latin sources. 4. Skeat 1871-1887. 5. Grinberg 1967. 6. Data from this text were used only for the verb-particle statistics in Section 3.

Gregory's Dialogues [GDI].

Ine's Laws [Laws Ine].
2. Secondary Sources


