



Variation and change in Old and Middle English – on the validity of the Double Base Hypothesis*

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Abstract. This paper investigates the role of Grammar Competition (Kroch 1989) in explaining word order variation in embedded clauses of Old and Early Middle English. It is argued that heretofore unnoticed distributional properties of adverbs point to the conclusion that the finite verb does not leave the extended verbal projection (i.e., vP/VP) in embedded clauses of Old English. Therefore, we claim that in these contexts, variation in the placement of the finite verb has to be attributed to competing grammars that differ with respect to parameter settings associated with the functional head *v* (contra the Double Base Hypothesis, Pintzuk 1999). Moreover, the proposed analysis provides a principled account for the intriguing fact that a certain serialisation pattern (S-V-O-V_{fin}) is absent from the variety of ordering possibilities encountered in Old English. It is further argued that our account opens up a new perspective on a set of syntactic factors which can be shown to have a statistically significant influence on the position of the finite verb in embedded clauses.

1. Introduction

It is a well-known observation that older Germanic languages such as Old English (OE) (Pintzuk 1993, 1999; Roberts 1997), Early Middle English (EME) (Kroch and Taylor 1998, 2000; Trips 2000, 2001) and Old High German (OHG) (Lenerz 1984; Tomaselli 1995; Fuss 1998) exhibit a degree of word order variation which is not encountered in their modern descendants. The following examples illustrate this fact for embedded

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pendent of the basic word properties of the languages in question. In other words, there seems to be a general tendency in the Germanic languages that led from the existence of both OV and VO orders to the fixation of either OV or VO as a single basic word order (cf. Gerritsen 1984; Weerman 1989).

English

- (3) a. . . . that Max **read** *a book*.
 b.*. . . that Max *a book* **read**.

Dutch

- (4) a. . . . dat Max *een boek* **las**.
 b.*. . . dat Max **las** *een boek*.

German

- (5) a. . . . dass Max *ein Buch* **liest**.
 b.*. . . dass Max **liest** *ein Buch*.

This paper focuses on the (re-) ordering possibilities of the verb and its (nominal) complements in embedded clauses in OE and EME. Following Pintzuk (1999) and Kroch and Taylor (1997), we claim that the kind of word order variation encountered in this set of data cannot be generated by a single grammar and thus requires an analysis in terms of several “competing” grammars that exist side by side in the mind of the speaker (so-called Grammar Competition, cf. Kroch 1989, 1994). In contrast to these authors, however, we do not assume that the grammars in question differ in the headedness of INFL and V (the so-called Double Base Hypothesis, DBH). We will show that an analysis in terms of the DBH faces serious empirical problems since it predicts the existence of a word order option (S-V-O-V_{fin}) that cannot be found in the OE records and is apparently absent cross-linguistically. Instead, we will argue for an alternative approach that attributes word order variation in embedded clauses of OE to another set of competing grammars that differ with respect to parameter settings associated with the light verb *v* and came into existence via language contact with the Scandinavian VO languages. Our analysis is motivated by a new empirical generalization on adverb placement in OE. More specifically, we will show that there exists an asymmetry between main and embedded clauses which indicates the absence of V-to-INFL/T movement in the latter context. Therefore, variation in the placement of the finite verb cannot be attributed to parameters governing verb movement to INFL/T in embedded clauses of OE (contra Pintzuk 1999 and Kiparsky 1996). Rather, the data in question point to an analysis

that involves leftward movement of the finite verb to a lower functional head, which we identify as *v*.

The paper is organized as follows. First, section 2 illustrates the relevant empirical facts with data from OE and EME, focussing on the serialization possibilities of the verb and its nominal complements in embedded clauses. In section 3 we discuss an analysis of OE in terms of the DBH involving competing values of the Head Parameter for both V and INFL (Pintzuk 1999). Section 4 presents a new theoretical perspective on word order variation in OE, arguing that the various patterns found in embedded clauses of OE are the result of competing grammars that differ with respect to the availability of V-to-*v* movement. Section 5 contains some speculations on the historical origins of grammar competition in OE. More specifically, we will argue that language contact was an important factor that influenced the development of OE into EME. Finally, section 6 provides a discussion of several factors (including the main/embedded distinction, coordination, clause type, and type of object) that have a statistically significant influence on word order in OE and EME (cf. Pintzuk 1999, ch. 5; Trips 2001), lending further support to our analysis.

2. Variable word order in previous stages of English

2.1. *Kemenade (1987): Old English: OV + rightward movement?*

Kemenade (1987) proposes an analysis of OE which is quite similar to the standard generative approach to the modern Germanic OV-languages Dutch and German. In other words, she claims that the V2 order found in main clauses is derived from a uniform OV-base by movement of the finite verb to the head of CP (with a topicalized XP in SpecCP) whereas a finite verb in final position is taken to signalize that INFL is head-final as well. The OE example in (6) illustrates the frequent final position of the finite verb in embedded clauses introduced by a subordinating conjunction (suggesting a head-final IP). Examples (7) and (8) show that the final position of verbal particles stranded by verb fronting in main clauses and the relative position of participles and nominal complements suggest that the VP is head-final as well:

- (6) . . . þæt hie [_{PP} *gemong him*] [_{PP} *mid sibbe*] **sittan**
 . . . *that they among them with peace settle*
mosten.
must
 . . . that they must settle in peace among themselves.
 (Oros., 52.33, Kemenade 1987, p. 59)
- (7) **Pa ahof** Drihten *hie up.*
then lifted the Lord them up
 Then the Lord raised them up.
 (Blick, 157; Kemenade 1987, p. 33)
- (8) On twam þingum hæfde God [_{DP} *þæs mannes sawle*]
in two things had God the man's soul
gegodod.
endowed
 God had endowed man's soul with two things.
 (AHth, I, 20; Kemenade 1987, p. 18)

However, it is a well-known fact that the finite verb may appear in a medial position of the embedded clause as well. In standard generative accounts of examples (9) to (11) orders of this kind are analysed as the result of a set of rightward movement operations such as extraposition or verb (projection) raising that adjoin elements to the finite verb or VP/IP (for OE see Stockwell 1977; Kemenade 1987).

- (9) *Extraposition*
 . . . þæt ænig mon t_i atellan **mæge** [ealne þone demm]_i.
 . . . *that any man relate can all the misery*
 . . . that any man can relate all the misery.
 (Oros., 52.6–7; Pintzuk 1993, p. 14)
- (10) *Verb Raising*
 . . . þæt he Saul ne t_i **dorste** [ofslean]_i.
 . . . *that he Saul NEG dared murder*
 . . . that he didn't dare to murder Saul.
 (Oros., 52.33; Kemenade 1987, p. 59)

(11) *Verb Projection Raising*

- a . . . þæt he t_i **mehte** [his feorh generian]_i.
 . . . *that he could his property save*
 . . . that he could save his property.
 (Oros., 48.18; Kemenade 1987, p. 59)
- b. . . . þæt hi t_i **mihton** [swa bealdlice Godes geleafan
 . . . *that they could so boldly God's faith*
 bodian]_i.
preach
 . . . that they could preach God's faith so boldly.
 (AHth, I, 232; Kemenade 1987, p. 59)

In other words, the standard analysis of these data in terms of rightward movement processes does not allow for the possibility that the finite verb could have moved to a position to the left of its base position in embedded clauses. In the next section, however, we will see that there are a number of examples that can only be accounted for by the latter assumption.

2.2. *Arguments for leftward movement of the finite verb*

Contrary to the standard analysis, Pintzuk (1993, 1999) claims that OE embedded clauses are not uniformly INFL-final, i.e., that there is variation in the position of the finite verb which reflects variation in the underlying position of INFL. She found a significant number of examples with the finite verb in a medial position which cannot easily be accounted for by a rightward movement analysis. Evidence that not all embedded clauses are INFL-final are examples which show verbal particles in final position and the finite verb in medial position (26.9% with finite main verbs in the corpus considered by Pintzuk), as in (12):

- (12) a. . . . þæt he **wearp** þæt sweord **onweg**.
 . . . *so-that he threw that sword away*
 . . . so that he threw away the sword.
 (BEDE 38.20; Pintzuk 1999, p. 57)

- b. . . . þæt wære swide gilplic dæd gif Crist **scute**
 . . . *that would-be very proud deed if Christ casts*
 ða **adún.**
then down
 . . . that would be a very proud deed if Christ then casts himself
 down. (ÆCHom 170.21–22; Pintzuk 1999, p. 58)

Since verbal particles cannot move rightward in the modern Germanic OV-languages – cf. the German examples in (13) – the existence of stranded verbal particles in OE is taken to indicate leftward movement of the finite verb into a functional head position.

- (13) a. dass der Student das Buch nicht **wegwarf.**
that the student the book not away-threw
 that the student did not throw the book away.
 b.*dass der Student das Buch nicht **warf weg.**
that the student the book not threw away

Another piece of evidence for a head-initial IP is the final position of “light” elements such as pronouns and monosyllabic adverbs (5.7% in subordinate clauses with finite main verbs), which do not undergo post-position in the modern Germanic languages; see the German examples in (14):

- (14) a. dass der Student sie auf den Mund **küsste.**
that the student she on the mouth kissed
 that the student kissed her on the mouth.
 b.*dass der Student auf den Mund **küsste** sie.
that the student on the mouth kissed she

In contrast, the following examples show that pronouns (*him* in (15a)) and light adverbs (*þa* in (15b)) may appear to the right of the finite verb in embedded clauses of OE. Again this is interpreted as the result of verb movement to a left-headed INFL⁰.¹

¹ Similar to Old English, the following examples cast some doubt on the standard analysis of Old High German as a uniform INFL-final language since they involve final pronominal elements which can not be extraposed in the modern Germanic languages that exhibit extraposition phenomena:

- (15) a. . . . swa þæt hy **asettan** *him* upp on
 . . . *so that they transported themselves inland in*
 ænne sið.
one journey (ChronA 132.19 (1001); Pintzuk 1993, p. 17)
- b. þæt martinus **come** þa into þære byrig.
that Martin came then into the town
 that Martin then came into the town.
 (ÆLS 31.490–491; Pintzuk 1993, p. 17)

Moreover, there is even synchronic evidence from OE that the examples in (15) cannot be the result of postposition: in OE, pronouns and mono-syllabic adverbs can occur after a finite verb that is in medial position, but they never show up to the right of a finite verb that is clearly in final position (i.e., * V_{fin} -pronoun/adv.). However, if postposition of these light elements were possible at all in OE, one would expect them to appear after finite verbs in final position as well.

Let's turn to another set of OE examples that is traditionally analyzed as the result of rightward movement operations. There are embedded clauses where a pronoun intervenes between the finite auxiliary and the main verb, as in (16):

- (16) a. . . . þæt he **wolde** *hine læran*.
 . . . *that she would him teach*
 . . . that she would teach him.
 (ÆLS 25.173; Pintzuk 1999, p. 73)
- b. . . . þæt Libertinus **mihte** *ðis gedon*.
 . . . *that Libertinus might this do*
 . . . that Libertinus might do this.
 (GD (C) 19.7–8; Pintzuk 1999, p. 75)

Kemenade (1987) suggests that such examples should be treated as instances of Verb Projection Raising (VPR, cf. Haegeman and van

(i) "Extrapolation" of pronouns

- a. [. . .] dhazs uueroðheoda druhtin t_i t_j **sendida** mih_i [zi dir]_j.
 . . . *that Lord of Hosts sent me to you*
 . . . that the Lord of Hosts sent me to you. (Isidor, 236; Eggers 1964)
- b. [. . .] dhazs ih t_i t_j fora sinemu anthlutte **hneige** imu_i dheodun_j.
 . . . *that I before his face subdue him people*
 . . . that I subdue people/nations before his face. (Isidor, 152; Eggers 1964)

Riemsdijk 1986). However, Pintzuk (1999) notes that similar orders are generally excluded in those modern Germanic languages that display VPR (such as Swiss German); see (17). This is taken to show that the OE examples in (16) should not be analyzed on a par with the Swiss German sentences in (17). The latter are presumably the result of VP-internal restructuring which is not compatible with pronouns that stay *in situ*. In contrast, the OE examples are better analyzed as leftward movement of the finite verb with the pronoun left behind in its base position (but note that even in OE and EME, pronouns preferably occur in a higher position; see section 6.4).²

(17) a. ?*das er **törf** [*en is Huus bringe*].
 that he may him into-the house bring

 that he is allowed to bring him into the house

b. das er *en* **törf** [*is Huus bringe*].
 that he him may into-the house bring

(Santorini 1992, p. 613)

Pintzuk's claim that there is a clause-medial position for finite verbs and the evidence she found for it shed new light on the situation in OE. Thus, embedded clauses can be categorized as being either underlyingly INFL-final or INFL-medial, i.e., the order of the verb and its complements can be modified by leftward movement of the finite verb in INFL-medial clauses (with postposition of full phrasal elements as a further option, e.g., in Heavy NP Shift).

2.3. Evidence for a VO base?

As noted in section 2.2, according to the standard analysis, OE is taken to be a language which uniformly exhibits OV word order in the base (i.e., in the VP). Pintzuk (1999) however claims that there is evidence which contradicts this assumption. In her database, there are a small number of examples (18 in 712 relevant clauses, around 2.5%) where light elements

² An anonymous reviewer pointed out to us that the Swiss German examples in (17) raise some problems for a uniform analysis of VPR (and apparent cases of VPR) in terms of leftward movement of the finite verb. But note that we do not want to imply that VPR has to be analysed in that way. Rather, we focused on the asymmetry between (16) and (17) (with reference to the position of the pronoun) to motivate *different* analyses for the OE and Swiss German constructions in question (with no further implications for the analysis of "real" VPR). Moreover, on the basis of the theoretical assumptions laid out in section 4, the basic OV character of Swiss German is taken to indicate the general absence of (overt) verb movement out of VP.

such as verbal particles, pronouns, and monosyllabic adverbs appear after the non-finite verb. As these elements cannot undergo postposition in the modern Germanic languages, Pintzuk interpreted these examples as the early beginnings of VO base structure:

- (18) . . . he wolde **adræfan** *ut* anne æþeling.
 . . . *he would drive out a prince*
 . . . he would drive out a prince.
 (ChronB (T) 82.18–19 (755); Pintzuk 1999, p. 116)
- (19) . . . þæt he wolde **geswutelian** swa his digelnyse *eow*.
 . . . *that he would reveal so his secrets you*
 . . . that he wanted to reveal his secrets to you in such a way.
 (ÆLS (Thomas) 166; Haeberli 1999, p. 360)

Again, these data show that OE was not as restricted as assumed under the standard analysis, i.e., to an underlying OV structure only, but that both underlying OV and VO word orders were possible within VP.

2.4. *Early Middle English*

As opposed to Old English, EME consistently displays the finite verb in a medial position in embedded clauses. Moreover, within the VP, OV/VO alternation is more robustly attested than in OE, i.e., the non-finite verb precedes the object in almost 50% of all cases ($S-V_{fin}-V-O$ vs. $S-V_{fin}-O-V$). The examples from two East Midlands texts (*Vices and Virtues*, dated 1200–1225, and *The Peterborough Chronicle*, dated to the 12th century) illustrate this:³

- (20) . . . for no man scholde **excusen** *hym* to lerne it . . .
 . . . *for no man should excuse himself to learn it . . .*
 (CMVICES 4, 97.15)
- (21) . . . þæt he wile þane lichame of ure
 . . . *that he will the dead corpse of our*
eadmodnesse in to michele brihtnesse **wanden**, . . .
meekness in too much brightness alter, . . .
 (CMVICES 1, 31.350)

³ The Middle English texts we investigated here are all part of the Penn-Helsinki Parsed Corpus of Middle English (PPCME2, see <http://www.ling.upenn.edu/mideng>).

- (22) . . . þa bed se kyng heom þæt hi scoldon **cesen**
 . . . *then bade the king them that they should choose*
hem ærcebiscop to Cantwarabyrig swa hwam swa
themselves archbishop to Canterbury whoever
 hi woldon.
they wanted (CMPETER B, 43.43)
- (23) . . . þæt hi scolden hi **forlæten** be Sanctes
 . . . *that they should them release by Sanct*
 Andreas messe, . . .
Andreas's mass, . . . (CMPETER B, 51.291)

There is one text called the *Ormulum* which is of special interest here. The text was written in Lincolnshire in the 12th century by Orm, an author of Danish origins. It exhibits variation between OV and VO orders quite early and it also shows a lot of syntactic as well as non-syntactic Scandinavian influence (see Trips 2001). In the text we can find clauses which exhibit both orders:

- (24) Forr þatt I wolde bliþelig þatt all Ennglisshe lede
for that I would gladly that all English people
 wiþþ ære sholde **lisstenn** itt, wiþþ herte sholde itt
with ear should listen it, with heart should it
trowwenn, wiþþ tunge sholde **spellenn** itt, wiþþ
trust, with tongue should spell it, with
 dede sholde itt **folghenn**.
deed should it follow. (CMORM, DED.L 113.33; Trips 2001)

Table 1 shows the distribution of pronominal objects in this text. What is striking is that pronominal objects occur in postverbal position in the *Ormulum* about 50% of the time (see section 6.4 for further discussion of this observation).

Table 1. Frequency of pronominal objects in postverbal position in the *Ormulum*

Text	Pronoun position					
	pre-aux	% pre-aux	post-aux	% post-aux	post-verb	%post-verb
The Ormulum	32	17	59	32	95	51

Table 2 shows that variation between OV and VO word orders can be found in all EME texts but that the frequency of postverbal objects differs between the texts and seems to be dependent on the dialectal area where they come from (from Kroch and Taylor 1998, and Trips 2001).

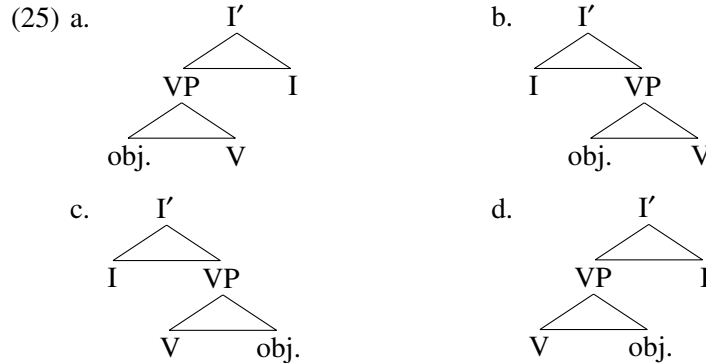
Table 2. OV and VO word orders in EME texts (from Kroch and Taylor 1998, and Trips 2001)

	OV	%	VO	%
Katherine Group	33	32	71	68
Ancrene Riwe	4	15	22	85
Vices and Virtues	24	49	25	51
Trinity Homilies	24	67	12	33
Kentish Sermons	3	14	18	86
Ormulum	95	30	222	70

3. The Double Base Hypothesis

Based on her arguments against an analysis of OE where IP and VP are uniformly head-final, Pintzuk (1993, 1999) develops an account of the word order variation found in OE in terms of the so-called Double Base Hypothesis (DBH) (cf. Santorini 1992), assuming that the encountered reordering possibilities are the result of co-existing different settings of the Head Parameter for (i) INFL and (ii) V within the usage of individual speakers. Thus, according to Pintzuk embedded clauses are not uniformly INFL-final in the base. Pintzuk argues that the variation in the position of the inflected verb in embedded clauses (see section 2) reflects variation in the underlying position of INFL, that is, INFL is either clause-final or clause-medial and uniformly triggers overt movement of the finite verb. Moreover, she claims that the word order variation found in the verb phrase is not mainly due to (rightward) movement operations but to the fact that there is synchronic competition between OV and VO order in the base. Following work by Kroch (1989, 1994), Pintzuk identifies this situation as an instance of Grammar Competition where more than one grammar is available for the speaker. More precisely, every possible combination of the values of the Head Parameter for INFL and V is associated with a separate grammar; eventually one of the grammatical options wins out. On these assumptions, the presence of the following four phrase structure options is predicted for OE:⁴

⁴ Pintzuk's analysis of OE comprises some further assumptions the most important of which are: (i) subjects remain in their base position SpecVP unless topicalized; (ii) SpecIP is assumed



As noted above, Pintzuk assumes that the relatively rich verbal inflection of OE triggers uniform V-to-I movement in all contexts. Accordingly, the following word order patterns are logically possible (schematicized; see Kiparsky 1996, p. 162):

- (26) a. I^0 right, V^0 right: $S-O-V-V_{fin}$
 þæt se biscop [_I [_{VP} [_{VP} þæt cild up aheafan] t_i]
that the bishop the child up lift
 wolde_i]
wanted
- b. I^0 left, V^0 right: $S-V_{fin}-O-V$
 þæt se biscop [_I wolde_i [_{VP} [_{VP} þæt cild up aheafan] t_i]]
- c. I^0 left, V^0 left: $S-V_{fin}-V-O$
 þæt se biscop [_I wolde_i [_{VP} t_i [_{VP} aheafan up þæt cild]]]]
- d. * I^0 right, V^0 left: $S-V-O-V_{fin}$
 *þæt se biscop [_I [_{VP} t_i [_{VP} aheafan up þæt cild]]] wolde_i]

There is, however, a gap in the word orders predicted by the DBH. As Pintzuk (1999) herself notes, option (26d) is unexpectedly not attested in the Old English data. Since there are only a limited number of OE records, one might argue that S-V-O-V_{fin} orders are absent simply by chance, that is, the order in question could actually be generated by the grammar of OE but somehow failed to be recorded in the texts handed down to us. However, evidence from a broader linguistic perspective suggests that we should not be content with this kind of explanation. It is a well-known

to be an A'-position hosting topicalized XPs; (iii) only syntactic operators (like *wh*-phrases) move to SpecCP; V-to-C is licensed only in these contexts; (iv) pronouns cliticize to the left edge of IP, giving rise to the well known V3 orders of OE.

typological generalization that the combination of a basic VO syntax with a final position of finite auxiliaries (i.e., S-V-O-INFL) is very rare if not absent across the world's languages (Steele 1975; Dryer 1992; among others).⁵ From a generative perspective, such an observation typically calls for some kind of profound explanation. Surprisingly, most approaches that recognize the issue at hand simply resort to the conjecture that the problematic order might be excluded by some principle of UG (Travis 1985; den Besten 1986; Pintzuk 1999; Kroch and Taylor 2000; Kiparsky 1996 and Hróarsdóttir 2000 are exceptions, see below).⁶ At this point, we want to stress that these considerations strongly suggest that the absence of S-V-O- V_{fin} orders in OE is not just an accidental gap (as an anonymous reviewer suspected) and that one should look for an analysis of the OE word order facts that excludes this order on principled grounds.

Recent accounts of the word order facts of OE (Roberts 1997; Hróarsdóttir 2000) analyze the absence of S-V-O- V_{fin} in terms of a theory of phrase structure (Universal Base Hypothesis, Kayne 1994) according to which projections are invariably head-initial (with the specifier universally preceding the head). Under this assumption, apparent SOV-orders are to be analyzed as the result of leftward movement of objects and other complements up to a higher functional projection (such as, for example, SpecAgroP, with the finite verb in Agro). It can be shown, however, that these approaches raise a number of problems. A first question concerns the nature of the "obligatory scrambling" movements of XPs. The triggers of these processes often remain unclear or have to be stipulated (Case for DPs, "similar" requirements for PP- and oblique complements). This is especially problematic in accounts that make use of massive leftward XP-movement (see Kayne 1998; Hróarsdóttir 2000; here, even SVO orders are the result of raising VP-internal elements to the left of VP, followed by moving the remnant VP to the left of these elements). This general

⁵ There are in fact some languages that apparently exhibit S-V-O-Aux orders. A case in point seems to be Kandoka-Lusi, a dialect of Kaliai-Kove, an Austronesian language spoken on the northern coast of Western New Britain, described by Counts (1969):

(i) ηα- βeta pater muva.
 I ask priest will
 I will ask the priest. (Counts 1969, p. 130)

However, it's not clear at all whether the auxiliary-like elements that appear in clause-final position are really verbal elements; apparently, they do not agree with the subject and show no other signs of finite inflection. Nonetheless, more research is certainly necessary to settle the status of these apparent counterexamples to the generalization in question.

⁶ See Hawkins (1990) for an analysis that attributes the lack of head-initial structures embedded in head-final structures (i.e., S-V-O-INFL) to general properties of the human parser.

conceptual concern is related to an empirical argument made by Kroch and Taylor (2000). In a quantitative study of EME, they show that not all SOV orders can be analyzed as the result of scrambling/movement of the object to SpecAgroP, i.e., some of these orders have to be analyzed as OV base orders. Kroch and Taylor demonstrate that only quantified DPs undergo regular scrambling in Early Middle English (EME). With non-quantified DPs it is a different matter: if DP-V_{fin}-Pron. is a diagnostic for scrambling, then only 5% of the preverbal scrambled objects are non-quantified DPs. However, the overall rate of OV-orders with non-quantified object DPs is much higher, namely around 30%. In other words, the few clear cases of leftward scrambling of non-quantified objects are much too rare to account for the high frequency of OV word order found in the EME texts considered by Kroch and Taylor, and thus 25% of the preverbal non-quantified DPs have to be analyzed as being in their base positions (i.e., as OV base orders).⁷

Still, we believe that a form of the Universal Base Hypothesis (UBH) constitutes an important and powerful restriction on phrase structure that can be used to explain the absence of the problematic phrase structure option (S-V-O-I). In the next section we will develop a new approach to the OE data that is based on a modified version of Kayne's original proposals, assuming that a form of the UBH holds only for functional categories.

⁷ Furthermore, it can be shown that an analysis that involves multiple leftward movement operations is in principle not restrictive enough to exclude the non-existing order S-V-O-V_{fin}. Hróarsdóttir (2000) recognizes the problem imposed by the absence of S-V-O-V_{fin} orders and excludes it in her analysis of word order variation in the Germanic languages. Nevertheless, her system allows for a set of parametrical choices that would generate the problematic order: starting from a uniform VO base, Hróarsdóttir assumes that each VP is embedded under a separate PredP that may attract a deeper embedded VP to its Spec. Furthermore, she proposes that the Germanic VO languages feature a functional projection FP higher up in the clause (to the left of AgroP). On these assumptions, VO-orders are the result of moving the object to SpecAgroP and extracting the highest VP (projected by the finite verb) to SpecFP. The problematic (S-V-O-I) grammar would involve the following parametrical options: (a) no object movement to SpecAgroP; (b) extraction of the embedded VP (i.e., PredP_{main}) hosting the non-finite main verb and the object to a position to the left of the matrix VP projected by the finite verb (i.e., to SpecPredP_{fin}); and (c) no movement of the finite remnant VP to SpecFP which is to the left of the extracted non-finite PredP_{main}. This set of parametrical choices gives rise to S-V-O-V_{fin} orders, cf. (i) (for ease of exposition, the empty heads Agro, Pred_{fin}, and Pred_{main} are left out):

(i) . . . [AgroP [PredP_{fin} [PredP_{main} [VP_{main} V_{main} object]]] [VP_{fin} V_{fin} [t_{PredP_{main}]]]]}

4. An alternative approach

At this point, we can formulate two basic criteria for an adequate analysis of OE. First, a successful theoretical approach must be liberal enough to generate the set of word order patterns found in OE. Second, we postulate that the absence of S-V-O- V_{fin} orders should be given serious consideration, that is, the analysis should be restrictive enough to exclude the non-existent word order on principled grounds.

To these ends, we basically follow Pintzuk (1999) and Kroch and Taylor (1997) and claim that the concept of Grammar Competition is necessary to explain the situation in OE and EME, that is, we believe that the idea of a single grammar that generates the word order properties illustrated above is to be rejected. Instead, the high degree of word order variation is conceived of as the result of several competing grammars. The previous section showed, however, that an instantiation of the general concept of Grammar Competition in terms of the Double Base Hypothesis (Pintzuk 1999) faces a serious problem since it predicts the existence of a word order option that is absent from the OE records. In this section, we will develop an alternative analysis of the OE data, which also employs the concept of Grammar Competition but is more restrictive than Pintzuk's approach. More specifically, we will make use of a modified version of the UBH, integrating proposals by Haider (1993, 2000) to rule out grammars generating the surface order S-V-O- V_{fin} .

Note that this approach to word order variation fits nicely into a research program that aims to eliminate optional movement operations (Chomsky 1995, 2000, 2001). Thus, apparent optionality is not treated as the result of optional movement processes within one grammar. Rather, we assume that competing internalized grammars employ obligatory movement operations to generate the variety of surface orders (see Lightfoot 1999, pp. 92ff. on this point).

4.1. *The UBH is restricted to functional categories*

In order to exclude the non-existing order S-V-O- V_{fin} we follow work by Haider (1993, 2000), Kiparsky (1996), and Vikner (2000) and postulate that lexical heads may precede or follow their complements whereas functional categories that trigger overt verb movement are uniformly head-initial (see section 4.4 for a theoretical motivation of this hypothesis).⁸

⁸ Arguments against the availability of overt rightward verb movement to a final functional head include (cf. Zwart 1993; Haider 1993, 2000; Vikner 2001; but see Sabel 2000 for a critical

Empirical arguments for this assumption include the observation that in the Germanic languages, functional elements such as complementizers and determiners uniformly take their complements on the right. Similar observations can be made cross-linguistically. In other words, there is a strong tendency for functional elements to precede their complements, i.e., it is much more common for an OV-language to have head-initial func-

review): First, particle verbs like German *uraufführen* 'to perform (or to put on a play) for the very first time' fail to undergo V-to-C. However, this should be possible after verb movement to INFL (assuming that further verb movement should in principle be possible after V-to-INFL):

- (i) *Uraufführten sie das Stück?
original-on-put.3.PL.PAST they the play?
 Did they perform the play for the first time?

Vikner (2001) notes that *uraufführen* can take on a finite form only if it occurs in sentence-final position, which leads to the conclusion that the clause-final position of finite verbs in embedded clauses is a non-moved position:

- (ii) . . . ob sie das Stück uraufführten.
 . . . *if they the play original-on-put.3.PL.PAST*
 . . . if they performed the play for the first time

Other morphologically complex verbs that behave similarly are German *preishegeln* 'to prize-bowl', *bauchreden* 'to stomach-speak', i.e., 'to ventriloquize', *bausparen* 'to building-save', i.e., 'to save with a building society', and Dutch *herinvoeren* 'to re-in-lead', i.e., 'to reintroduce', *herindelen* 'to re-in-split', i.e., 'to redivide'. The fact that several Dutch and German verbs behave in this way seem to support the assumption that these languages do not have V-to-I movement.

Second, the assumption of rightward V-to-I necessitates obligatory extraposition of sentential complements to an IP-adjoined position to derive their sentence-final position. This, however, is at odds with examples where the (VP-internal) participle is topicalized together with an extraposed complement clause (cf. Haider 1993, p. 60):

- (ii) [Gefragt, [ob ich zufrieden bin]] hat er mich nicht.
asked whether I satisfied am has he me not
 He didn't ask me whether I am satisfied.

Finally, an analysis involving rightward V-to-I falsely predicts ungrammaticality in connection with VP-adverbs that must c-command the verb. (iiia–b) illustrate the relevant property with the adverb *mehr als bloß* 'more than just'. In (iiic), the VP-adjoined adverb should not be able to c-command the finite verb *verdreifachte* 'tripled' after V-to-INFL movement. However, in contrast to (iiib), the example is perfectly well-formed (Haider 1997a, b; Vikner 2001).

- (iii) a. Dies hat den Wert mehr als bloß verdreifacht.
this has the value more than just tripled
 This has more than just tripled the value.
 b. *Dies verdreifachte den Wert mehr als bloß.
 c. weil dies den Wert mehr als bloß verdreifachte
because this the value more than just tripled
 . . . because this more than just tripled the value.

tional elements (e.g., complementizers) than for VO-languages to have head-final functional elements (see Dryer 1992). In contrast, the direction of complementation of lexical categories may vary even within a single lexical item, cf. German adjectives which may take their PP-complements either on the left or on the right:⁹

- (27) a. für den Studenten angenehm
 for the student pleasant
 b. angenehm für den Studenten
 pleasant for the student

Given this assumption, one could analyze the kind of variation encountered in OE as competition between the phrase structures in (28), which differ with respect to the value of the Head Parameter for V and the presence of overt V-to-INFL movement (cf. Kiparsky 1996):

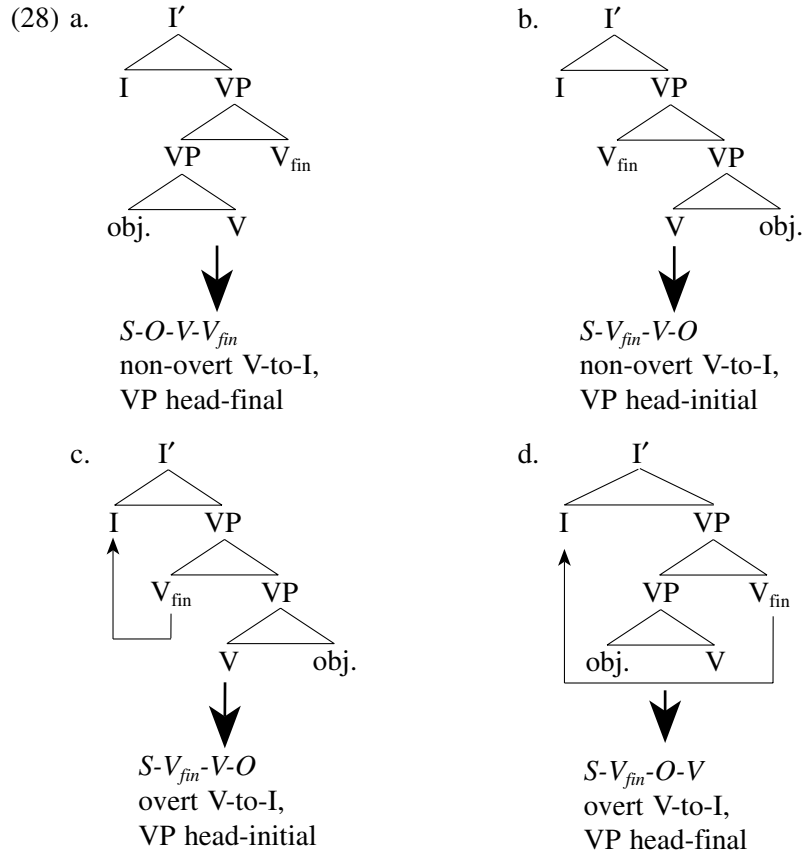
⁹ An anonymous reviewer pointed out to us that the two possible orders in lexical phrases are not equal as assumed in our paper and as shown with an AP in (27). He claims that one order is always derived, which can be seen by the different readings of clauses:

- (i) a. [_{AP} An nichts interessiert] war nur mein Onkel.
 on nothing interested was only my uncle
 My uncle was interested in nothing.
 b. * [_{AP} Interessiert an nichts] war nur mein Onkel.
 Interested in nothing was only my uncle
 My uncle was interested in “nothing”.

According to the reviewer (ib) is awkward because it has a reading according to which *nichts* is referentially interpreted. However, this seems to be true only for some speakers of German (maybe this is due to dialect differences) as we do not get different readings for (ia) and (ib). For us, both sentences are completely equal in meaning. Bayer (1996) notes that lexical phrases behave differently depending on the type of complement they have. Thus, the PP complement of an AP can occur on either side of the head A while a DP complement is not allowed in postverbal position:

- (ii) a. seinem König treu
 his king-DAT loyal
 loyal to his king
 b. *treu seinem König
 loyal his king-DAT

(Bayer 1996, p. 157)



Under this analysis, the non-existing order $S-V-O-V_{fin}$ can arise only as the result of a head-final VP projected by the finite verb that embeds a head-initial VP hosting the non-finite verb (in a grammar that lacks V-to-INFL movement). Kiparsky (1996) excludes this possibility by assuming that different settings of the Head Parameter for VP are associated with different competing grammars in OE. Therefore, nested VPs must always share the same setting of the Head Parameter, and the problematic phrase structure cannot be generated. Note that this approach attributes variation in the placement of the finite verb to the absence vs. presence of overt V-to-INFL movement in both main and embedded clauses (giving rise to V2 orders in main clauses and a medial position of the finite verb in embedded clauses). In the following section, we will demonstrate that such an analysis is not compatible with an asymmetry between main and embedded clauses that concerns the placement of adverbs and (to the best of our knowledge) has gone unnoticed in the literature up to now.

4.2. *The distribution of adverbs: evidence for different verb positions in main and embedded clauses*

In this section we will show that evidence from adverb placement suggests that leftward moved finite verbs occupy different head positions in main and embedded clauses. This asymmetry is taken to suggest that word order variation in embedded clauses of OE cannot be attributed to the structures shown in (28) above, that is, to the absence vs. presence of V-to-INFL movement. Let's first look at the syntax of finite verbs in main clauses before we turn to the relevant data.

It is by now standardly assumed that the V2 character of OE is only in some well-defined contexts (such as *wh*-questions; see below) the result of V-to-C movement. Facts such as the placement of pronouns and the general availability of V3 orders are taken to indicate that the finite verb does not move higher than INFL/Agrs in main declaratives of OE (see Cardinaletti and Roberts 1991; Kiparsky 1995; Eythórsson 1996; Kroch and Taylor 1997; Pintzuk 1999; Haerberli 1999; Fuss 2000). The examples in (29)–(31) illustrate the distributional properties of pronominal elements.¹⁰

- (29) [Æfter his gebede] *he ahof þæt child up.*
after his prayer he lifted the child up
 After his prayer, he lifted the child up.
 (AHth, II, 28; Kemenade 1987, p. 110)
- (30) *Hu begæst þu weorc þin?*
how go-about you work your
 How do you go about your work?
 (Æcoll. 22; Kemenade 1987, p. 138f.)
- (31) *Ne mæge we awritan ne mid wordum ascegan*
NEG can we write NEG with words express
ealle þa wundra.
all those wonders
 We can neither write nor express with words all those wonders.
 (ÆLS 21.242; Kiparsky 1995, p. 147)

¹⁰ But cf. Roberts (1996) for an analysis of OE which is based on the Split-C hypothesis proposed by Rizzi (1997). According to Roberts, V3 orders like (29) follow from a configuration where the finite verb moves to the lowest head of the C-system (Fin⁰), with the subject pronoun in SpecFinP and the fronted XP in the Spec of some higher functional projection (TopP or ForceP).

Pronouns always appear between the finite verb and an initial topicalized XP, giving rise to V3 orders (see Pintzuk 1999, p. 122 for some exceptions).¹¹ In contrast, pronominal elements must follow the finite verb if the clause-initial constituent is a syntactic operator such as a *wh*-phrase, a Neg-adverb, or a Neg-particle; see (30) and (31). On the assumption that the OE pronouns always occupy a fixed position on the left edge of IP, which is the typical position for weak pronominal elements in the Germanic languages, V2 and V3 are the result of different structural positions of the finite verb: finite verb and clause-initial phrase are in a spec-head relationship only if the clause-initial phrase is a syntactic operator (resulting in attraction of the finite verb due to criterial features in C). As a consequence, the finite verb must occupy a lower head position in main declaratives, presumably INFL (or, as we will assume later, T). Then, according to the analysis depicted in (28), leftward moved finite verbs occupy the same position in main and embedded clauses. In what follows, however, we will argue that this conclusion cannot hold. Based on an investigation of adverb placement in main and embedded clauses, we will show that leftward moved finite verbs target an even lower head position in embedded clauses.

A close study of the *Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English* reveals that adverbs apparently cannot intervene between pronominal subjects which mark the left edge of IP and the finite verb in main declarative clauses of OE. Note that this empirical generalization holds only for examples that display the subject pronoun in second position and a topicalized phrase in sentence initial position (if the pronoun itself is topicalized, adverbs may intervene between the pronoun and the

¹¹ Furthermore, there are V3-patterns of the type *adverb/PP-nominal subject-finite verb*, which also indicate that the grammar of OE was different from the grammars of the modern Germanic V2 languages:

- (i) a. [Æfter þeossum wordum] [se Hælend] **cwæþ** to his leornerum . . .
after these words the Savior said to his disciples
 (BLICK 135; Swan 1994, p. 241)
- b. [Æfter þæm gefeohte] [ealle Egypti] **wurdon** Iuliuse underþeowas.
after that battle all Egyptians became Julius's subjects
 (OROSIUS 128; Swan 1994, p. 241)

Note that these examples are compatible with the assumption that the finite verb does not move to C in main declaratives of OE (e.g. with the subject in SpecIP and the the clause initial constituent in SpecCP or an IP-adjoined position).

finite verb).¹² The following examples illustrate the fact that a pronominal subject in second position is adjacent to the following finite verb:

- (32) a. Mid þam haligan ele ge **scylan** þa hæþenan cild
with the holy oil you-PL should the heathen child
 mearcian on þam breoste [. . .].
mark on the breast

With the holy oil you should mark the heathen child on the breast. (AELET3, 148.5.317)

- b. Nu þu **meaht** sweotole ongitan þæt þæt is good
now you can openly understand that that is good
 self.
self

Now you can openly understand that that is the good itself. (BOETH, 83.6.168)

- c. gewislice ic **mæg** be him mare secgan.
certainly I can about him more tell

Certainly, I can tell more about him. (GREGD3, 5.20.12.56)

In embedded clauses, however, a different picture emerges. In examples that display the finite verb in a sentence medial position, adverbs may intervene between the pronominal subject and the leftward moved finite auxiliary/modal:¹³

¹² We found only three apparent counterexamples to this generalization (i.e., orders of the type *XP-pronominal subject-adverb-finite verb*) in the whole Brooklyn Corpus. All these examples involve no complex verb forms (i.e., they contain only a finite main verb) and may thus be analyzed as verb-final structures.

¹³ Koopman (1991/1993) mentions other examples where elements intervene between a pronominal subject and a (leftward moved) finite verb in embedded clauses. However, he does not really discuss these cases and does not notice the significant asymmetry between main and embedded clauses formulated in the generalizations in (34). Koopman also lists some sentences that display other elements in the position between the subject and the finite verb: pronouns as in (i) and a combination of adverbs and other XPs as in (ii).

- (i) ðæt we hie **sculon** eac milde mode lufian.
that we them must also with mild heart love
 that we must also love them with mild heart.

(CP (Cotton) 33.222.5; Koopman 1991/1993, p. 118)

- (33) a. . . . forðon þu nu **scealt** eft to lichoman
 . . . *because you now shall again to body*
 hweorfan.
turn
 . . . because you should now turn again to the body.
 (BEDE, 13.432.21.566)
- b. . . . þa hie ða **hæfdon** Cirinen þa burg
 . . . *when they then had C. the stronghold*
 ymb seten.
surround
 . . . when they had surrounded the stronghold C.
 (OROSIU, 66.17.62)
- c. . . . þæt hie þonan **mosten** to þæm sawlum
 . . . *that they thence must-PAST to the soul*
 becuman.
come
 . . . that they thence had to turn to the soul.
 (OROSIU, 102.14.191)

These empirical findings can be summarized by the following set of descriptive generalizations:

- (34) a. In main clauses, adverbs may not intervene between a subject pronoun in second position and a leftward moved finite Verb:
*XP-subject pronoun-(*adverb)-V_{fin} - [. . .]*

-
- (ii) ðæt hie hiora ða nænne dæl **noldon** on hiora
that they of them then no part not wanted into their
 agen geðiode.
own language translate
 that they then did not wish to translate any part into their own language.
 (CPLet Wæf 36), Koopman 1991/1993, p. 118)

Note that these examples do not constitute a problem for our analysis. Rather, they strengthen our point that leftward moved finite verbs must occupy a lower functional head position in embedded clauses. More specifically, the examples in (i) and especially (ii) can be taken to show that this head position is to the right of the (Spec-) position of nominal elements that underwent object shift (see Kemenade 1991/1993, p. 91 for more examples that exhibit a full nominal object between a pronominal subject and a finite verb in medial position).

- b. In embedded clauses, adverbs may intervene between a subject pronoun and a leftward moved finite Verb:

C^0 -subject pronoun-(adverb)- V_{fin} – [. . .]

On the plausible assumption that pronominal subjects in second position are always located in the same structural slot, this asymmetry suggests that the finite verb occupies a lower head position in embedded clauses. We are now in a position to interpret the main/embedded asymmetry concerning the distribution of adverbs along the following lines. In main clauses, adverbs cannot intervene between a pronominal subject and the finite verb since these two elements occupy Spec and Head of TP, respectively (cf. Fuss 2000).¹⁴ In embedded contexts, however, leftward movement of the finite verb targets a functional head further below in the clause. This head position is separated from the subject pronoun (in SpecTP) by an XP node that provides an adjunction site for adverbs. Therefore, word order variation in embedded clauses of OE cannot be attributed to competing grammars that differ with respect to the presence of overt verb movement to INFL/T (contra (28) and the analysis proposed by Kiparsky 1996). In the next section, we will develop an alternative analysis of the relevant empirical facts that is based on the assumption that in embedded clauses, the finite verb undergoes only short movement to a lower functional head position.

4.3. *Competing grammars and the [$\pm vP$] parameter*

It is a well-known observation that language change often goes hand in hand with a degree of variation which is not encountered in “stable” linguistic communities.¹⁵ In a series of publications (Kroch 1989, 1994, 2001), Anthony Kroch has developed a formal account of that observa-

¹⁴ Several authors (Kemenade 1987; Koopman 1990; Tomaselli 1995) analyse the OE subject pronouns as clitics that adjoin to the finite verb (or to the complementizer). This analysis offers no real explanation for the fact that OE subject pronouns precede the finite verb in declaratives but follow it in questions (cf. (29) vs. (30)). Furthermore, it raises some problems from a comparative point of view: (i) On the plausible assumption that the weak pronouns of OE and those of the modern Germanic V2 languages should be analysed in a uniform manner, the complete absence of V3 orders in connection with pronouns in modern Germanic is somewhat puzzling. (ii) If the OE pronouns were clitics attaching to an inflectional head, one would perhaps expect them to behave like the clitic pronouns of the Romance languages, but this is obviously not the case (e.g., they do not incorporate overtly into the verb, are stranded by verb movement to C^0 , and cannot undergo clitic climbing).

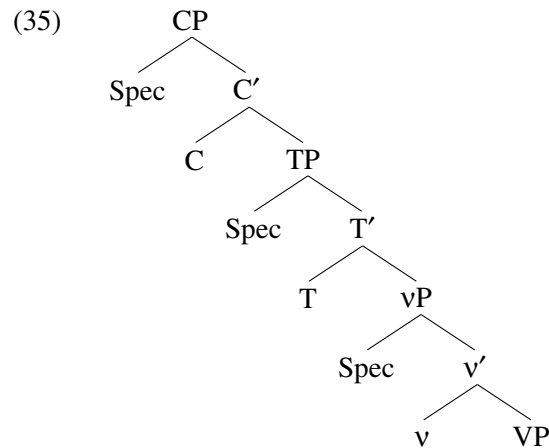
¹⁵ See Labov (1994) for the claim that linguistic variation constitutes the origin of language change.

tion which is based on the Principles and Parameters framework. Here, the notion of Grammar Competition represents the core concept of an integrated theory of language change and variation. The basic idea of Kroch's approach is that parametric change must always proceed via a stage where the speaker (or, a generation of speakers) of a language X has access to more than one internalized grammar. The grammars in question may differ in a number of parametric choices, giving rise to a wider range of linguistic variation. However, Blocking Effects imposed by UG (see Kroch 1994 for details; cf. Aronoff 1976 on Blocking Effects on morphological doublets) restrict the co-existence of grammars that differ only minimally with respect to a set of parameter doublets (i.e., co-existing "competing" values for one parameter), thereby warranting that one grammar will win against its competitors, which completes the change process in question.

In this section, we develop an analysis of OE which is based on the assumption that word order variation in embedded clauses of OE is due to the existence of competing grammars which differ minimally as to whether they license overt movement of the finite verb to a light verb *v* that closes off the series of VP-shells. Moreover, we will show in section 4.4 that this alternative approach receives further support in that it can be related to the basic word order properties (VO or OV) of the language in question. Before we start to lay out our theoretical assumptions, let's have again a cursory look at the data the analysis wants to account for. At the beginning of this section we postulated that an adequate analysis of OE must take into account two basic observations, namely the general phenomenon of word order variation and the absence of S-V-O- V_{fin} orders. Furthermore, we have seen (in section 2, basically following Pintzuk 1999) that OE exhibits the possibility of moving the finite verb to a head-initial (functional) projection in embedded clauses. Here, we claim that it is attractive from both a conceptual (elimination of optional movement operations, cf. Chomsky 1995; and Lightfoot 1999) and an empirical point of view (a degree of variation which is not encountered in modern Germanic) to associate both the presence and absence of this leftward movement operation with a separate competing grammar.

Finally, if we take the main/embedded asymmetry illustrated above in section 4.2 seriously, we have to assume that the landing site of this movement operation is a functional head different from the head position that hosts the finite verb in main clauses. The heads in question are presumably some head of the inflectional system in main clauses but a head further below in the structure of embedded clauses. In a Split-INFL structure as devised in Pollock (1989), Chomsky (1991) or Ouhalla (1991), several combinations are possible (Agrs in main clauses, T or Agro in

embedded clauses, etc.). However, if we follow Chomsky (1995, chapter 4.10) and assume a more minimalist clause structure, another possibility comes to mind. In a structure such as (35), another target for a “shorter” leftward movement of the finite verb in embedded clauses is the head of the vP that immediately dominates the series of VP shells:



In other words, we suggest that variation in the placement of the finite verb in embedded clauses of OE is to be analyzed in terms of the absence vs. presence of short verb movement within the borders of vP. In contrast, the finite verb moves further up to T (and in some contexts to C due to the presence of criterial features) in independent clauses (cf. Kroch and Taylor 1997; and Fuss 2000). This difference results in the apparently more fixed placement of the finite verb in unembedded contexts.¹⁶

¹⁶ Anthony Kroch (personal communication) pointed out to us that some statistical findings of Pintzuk (1999) might constitute a problem for an analysis that postulates different positions for leftward moved finite verbs in main (T in declaratives) and embedded clauses (v). Pintzuk (1999) observes crucial parallels in the development of a medial position of the finite verb in main and embedded clauses of OE. That is, although the developments in question show no temporal parallels (the development in main clauses took place much earlier), they can be shown to evolve at the same rate. Kroch (1989) claims that such *constant rate effects* indicate that the two surface changes in question are the result of only a single parametric change. Now, on the assumption that a single parameter is always associated with a single functional head, which is presumably T in the case at issue, our analysis seems to face a problem. However, if we assume that V-to-T movement in embedded clauses did not develop until the ME period, we can attribute the observed constant rate effect to a reanalysis in which surface strings originally derived by V-to-v were reinterpreted as the result of V-to-T movement (see footnote 32). In other words, in embedded clauses, a medial position of the finite verb evolved as the result of two different change processes in the history of English: (i) development of V-to-v; (ii) development of V-to-T. By assumption, only the latter change gave rise to the constant rate effect noticed by Pintzuk (1999).

Before we further elaborate our analysis of verb placement in terms of V-to-v movement, let's first address the question as to what prevents movement of the finite verb to T in embedded clauses. The intuition behind our analysis is to assimilate the contrast encountered in OE to the familiar main/embedded asymmetries of the modern Germanic languages. Following work by Travis (1984), and especially Bennis and Hoekstra (1989) (see Roberts and Roussou 1998; and Pesetsky and Torrego 2000 for an implementation of similar ideas in more recent frameworks), we assume that the different positions of the finite verb are the result of parameterized licensing requirements of Tense. According to Evers (1981), Tense is to be construed as an operator that needs a scope-bearing element. This function is carried out by the verb, which has to enter into a structural relation with Tense. In main clauses, Tense and the verb are related by means of a syntactic chain that is established by V-to-T as a Last Resort. In independent sentences, this operation "anchors the temporal reference of the event on the time of the utterance" (Bennis and Hoekstra 1989, p. 26). In contrast, Tense of embedded clauses is dependent on the temporal anchoring of the matrix clause (see Enç 1987). By assumption, this relation is mediated in a local fashion by the complementizer (which is selected by the matrix verb), rendering V-to-T superfluous and therefore by economy impossible.¹⁷ Therefore, children will acquire a lower position of the finite verb in embedded clauses as a default.¹⁸ In what follows, we will now focus on the properties of that lower verbal position.

Adopting the basic idea proposed in section 4.1, we assume that *v* as a functional category is uniformly head-initial. It has been argued (cf. Chomsky 1995; Collins 1997) that *v* universally has a strong [V] feature that triggers obligatory movement of the closest verb (which is the finite verb in tensed clauses). At this point, we want to suggest that languages are nevertheless not uniform with respect to the presence of this movement

¹⁷ Bennis and Hoekstra (1989) suggest that the relevant information percolates from matrix Tense to embedded Tense via the complementizer. The analysis of Travis (1984) is based on the assumption that the complementizer governs and identifies INFL properly. Both mechanisms are supposed to block V-to-INFL movement in embedded clauses. However, the technical devices of percolation and government are no longer available in more recent developments of syntactic theory (Chomsky 1995 and others). An interpretation of these ideas which is in accordance with current trends (cf. Pesetsky and Torrego 2000) can be given in terms of T-to-C movement in embedded clauses (for reasons of licensing of tense/finiteness). By assumption, the resulting complex is then spelled out as the complementizer, which is possible only if the T head in question has no other material (i.e., V) adjoined to it.

¹⁸ One could imagine that this default can be overwritten by triggers like the shape of the embedded C-system (including type of complementizer) or the presence of subjunctive morphology.

operation. Instead, we propose that grammars may differ as to whether they select the parametrical choice of a separate vP or not. Let's call this the [\pm vP] parameter.¹⁹ This amounts to saying that v is present only if it is strong, that is, if it triggers overt movement of the closest verb (cf. Chomsky 1995, p. 351 for similar considerations concerning the presence of Agro).²⁰ Furthermore, we want to propose that the realization of a separate vP is intimately connected to the basic word order properties of the language in question. Here, the intuition is that VO grammars require overt movement of the verb to v whereas the verb may stay *in situ* in OV languages such as German or Dutch (cf. Larson 1988; Bowers 1993 on the derivation of VO in English; Haider 1993, 2000; Kiparsky 1996; Vikner 2000). A somewhat more formal variant of that notion is given in (36) (see section 4.4 for more discussion).

- (36) Hypothesis: The possibility of a head-initial VP is bound to the presence of a head-initial vP that closes off the series of VP shells.

If v is absent, its functions are performed by featural content of the verb itself, giving rise to a uniform OV-structure within VP. Relevant properties of v (see Bowers 1993; Chomsky 1995; Kratzer 1996; Collins 1997) include the introduction of the external argument (in SpecvP) and assignment of accusative case. These assumptions give rise to a typology of three phrase structural options in the extended verbal projection since (36) is only a one-way implication – a VO structure in the base implies the presence of a separate vP but not the other way around. In other words, according to (36), the existence of vP does not exclude the possibility of an OV base order within VP.

Let us now turn to the analysis of the word order patterns found in OE. We suggest that the kind of word order variation characteristic of OE is

¹⁹ This parameter could equally be (re-) formulated in terms of the strength of v's [V] feature. We opted for the version according to which the presence of a separate vP is parameterized for basically two reasons. First, it enables us to maintain the assumption of a universally strong v (Chomsky 1995; Collins 1997). Second, we want to link the presence of overt V-to-v movement to the licensing of complements in a VO grammar (see section 4.4 below). On these assumptions, there is no real reason for (covert) V-to-v movement in a pure OV grammar and therefore no reason to postulate a separate vP (but see section 5 on the question which circumstances might lead to a grammar that blends basic OV properties with the presence of vP).

²⁰ Rizzi (1997) discusses some related ideas with reference to the structure of the left periphery of the clause. More specifically, he assumes that the node Top is present only if it triggers movement of a topicalized phrase.

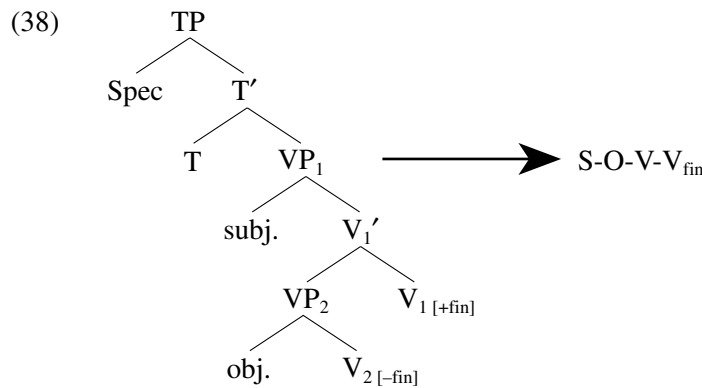
the result of competition between the full range of grammars licensed by (36), that is, competition between

- a pure OV grammar without vP;
- a grammar that combines a basic OV syntax with overt V-to-v movement; and
- a VO grammar with a separate vP (in later stages of OE).

The structures generated by these grammars are illustrated below. The tree in (38) represents the (base) structure of pure OV patterns as in (6), repeated here as (37).²¹ For all these structures, we assume that the external argument receives its theta role in the highest specifier of the (extended) verbal projection (i.e., SpecVP in OV languages and SpecvP in VO languages). Here and throughout the rest of the paper, the notion “extended verbal projection” is understood as referring to the combination of vP and VP (see section 4.4).

(37) . . . þæt hie [pp gemong him] [pp mid sibbe] **sittan**
 . . . *that they among them with peace settle*
mosten.
must

. . . that they must settle in peace among themselves.
 (OROSIU, 52.33, Kemenade 1987, p. 59)



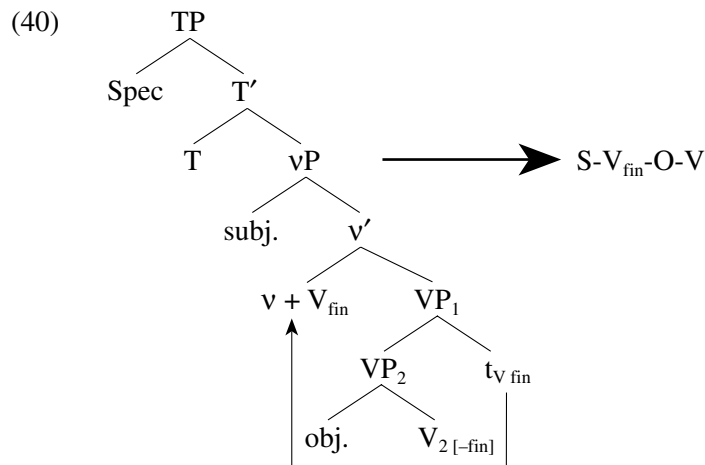
Examples such as (12a) (repeated here as (39)) which display a verbal particle in final position with the finite verb moved to the left of the complements are assigned a structure as in (40). In other words, the

²¹ Note that we concentrate in the following trees on the structure of the extended verbal projection, abstracting away from further movement operations that target, for example, SpecTP.

peculiar S-V_{fin}-O-V patterns of OE are the result of a series of head-final VP shells that is embedded under a uniformly head-initial vP that obligatorily attracts the finite verb.

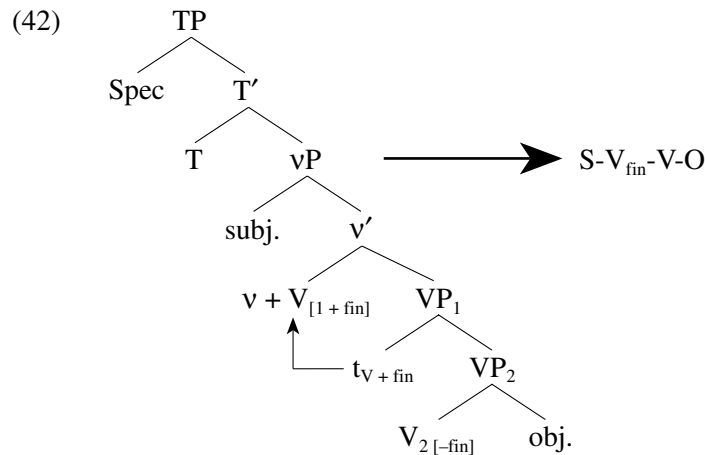
- (39) . . . þæt he **wearp**_i þæt sweord **onweg** t_i.
 . . . *so-that he threw that sword away*
 . . . so that he threw away the sword.

(BEDE 38.20; Pintzuk 1999, p. 57)

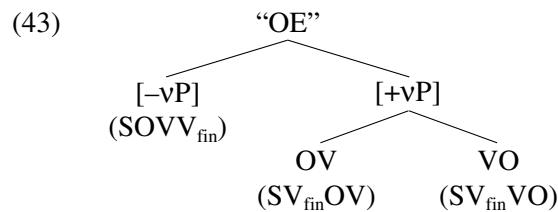


At this point, we follow Pintzuk (1999) and assume that the small number of examples such as (19), repeated as (41), that show a prosodically light element in postverbal position indicates the beginning of “pure” VO-phrasal structure, where the vP node dominates a series of head-initial VPs.

- (41) . . . þæt he **wolde geswutelian** swa his digelnyse eow.
 . . . *that he would reveal so his secrets you*
 . . . that he wanted to reveal his secrets to you in such a way.
 (ÆLS (Thomas) 166; Haeberli 1999, p. 360)



To sum up, the proposed analysis leads to the conclusion that there is no such thing as “the grammar of OE”. Rather, the unusual degree of word order variation encountered in embedded clauses of OE motivates an approach where the multitude of serialization patterns is analyzed as the result of two competing parametric choices that give rise to a set of three competing grammars. The relevant parametrical options are (i) absence vs. presence of a separate vP, affecting the placement of the finite verb; (ii) the set of grammars that involve a separate vP is subdivided according to the directionality of complementation within VP, resulting in variation in the order of non-finite verbs and their complements. Schematically, the linguistic situation found in OE can then be represented as in (43).



Importantly, on these assumptions the cross-linguistically absent order VO-V_{fin} cannot be derived: a finite verb in final position is only possible in a “pure” head-final VP that lacks a separate vP-projection. On the other hand, the presence of VO base structure always implies the presence of a head-initial v which obligatorily attracts the finite verb. In the next subsection, we demonstrate that the close connection between the setting of the Head Parameter for V and the presence of a separate vP can in fact be derived if we adopt a specific set of assumptions on the projection of phrase structure (Haider 1993, 2000).

4.4. “*OV is more basic than VO*”

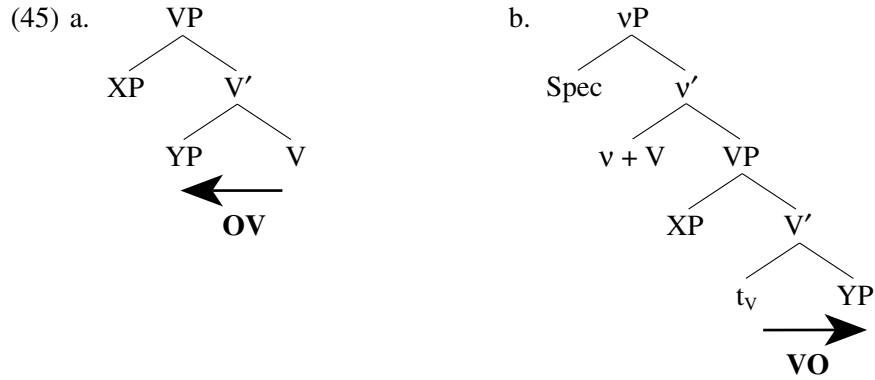
In a series of publications, Haider (1992, 1993, 2000) has developed a theory of phrase structure which is based on the following two assumptions. First, the structural (theta-) licensing of complements has to proceed in a uniform direction: to the left in OV languages and to the right in VO languages. Second, the projection of phrase structure is constrained by the axiom stated in (44) (Haider 2000, p. 47).

- (44) *Branching Constraint (BC)*
Projection-internal branching nodes on the (extended) projection line *follow* their sister node.

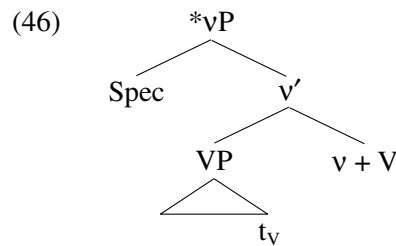
The BC requires a rigid right-branching structure for lexical projections and their functional extensions.²² Important for our purposes, these assumptions lead to basic structural differences between OV and VO languages. In OV languages, the final V head and each of its projections follow all complements to be (theta-) licensed. In other words, head-final structures fulfill the BC in an optimal way; all complements precede the verbal head and its projections and can be licensed in a uniform fashion/direction; see (45a). In a VO grammar, however, verbal heads license their arguments to the right. Consequently, the only position where a complement can be licensed directly (in accordance with the BC and the directionality of licensing) is the sister of the verbal head; see (45b). In order to license further complements, the verb has to raise into a position to the left of these elements, giving rise to a “Larsonian” layered VP. In other words, only a VO grammar requires the presence of a light verb *v* that acts as a landing site for the raised (content) verb, with the *v*P being a functional extension of VP (the arrows indicate the direction of licensing):²³

²² Haider (2000, p. 49) defines the notion *functionally extended lexical projection* as follows: “A functional projection is a functionally extended lexical projection if and only if the lexical head moves to the functional head position overtly.”

²³ At this point, some non-trivial further questions arise which we cannot address in a comprehensive way for reasons of time and space. For the time being, let us just point out two of them and add some brief comments. Of course, more has to be said on the syntax of periphrastic verb constructions. For example, it is not clear if *every* VP (e.g., the VP projected by a finite auxiliary and the VP projected by a past participle) has to be closed off by a separate *v*P or if there is just a single *v*P at the top of all VP shells. On the basis of other properties associated with the light verb (introduction of the external argument, accusative case, verbal mood and voice, etc.), one might in fact argue that there can be no more than one *v*P in a given clause. Still, the main verb presumably has to raise to the left of its complements. This could perhaps be achieved by adjunction to the finite auxiliary (which might be necessary for independent reasons, cf. Belletti 1990; Grewendorf and Sabel 1994). Alternatively, one might assume that the auxiliary shares an index with the past participle which enables the auxiliary



Now it is not only possible to derive the hypothesis in (36), but it can also be shown that the claim that functional projections are uniformly head-initial follows from these assumptions as well. In the following ill-formed structure, the VP precedes the functional head *v*. On the plausible assumption that the combination of *vP* and VP constitutes an extended verbal projection, VP represents a branching node on the extended projection line which follows its sister node in (46). This, however, is ruled out by the BC.



Note that this kind of system enables to draw the desired close connection between the directionality of licensing and the presence of a separate *vP* in a given grammar. However, that raises the question why OE should make use of a structure like (40) where a head-final VP is embedded under a separate *vP*. The next section discusses a set of influences and developments that might be responsible for that peculiar trait of the syntax of OE.

to structurally license the complement to its left and allows the participle to stay *in situ*. The licensing of external arguments constitutes another murky area. In section 4.3, we assumed that the highest specifier of the (extended) verbal projection constitutes the theta-position of the external argument. If we maintain that assumption, it follows that the introduction of the external argument is independent of the directionality of licensing. This is perhaps not an completely undesirable consequence (see Kratzer 1996 for the claim that the external argument is realized outside of the verb's licensing domain).

5. Language contact and grammar change

In this section we want to address the question as to which factors led to the development of a separate vP. We assume that at least one important activating factor of the change in question was external in nature, namely language contact with the Scandinavian languages.²⁴ It is a well-known fact that speakers of English were in close contact with Scandinavian invaders who settled down in England during the great invasions between the eighth and eleventh century. According to the Anglo-Saxon Chronicle the period of the early raids began in 787 and lasted up to about 850. After these raids the Scandinavians started more widespread plundering as well as extensive settlements in the area which was later known as the Danelaw because it was subject to the Danish law. These invasions gradually led to permanent Scandinavian settlement in the island. Today, more than 1.400 Scandinavian place names can be found in this region which are an indication of how many Scandinavians permanently stayed in Great Britain (these are place names with the endings *-by* as in *Whitby* e.g., *-thorp* as in *Althorp*, *-thwaite* as in *Applethwaite* and *-toft* as in *Brimtoft*). In medieval records of these districts a large number of Scandinavian personal names ending in *-son* as in e.g. “Johnson” has been found which is additional evidence that Scandinavians intensively settled these regions.

The relation between the two languages – Scandinavian and English – was similar to that observable in numerous parts of the world today where people speaking different languages live side by side in the same region. Thus, a study of three Modern Greek dialects (Sílli, Cappadocia, and Phárasa) spoken in Asia Minor where these dialects are surrounded by Turkish show that the Greek speakers shift to Turkish, i.e., they borrow syntactic traits such as Turkish SOV word order (see Thomason and Kaufman 1988). Such a contact situation seems to have existed between speakers of English and Scandinavian during and after the time of the invasions. Although the Scandinavians gradually adopted the English language, there were communities where Scandinavian was the main language to use in everyday life (attested for the region of Deira). In many districts in which the main language was English there were doubtlessly many newcomers who continued to use their own language at least as late as 1100

²⁴ The Scandinavian language we are talking about here is the ancestor of the modern Scandinavian languages, Old Norse. Sigurðsson (1985) and Kossuth (1978) claim that in Old Norse texts the word order in the verb phrase is unequivocally VO. Hróarsdóttir (2000) however claims that these texts exhibit mixed OV/VO word order. We assume here that Old Norse shows variation in the verb phrase but that VO word order was much more frequent than OV word order already at that time.

and a considerable number who were bilingual. The assumption that there must have been bilingualism is due to the fact that intermarriage between the two peoples was frequent and that the two languages were quite similar. The language of the Anglians resembled the language of the Scandinavians in a number of ways in which West Saxon showed divergence. All these facts were the basis for an extensive interaction between the two languages, which is evident by the large number of Scandinavian elements found in the English language.

Evidence for language contact between the two languages is non-syntactic evidence, i.e., the borrowing of Scandinavian words such as *give*, *skull*, or *egg*. But not only lexical items were borrowed from Scandinavian. There are a number of grammatical items of Scandinavian origin that can be found in northern Middle English texts such as the infinitive marker *at*, the third person plural pronouns *they*, *their* and *them*, and the extensive use of verb + preposition on the model of Old Norse.²⁵ Recently, it has been argued that contact with Scandinavian was so intense that it even affected the syntax of the English language. Thus, Kroch and Taylor (1997) claim that the loss of V2 is likely to be due to Scandinavian influence. Most recently, Kroch and Taylor (2000) and Trips (2000, 2001) show that the well-known change from OV to VO is also most likely to be attributed to this contact situation.

Our analysis now provides a theoretical explanation of the impact Scandinavian VO orders had on the OV-VO change in English. On the assumption that a VO grammar always implies the presence of a separate vP (see sections 4.3 and 4.4 above), we can reconstruct the following scenario, which first led to the development of a head-initial light verb and ultimately to the loss of OV order in the history of English: in a mixed Scandinavian/English linguistic environment, learners confronted with clear VO data (which was not analyzable as instances of rightward movement such as extraposition; see above) had to posit the existence of a separate vP since the relevant empirical facts could only be accounted for in terms of movement of the verb to the left of VP (i.e., to the left of its arguments; cf. Larson 1988 and Haider 1993 for further discussion). In other words, clear VO data acted as an unambiguous trigger or cue (cf. Lightfoot 1999) for the parametrical choice [+vP]. On the other hand, OV-orders were still robust enough in the input to trigger a head-final VP

²⁵ An EME example of this construction from the *Ormulum* is given below:

- (i) To **takenn ut** off helle wa þa gode sawless alle, . . .
 to take out of hell woe the good souls all, . . .
 (CMORM, DED.L199.46)

(with or without vP and a competing VO option in later stages of OE).²⁶ Those learners who developed a grammar with the possibility of a separate vP went on to produce the full variety of word orders described above in section 2 for embedded clauses, that is, O-V-V_{fin}, V_{fin}-O-V, and V_{fin}-V-O.

Moreover, the availability of a separate vP contributed to the ultimate loss of the OV option in later stages of English in that it facilitated reanalyses in embedded clauses that contained only a single finite main verb. First, surface VO orders with finite main verbs that were derived from an OV base could be subjected to a reanalysis as underlying VO structures:

- (47) a. [C [subj. [_v v + V_i] [_{VP} obj. t_i]]]
 b. [C [subj. [_v v + V_i] [_{VP} t_i obj.]]]

An anonymous reviewer pointed out to us that a similar scenario could be expected in verb-second clauses with finite main verbs in Modern Dutch and German. However, this is not the case. In these languages, structural ambiguity does not arise in the first place because there is no sufficient evidence for a VO grammar that competes with the OV option. Coming back to Old English, it could be argued that simple structures as in (47) are not frequent enough to strengthen the VO grammar and that a similar reanalysis is not possible if the VP contains more material. First, every structure that is analyzable in terms of a VO grammar weakens the evidence for the older OV grammar. Second, it is a well-known fact that the base order of arguments in the VP (indirect object – direct object – PP) is the same both in OV and VO languages (Barss and Lasnik 1986; Haider 1993). In other words, the presence of more lexical material within VP does not tell us anything about the base position of the moved finite verb.

In a second possible reanalysis, surface OV orders that represented the base order of elements in an OV grammar could be reinterpreted by the learner as the result of object shift in a VO grammar:²⁷

²⁶ Note that the relative ordering of objects and non-finite verbs (and verbal particles) in non-embedded contexts presumably suffices to signalize OV base order to the child – even under the assumption that evidence from embedded clauses is not visible for purposes of parameter setting (*Degree-0 Learnability*, Lightfoot 1991).

²⁷ Since there exist only few records of the language spoken by the Scandinavian invaders (mainly runic inscriptions), it is not entirely clear whether that grammar permitted object shift. Here, clear evidence is indirect in nature: it can be shown that Northern dialects that were in close contact with Scandinavian actually display object shift (cf. Trips 2001 on the *Ormulum*). Furthermore, it has been claimed that older Scandinavian languages like Old Icelandic or Old Swedish show object shift as well (see Hróarsdóttir 2000 for discussion). This can be taken to indicate that the Scandinavian invaders and settlers also had this construction at their disposal and that the emergence of object shift in the English dialects was actually the result of a language contact situation.

- (48) a. [C [subj. [_{VP} obj. V]]]
 b. [C [subj. [_{VP} obj._j [_{V'} v + V_i] [_{VP} t_i t_j]]]]

In other words, a set of examples that originally signaled an OV grammar (with or without a separate vP) were now attributable to a pure VO grammar. This development further weakened the evidence for a OV grammar in the input, which finally led to the win of the [+vP]-[VO] grammar over its competitors.

6. Factors that influence word order variation

Pintzuk (1999) identifies a set of syntactic factors that have a statistically significant influence on the position of the finite verb in OE. However, Pintzuk offers no theoretical explanation for the results of her quantitative analysis. In other words, it is not clear why these factors influence the position of the finite verb/auxiliary in the way they do. In this section, we illustrate the statistically most significant conditioning factors and attempt to develop an account of Pintzuk's empirical findings which is based on the analysis outlined in section 4. Furthermore, we will show that in EME, certain properties of the object, namely the distinctions [\pm pronominal] and [\pm quantified], constitute another factor that is relevant for the derivation of surface OV/VO orders (cf. Kroch and Taylor 2000; Trips 2001).

6.1. *Main vs. embedded clause*

Pintzuk (1999) observes that the distinction between main and subordinate clauses has a statistically significant effect on the position of the finite verb: In main clauses, the finite verb appears much more frequently in a medial position than in embedded clauses.²⁸

Recall that Pintzuk's analysis of OE combines uniform V-to-INFL movement in all types of clauses with varying directionality of INFL. On these assumptions, the word order difference between main and embedded clauses receives no explanation since it is not clear why main clauses should favor a head-initial IP.

²⁸ Pintzuk (1999) distinguishes between INFL-final and INFL-medial positions. Since this distinction is not available in our theoretical approach (see section 4), we use the more neutral terms V_{fin} or Aux to avoid confusion. Note furthermore that Pintzuk's database includes only examples with complex verb forms that involve one finite and one or more non-finite verbs.

Table 3. Effect of the main/subordinate distinction on the position of the finite verb in OE clauses (Pintzuk 1999, p. 223)

Clause type	% finite verb medial	Total
Main	84.4%	1025
Subordinate	47.0%	1197

Within our theoretical approach, the otherwise mysterious difference between main and embedded clauses of OE receives a natural explanation in terms of two different structural positions of the finite verb: the finite verb moves up to head-initial T in main clauses but stays behind in the extended verbal projection in embedded clauses. In section 4.3, we attributed this main/embedded asymmetry to different licensing strategies for Tense.

On these assumptions, the distribution of final vs. medial position of the finite verb in embedded clauses reflects free variation (47% vs. 53%) between two competing parametrical options, namely the absence vs. presence of V-to-v movement within the extended verbal projection.

Moreover, our analysis avoids another shortcoming of the standard DBH approach to OE: within an analysis that assumes uniform V-to-INFL in combination with SpecIP as a topic position (Pintzuk 1999), it remains unexplained why there is no general embedded V2 in OE. Rather, most embedded clauses display the order *Comp-subject-[. . .]-V_{fin}-[. . .]* with the subject in the “topic position”.²⁹ The absence of V2 effects receives a

²⁹ OE shows embedded V2 only in a very limited set of contexts (in contrast to “symmetric” modern V2 languages like Icelandic or Yiddish, see Kemenade 1997). Environments where embedded clauses display V2 effects include sentential complements of bridge verbs and examples with subject gaps (with impersonal verbs or due to extraction or passivization). The latter cases are perhaps better analyzed as a form of Stylistic Fronting where the empty subject position is filled by another XP (perhaps due to a phonological version of the EPP; see Holmberg 2000):

- (i) a. þonne ælce dæge beoð [manega] acennede þurh hy mihte
when each day are many-NOM given birth through his power
 on worulde.
on world
 when every day many are given birth through his power on earth.
 (AHP, VI.120; Kemenade 1997, p. 335)
- b. for þan þe on me is afunden [ætforan Gode rihtwisnyss].
because that in me is found before God justice-NOM
 because justice before God is found in me.
 (AHP, XXI, 331; Kemenade 1997, p. 335)

simple explanation in our account: the order Comp-Subj-V is dominant in embedded clauses since it reflects the base order of elements, none of which have to leave the VP in embedded clauses (except perhaps the subject).³⁰

6.2. *Parallelism in conjoined clauses*

It is a traditional observation that conjunct clauses in Old English behave more like subordinate clauses than main clauses (e.g., with respect to word order) (Traugott 1972; Mitchell 1985; Kemenade 1987). In particular, second conjuncts of conjoined main clauses are more frequently verb-final than other main clauses (similar orders can be found in Old High German; see Behaghel 1932):

³⁰ Presumably, nominal subjects are licensed in their base position within VP/vP in OE (i.e., in contrast to Modern English, there is no obligatory movement of the subject DP to SpecIP). This is indicated by the fact that VP-adverbs may intervene between a nominal subject and the finite Verb which is located in T, giving rise to the order V-Adv-Subj. in main clauses (for additional arguments and discussion see Kiparsky 1997, Kroch & Taylor 1997, Pintzuk 1999, Haeberli 1999, Fuss 2000). Furthermore, Fischer et al. (2000, p. 124f.) note a very interesting distributional difference between nominal and pronominal subjects which provides further support for the assumption that nominal subjects are licensed *in situ*: In examples with multiple sentential negation (consisting of the clitic *ne* and the negative adverb *na*) pronominal subjects appear to the left of *na* whereas nominal subjects consistently follow *na*, cf.

- (i) Ne het he us **na** leornian heofonas to wycenne.
not ordered he us not learn heavens to make
 He did not bid us learn to make the heavens.
 (ÆLS, 127; Fischer et al. 2000, p. 125)
- (ii) Nis **na** se halga gast wuniende on his gecynde swa swa he
not-is not the holy ghost existing in his nature as he
gesewen wæs.
seen was
 The Holy Ghost is not existing in his nature as he was seen.
 (ÆCHom I, 22.322.17; Fischer et al. 2000, p. 125)

Under standard assumptions concerning the structural positions of negative adverbs – either located in SpecNegP or adjoined to VP – these examples suggest that nominal subjects remain in their base position whereas pronominal elements can move to a position in the left periphery of TP.

- (49) a. *Ʒa was domne Leo papa, on Rome: ond he hine
then was lord Leo pope in Rome and he him
to cyninge **gehalgode**, ond hiene him to
to king consecrated and himacc himdat to
bicepsuna **nam**.
godson took*

Then was lord Leo pope in Rome, and he consecrated him king,
and adopted him as his godson.

(ASC (853); Kiparsky 1995, p. 148)

- b. *Her for se here from Lindnesse to Hreopedune,
Here went the army from L. to H.
ond þær wintersetl **nam**.
and there winter quarters took*

Here (this year) the army went from L. to H., and took up winter
quarters there.

(ASC (874); Kiparsky 1995, p. 148)

Pintzuk (1999) suggests that the higher rate of verb-final structure in second conjuncts is influenced by a tendency of conjoined constituents to have similar structures. Her quantitative analysis seems to support this claim: the frequency of orders with the finite verb in a medial position is significantly lower in second conjuncts when the first conjunct displays the finite verb in a final position:

Table 4. Position of the finite verb in conjoined main clauses (Pintzuk 1999, p. 226)

Position of the finite verb in first conjunct	Medial position of the finite verb in second conjunct	Total
(i) medial	87.3%	110
(ii) final	58.6%	58

We want to argue for an alternative account of Pintzuk's observations which treats the findings displayed in Table 4 as a more or less direct reflection of Grammar Competition in OE, supporting our analysis in terms of the three competing grammars identified in section 4.3.

First, however, some introductory comments on the status of the OE conjunctions are in order. In the descriptive literature on OE (cf., e.g., Mitchell 1985; Mitchell and Robinson 1992), it has been repeatedly noted that "coordinating" conjunctions such as *ond* 'and' and *ac* 'but' do not behave "properly", that is, they often induce the word order typical of subordinate clauses. A theoretical explanation for this state of affairs can

be provided by assuming that these conjunctions may come in two variants, one subordinating (in C^0) and one coordinating form (cf. Lenerz 1984, p. 158f.). In other words, the categorial status of the conjunctions was not fully settled in OE, which is connected to the general observation that the difference between hypotactic and paratactic structures was not as clear cut in the older Germanic languages as it is today.

In the light of the analysis of OE presented in section 4, these considerations have important consequences for the interpretation of the quantitative findings summarized in Table 4. Let's first turn to case (i), where it is shown that 87.3% of the second conjuncts display the finite verb in a medial position if the first conjunct exhibits this order as well. However, given the ambiguous status of the OE conjunctions, it is highly questionable that all of these 110 clauses are actually derived by the V-to-T movement typical of main clauses. Rather, one cannot escape the conclusion that a number of these second conjuncts are in fact the result of a "subordinating" conjunction in combination with "short" movement of the finite verb to *v*.

This becomes even more evident if we turn to case (ii) in Table 4. Here, Pintzuk's relevant observation is that verb-final order in the first conjunct has a significant influence on the word order properties of the second conjunct.³¹ Recall that according to the assumptions made in section 4.3 and 4.4, main clauses with the finite verb in absolute final position can only be the result of a pure OV-grammar without a separate *vP*. Now, under the plausible assumption that a speaker cannot switch from one grammar to another in mid-sentence, a [-*vP*] grammar has to be used for the second conjunct if it is used in the first conjunct. Therefore, in contrast to case (i) discussed above, a medial position of the finite verb can only be the result of a real coordination structure with V-to-T movement in the second conjunct; if the conjunction is interpreted as a subordinator, the finite verb must stay in its base position since there simply is no light verb it can move to. In other words, given a verb-final first conjunct, there is no further possibility available to derive a medial position of the finite verb by V-to-*v* movement in the second conjunct. This explains the lower frequency of this word order option in exactly these contexts. Note that this explanation follows rather naturally from the theoretical approach proposed in section 4, thereby lending further support to our analysis of OE in terms of three competing grammars that differ with respect to the presence of a separate *vP* and the headedness of *VP*.

³¹ Note that most older Germanic languages exhibit the option of verb-final main clauses. On the basis of the theory of Tense identification presented in section 4.3, one might speculate that this peculiar property is perhaps the result of a discourse-linked identification of Tense.

6.3. *Type of subordinate clause*

According to Pintzuk (1999), clause type is another factor that has a statistically significant influence on word order in embedded clauses. If we subdivide the set of subordinate clauses according to clause type, it seems that [+*wh*] subordinate clauses (i.e., indirect questions and relative clauses) disfavor a medial position of the finite verb while affirmative sentential complements apparently (slightly) favor it:

Table 5. Type of subordinate clause and position of Aux (Pintzuk 1999, p. 228)

Clause type	% Aux-medial	Total
[+ <i>wh</i>] clauses	29.1%	333
Sentential complements	62.6%	286
All other subordinate clauses	49.5%	578

It seems that the choice of a grammar with a separate vP is influenced by a certain property of [+*wh*] clauses that disfavors this clause structural option. The basic idea here is that the selection of a grammar with a separate vP is influenced by the morphological content of the finite verb. Then, the effect of clause type on the position of the verb can be attributed to the presence of stronger verbal morphology (subjunctive) in [+*wh*] clauses, in the sense that this type of inflection disfavors the projection of a vP (and therefore a medial position of the finite verb resulting from V-to-v movement). That approach predicts that the availability of a separate vP is connected to the loss of distinctive morphological features for mood/aspect on the finite verb.³² Here, it is perhaps possible to detect

³² According to Kiparsky (1997), the loss of morphological case distinctions required the licensing of nominal arguments to proceed via Spec-Head relations exclusively. This presumably led to the development of the strong EPP feature in T (cf. Fuss 2000) and, similarly, to obligatory object shift for nominal complements, which is bound to the presence of a separate vP (cf. Chomsky 2001). On these assumptions, a new perspective on the history of V-to-T in English becomes available: the fact that learners continued to be confronted with a major number of SVO orders gave rise to a “catastrophic” reanalysis, which is exemplified by the following structures:

- (i) . . . [_{vP} Subject [_v + V_i [_{vP} (t_i) Object (t_i)]]] was reanalyzed as
 (ii) . . . [_{TP} Subject_k [T + [V + V_i [_{vP} Object_j [_{vP} t_k [t_i [_{vP} (t_v) t_j (t_v)]]]]]]]

In other words, we propose that OE exhibited V-to-T only in root clauses whereas in embedded clauses, a medial position of the finite verb was the result of V-to-v movement. In EME, a reanalysis of the type depicted in (i) and (ii) led to a strong EPP and overt V-to-v-to-T movement in all clauses. This operation was lost in later stages of ME (according to standard assumptions including the rise of *do*-support in the late ME period; cf. Lightfoot 1999).

some systematic connections with the grammaticalization of the OE modal verbs as markers of verbal modality. Roberts (1985) argues that due to the loss of distinctive subjunctive morphology by phonological reduction processes, a new way of expressing modality came into existence: (epistemic) modals were grammaticalized as markers of verbal modality, i.e., the subjunctive/indicative distinction. The grammaticalization process in question was facilitated by the well-known special properties of the OE modal verbs that set them apart from other verb classes.³³

Based on the theoretical approach developed in section 4, we postulate that this development could only arise in a grammar featuring a functional *v* head which was lexicalized by the OE modal verbs in the course of the grammaticalization process (on the assumption that the subjunctive/indicative distinction is a function of *v*). Similar to subjunctive morphology, (epistemic) modals entered the lexicon as “clausal operators” that are associated with functional categories and therefore cannot assign θ -roles (cf. Roberts 1985).³⁴ The reanalyzed elements existed over quite a long period side by side with the “original” lexical entries that exhibited more main verb characteristics concerning θ -role assignment and syntactic distribution.

To sum up, we reconstructed the influence of clause type on the position of the finite verb as an effect of the implementation of the indicative/subjunctive distinction. Again, variation in word order properties can be attributed to the existence of different competing grammars: the realization of verbal modality by reanalyzed modal verbs necessitates the projection of a separate *vP* whereas the presence of distinctive subjunctive morphology is a characteristic of the older *OV* grammar.

³³ Even before their reanalysis, modals subcategorized for another *VP*. This structure could easily be reanalyzed as a periphrastic subjunctive with the modal as a functional head. Furthermore, the OE modals were characterized by special morphological properties. They belonged to the class of Proto-Germanic preterit-presents which are characterized by a defective inflectional paradigm. Therefore, morphological evidence was not strong enough to prevent an analysis as a functional category. Finally, the lexical semantics of many preterit-presents made them a good candidate for the reanalysis in question since they already included a notion of ‘modality’ (cf. Roberts 1985).

³⁴ The assumption that the reanalysis of modals as *v*-heads led to the loss of their capacity to assign θ -roles seems to be at odds with the idea that *v* assigns the θ -role of the external argument (see Kratzer 1996; Collins 1997, p. 15). However, no such problem arises if we stick to the standard idea that all verbal θ -roles are assigned by *V*. On this assumption, *vP* provides only the structural configuration for assigning the agent θ -role via Spec-Head agreement of *V* and the external argument in a *VO* grammar (for discussion see Grewendorf, to appear).

6.4. *The distribution of nominal and pronominal objects in Early Middle English*

There is evidence in texts of Early Middle English that word order variation is not only due to different positions of the finite verb but also to the type of object. This observation can also be made for Old English.

It has often been noted that pronominal objects behave differently from full object DPs, due to the special properties of the former type of objects. The example in (50) shows that full object DPs occur in postverbal position quite frequently (this is an example of a double-object construction):

- (50) . . . gif ic **sceole cyþan** þinne tocyme
 . . . if I had-to make-known your coming-ACC
helwarum.
inhabitants-of-hell-DAT
 . . . if I had to make known your coming to the inhabitants of
 hell. (Haeberli 1999, p. 360)

Generally, it is assumed that whenever a full object DP occurs to the left of an adverb which is taken to mark the left periphery of VP, the object has moved out of the VP. The following examples from OE illustrate this:

- (51) & æghwhæþer oþerne oftrædlice **utdræfde.**
and every-one other frequently outdrove
 and each of them frequently drove the other away.
 (Haeberli 1999, p. 356)
- (52) & he monig mynster & circian in ðæm
and he many monasteries and churches in that
 londe **getimbrede.**
land built
 and he built many monasteries and churches in that land.
 (Haeberli 1999, p. 357)

Note that in (51) a specific object appears to the left of the adverbial whereas in (52) it is a non-specific object that has undergone scrambling. This implies that both types of full object DPs, specific and non-specific, occur in preverbal position due to scrambling.

The behavior of pronominal objects is different in that they can occur in a number of positions in the clause where full object DPs cannot occur. Thus, pronominal objects occur a) immediately to the right of the complementizer in embedded clauses as shown in (53); b) immediately

preceding the finite verb in main clauses as in (54); in clauses where the first constituent is a *wh*-element, a negative element, or *þa* immediately after the finite verb as in (55):

- (53) . . . þæt *him* his fiend **wæren** *æfterfylgende*.
 . . . *that him his enemies were following*
 . . . that his enemies were chasing him.
 (Kemenade 1987, p. 113)
- (54) God *him* **worhte** þa reaf of fellum.
God them wrought then garments of skin
 Then God made garments of skin for them.
 (Kemenade 1987, p. 114)
- (55) Þa **sticode** *him* mon þa eagan **ut**.
Then stuck him someone the eyes out
 Then his eyes were gouged out.
 (Kemenade 1987, p. 114)

Further, pronominal objects occur to the left of the main verb as shown in (56), or to the right of the main verb as in (57) (example (2) from above):

- (56) Hwi wolde God swa lytles þinges *him* **forwyrnan**.
Why would God such small things him deny
 Why would God deny him such small things?
 (Kemenade 1987, p. 112)
- (57) . . . þæt he wolde **geswutelian** swa his digelnyse *eow*.
 . . . *that he would reveal so his secrets you*
 . . . that he wanted to reveal his secrets to you in such a way.
 (ÆLS (Thomas) 166; Haeberli 1999, p. 360)

The OE data show that the orders object-verb as well as verb-object can be underlying as well as derived, as there is evidence for leftward movement of objects, full DPs as well as pronouns.

This observation also holds for EME. Kroch and Taylor (2000) and Trips (2001) have shown that the OV/VO word order variation is due not only to different positions of the finite verb but also to the type of object. First, both full object DPs and pronominal objects can move leftward, which is evident from the fact that they occur to the left of adverbs:

- (58) . . . þet heo ne schal þene stude neauer mare
 . . . *that she NEG shall the abode never more*
changin bute for nede ane.
change but for need alone
 . . . that shall never again change her abode except when
 necessary. (Kroch and Taylor 2000, p. 17)
- (59) . . . þach god ne cunne him neauer þonc of his
 . . . *though God NEG can him never thank of his*
 sonde.
sending
 . . . though God can never thank him for sending it.
 (Kroch and Taylor 2000, p. 17)

Moreover, pronominal objects occur in postverbal position about 50% of the time (see section 2.4):

- (60) & unnc birrþ biddenn Godd tatt he forrgife
and we-two behoves-to bid God that he forgive
 hemm here sinne;
them their sins
 (CMORM, DED.L83.23; Trips 2001, p. 256)
- (61) . . . þurh þatt he wolde tolenn dæð wiþputenn
 . . . *through that he would permit death without*
 hise wrihte & turnenn menn till Cristenndom . . .
his fault and turn men till Christendom . . .
 & fullhtenn hemm & clennessenn hemm . . .
and baptize them and cleanse them . . .
 (CMORM, I, 148.1212; Trips 2001, p. 130)

Further, there is evidence that pronominal objects undergo leftward movement as they occur in a position immediately preceding the auxiliary:

- (62) . . . þatt menn himm sholldenn fosstrenn.
 . . . *that men him should nourish*
 (CMORM, I, 267.2175; Trips 2001, p. 254)
- (63) forrþi þatt he Pe wolde gifenn bisne, . . .
forthi that he thee wanted-to give example . . .
 (CMORM, I, 129.1103; Trips 2001, p. 254)

- (64) . . . hu ge *ham* **schulen** leoueliche learen.
 . . . *how you them shall lovingly teach*
 (CMANCRIW, I.52.125; Trips 2001, p. 246)
- (65) ouer michel þing ic ðe **scal** setten.
over much things I thee shall set
 (CMVICES, 1, 17.190; Trips 2001, p. 246)

Table 6 shows that pronominal objects move to the left with a much higher frequency than nominal objects, i.e., the variation between OV and VO orders is at least partly due to the properties of pronouns (see examples above):

Table 6. Comparison of pronominal objects and full object DPs with respect to the frequency of leftward movement in double-object constructions

	The Ormulum			
	Pronominal objects		Full object DPs	
	Preverbal	Postverbal	Preverbal	Postverbal
Main cl.	18	69	5	92
Embedded cl.	21	39	2	55
Total	39	108	7	147
Total %	27	73	5	95

If we focus on full DPs only, we find a further difference between types of objects, namely that quantified and non-quantified object DPs behave differently: quantified object DPs appear more frequently in preverbal position than non-quantified DPs do. According to Kroch and Taylor (2000) the difference between the rate of preverbal quantified objects and preverbal non-quantified objects is due to the fact that the former type of nominal objects scramble more frequently than the latter type. The examples below show that both types of objects can occur in a preverbal and postverbal position. The comparison of Tables 7 and 8 however shows that quantified DPs occur in a position preceding the main verb more often than non-quantified DPs do.

Non-quantified DPs:

- (66) & Godess enngell Gabriæl **gaff** hire *anndswere*.
and God's angel Gabriel gave her answer
 (CMORM, I, 83.733; Trips 2001, p. 256)

- (67) & swa we mughenn alle imæn þe lambess
and so we may all in common the lambs
 bisne **follghenn**;
example follow

(CMORM, I, 269.2193; Trips 2001, p. 257)

Quantified DPs:

- (68) & ec icc habbe **shæwedd** guw summ del off
and also I have showed you some part of
their wikenn.
 þeggre duty (CMORM, I, 36.395; Trips 2001, p. 257)

- (69) & off Goddspell icc wile guw get summ del mare
and of gospel I want you yet some part more
shæwenn;
show (CMORM, PREF.L81.91; Trips 2001, p. 257)

Table 7. Distribution of non-quantified DPs in the Ormulum (from Trips 2001, p. 258)

	Non-quantified DPs			
	Pre-aux	Post-aux	Post-verb	% post-aux
Ormulum				
Main	5	16	42	25
Subordinate	22	33	84	24
Total	27	49	126	24

Table 8. Distribution of quantified DPs in the Ormulum (from Trips 2001, p. 258)

	Quantified DPs			
	Pre-aux	Post-aux	Post-verb	% post-aux
Ormulum				
Main	5	6	14	24
Subordinate	1	10	13	42
Total	6	16	27	33

The frequency of preverbal (“post-aux”) non-quantified full object DPs shows that base generated OV phrase structure is still robustly attested in the EME text under consideration (contra an analysis in terms of a uniform VO base, cf. Roberts 1997; Hróarsdóttir 2000). Moreover, the fact that

quantified and pronominal objects occur more frequently in preverbal position than non-quantified objects suggests that a number of surface OV orders are the result of scrambling from a VO base.

7. Summary and conclusions

In this article, we have presented a new account of word order variation in OE. Our analysis is based on the assumption that the close connection between language variation and language change is to be analyzed as the result of several competing grammars which generate the striking multitude of serialization patterns (following Kroch 1989). However, in contrast to previous work that pursues this line of thought (e.g., Pintzuk 1999), we have argued that the variant positions of the finite verb in embedded clauses of OE should not be analyzed in terms of different orientations of INFL. Instead, the variation in question is attributed to synchronic competition between grammars that differ with respect to the presence of a head-initial light verb *v* that closes off the series of VP shells (and attracts the finite verb if present). This approach is motivated by two empirical observations. First, we have postulated that an adequate analysis of OE should take into consideration the fact that S-V-O-V_{fin} orders do not show up in the OE records (and are apparently absent cross-linguistically). Second, we have presented new empirical evidence from the placement of adverbs which indicates that leftward moved finite verbs occupy a lower head position in embedded clauses. Our analysis accounts for these findings by assuming (i) that the Universal Base Hypothesis is restricted to functional categories and (ii) that the source of variation is to be located within the borders of the extended verbal projection, which we identify as *vP* or *VP* (dependent on the choice of grammar). Accordingly, a clause-final position of the finite verb is associated with a grammar that lacks a separate *vP* whereas the presence of a functional light verb triggers leftward movement of the finite verb to a medial position. On these assumptions, the word order patterns observed in OE can be derived without generating the unwanted option S-V-O-V_{fin}. Furthermore, it was shown that important parts of this outcome follow from a set of assumptions on phrase structure (most notably the Branching Constraint, Haider 2000) that tie VO base order to the presence of a separate *vP* and exclude head-final functional projections on principled grounds.

We then addressed the question of the historical origin of grammar competition in OE. Here, we claimed that the development of a grammar that featured a separate *vP* was the result of language contact with the

Scandinavian VO-languages, following the idea that the confrontation with unambiguous VO orders triggered the acquisition of a grammar with leftward movement of the content verb to a functional light verb.

Next, we saw that our analysis receives further support in that it allows for an explanation of a set of statistical findings by Pintzuk (1999). More specifically, we showed that asymmetries between main and embedded clauses and parallelism effects in conjoined clauses can be successfully accounted for if we assume that OE consisted of competing grammars that differed with respect to the parameter $[\pm vP]$. Furthermore, the influence of clause type (i.e., $[\pm wh]$) on word order was reconstructed as the result of competing realizations of verbal modality. Again, the same set of grammars is involved, assuming that different implementations of subjunctive mood (periphrastic vs. morphological) are intimately connected to the realization of a separate vP.

Finally, considering data from EME, we argued that scrambling of pronominal and full objects constitutes a further source of surface OV orders. This suggests that some of the OV orders encountered in OE are possibly the result of leftward movement of nominal complements as well.

Appendix

Names of text files from *The Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English*

AELET3	Ælfric's first and second letters to Wulstan
BOETH	King Alfred's Boethius
GREGD3	Gregory the Great, Dialogues
BEDE	Bede's Ecclesiastical History
OROSIU	King Alfred's Orosius, Part I

Names of text files from *The Penn-Helsinki Parsed Corpus of Middle English (PPCME2)*

CMANCRIW	The Ancrene Riwe
CMORM	The Ormulum
CMPIETERB	The Peterborough Chronicle
CMVICES1	Vices and Virtues
CMVICES4	The Book of Vices and Virtues

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