Clause Type Asymmetries in Old English and the Syntax of Verb Movement

Eric Haeberli*

Old English (OE) exhibits main clause / subordinate clause word order asymmetries comparable to those found in modern West Germanic languages such as Dutch or German. Finite verbs generally occur near the beginning of a main clause whereas they tend to occur towards the end of subordinate clauses. Furthermore (in contrast to modern West Germanic), it has been observed that conjoined main clauses often have subordinate clause word order in OE. This chapter addresses the question of how these clause type asymmetries can be accounted for. Section 1 presents the main word order properties of OE and some quantitative data concerning the distribution of finite verbs in different types of clauses. Recent proposals for the structural analysis of the OE word order patterns are presented in section 2, and some problems for the treatment of subordinate clauses are discussed. Section 3 presents a solution to these problems in terms of Bobaljik and Thráinsson's (1998) analysis of verb movement in modern Germanic. The remainder of the paper then explores some consequences of this approach with respect to the analysis of conjoined clauses and the development of verb movement in the history of English.

1 The distribution of finite verbs in Old English

As often observed in the literature, one of the characteristic properties of OE word order is the variation in the distribution of finite verbs in different types of clauses (cf. e.g. Bacquet 1962, Mitchell 1985, Traugott 1992, van Kemenade 1987). In main clauses, the verb tends to occur in a position near the beginning of the clause. This leads to frequent Verb Second (V2) orders as shown in (1).[1]

(1) a. [He] *com* on Breotone mid fyrde. (SV…) (Bede 1:5.32.16.257)
　　　　　He　came to Britain　with army
　　 b. [Ðas gifu] *sealde* seo ceasterwaru on Tharsum Apollonio þam tiriscan. (OV…)
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(ApT:10.16.181)
　　　　　This gift　gave　the citizens　　in Tharsus　Apollonius the　Tyrian
　　　　　'The citizens of Tharsus gave this gift to A. the Tyrian.'
　　 c. And [egeslice] *spæc* Gregorius be　ðam … (AdvV…)　(Whom 10c:48.865)
　　　　　And　sternly　　spoke Gregorius about that
　　　　　'And Gregorius spoke sternly about that …'

In subordinate clauses, however, there is a tendency for the verb to be placed towards the end of the clause. This is illustrated by the following clauses (from van Kemenade 1987:16/19).

(2) a. þæt ic þas boc　of　　Ledenum　gereorde to Engliscre spræce *awende*
　　　　　　　　　　　　　　　　　　　　　　　　　　(ÆCHom I [Pref]:174.48.5)
　　　　　that I　this　book from Latin　　language to English　tongue　translate
　　　　　'… that I translate this book from Latin to English.'
　　 b. þæt Darius　hie　mid gefeohte secan *wolde* (Or 2:5.45.30.867)
　　　　　that Darius them for　battle　　visit　wanted
　　　　　'… that Darius wanted to seek them out for a battle.'

Finally, with respect to conjoined clauses, and in particular second conjuncts introduced by conjunctions, it has been observed that they "tend to be verb-final, like subordinate clauses"

(Traugott 1992:272). Illustrations for this observation are given in (3) where the finite verbs in the first conjunct occur in second position and in the second conjunct in final position.

(3) a. [Þa tungel witgan of   eastdæle] *cuomon* to þon þæt hie   Crist   weorþedon
The star   prophets from East   came   to that that they Christ honour
& [þa cild   on Bethlem] [ofslægene] *wærun* …   (ChronA:2.1.59/60)
and the children in Bethlehem   killed   were
'The astrologers from the East came to honour Christ and the children in Bethlehem were killed…'
   b. … [ða] *aras* he hal   &   gesund. Ond [he] [for his hælo] [eft] [Dryhtne]
then arose he uninjured and healthy. And he   for his health   again God
[þonc] [secgende] *wæs* …   (Bede 4:32.380.16.3796/7)
thank   saying   was
'Then he got up uninjured. And he repeatedly thanked God for his health.'
   c. [Sume hy] *forleton* þæt unalyfede þing. And [mid clænnysse] [Criste]
Some they gave-up   that unlawful thing. And with purity   Christ
þenedon …   (Ælet 2 [Wulfstan 1]:79.124/5)
served
'Some gave that unlawful thing up and served Christ with purity.'

As is well known, the contrasts shown in (1) to (3) are tendencies rather than systematic differences among clause types. Thus, main clauses can occasionally have verb-final word order (cf. e.g. Koopman 1995), or in subordinate clauses various constituents can follow the finite verb (cf. e.g. van Kemenade 1987, Pintzuk 1999). Let us therefore briefly examine how strong the word order tendencies in (1) to (3) are in quantitative terms. As a test case, I will consider clauses like (2b), (3a) and (3b) which contain a finite verb and a non-finite verb. In terms of the observations made above, we would expect finite verbs to generally precede non-finite verbs in main clauses, whereas we should find frequent occurrences of the inverted order (non-finite – finite) in subordinate and conjoined main clauses. Table 1 shows the relevant quantitative data for a sample of texts from *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (Taylor et al. 2003) (Aux = finite verb; V = non-finite verb; MC = non-conjoined declarative main clause; +MC = declarative main clause introduced by a conjunction; SC = subordinate clause).[2]

TABLE 1   The order of finite auxiliaries and non-finite main verbs in different texts and clause types in OE

	MC AuxV	MC VAux	+MC AuxV	+MC VAux	SC AuxV	SC VAux
Bede	409	38	140	76	217	449
		8.5%		**35.2%**		**67.4%**
Boethius	367	6	159	2	267	248
		1.6%		**1.2%**		**48.2%**
Cura Pastoralis	463	2	188	1	545	313
		0.4%		**0.5%**		**36.5%**
Chronicle A	67	2	65	6	23	41
		2.9%		**8.5%**		**64.1%**
Ælfric's Letters	218	0	137	2	109	65
		0.0%		**1.4%**		**37.4%**
Ælfric's Lives of Saints	692	2	338	10	404	216
		0.3%		**2.9%**		**34.8%**
Apollonius of Tyre	35	0	22	2	22	19
		0.0%		**6.7%**		**46.3%**
Wulfstan's Homilies	102	1	150	4	105	87
		1.0%		**2.6%**		**45.3%**
TOTAL	2353	51	1199	103	1692	1438
		2.1%		**7.9%**		**45.9%**

An important observation based on Table 1 is that conjoined main clauses and subordinate clauses do not have the same status with respect to the distribution of finite verbs. While it is correct that in general the frequency of the order 'non-finite – finite' is higher in conjoined main clauses than in non-conjoined main clauses (four times higher in the total percentage), there is also a substantial difference between conjoined main clauses and subordinate clauses in that the latter have a much higher frequency of 'non-finite – finite' orders (six times higher). Thus, we obtain a scale concerning the occurrence of finite verbs in final or near-final position in OE clauses with subordinate clauses having such orders more frequently than conjoined main clauses and conjoined main clauses having such orders more frequently than non-conjoined main clauses. This scale is confirmed if we look at other word order patterns. For example, in clauses containing an overt (pronominal or non-pronominal) subject which precedes both a finite main verb and a full DP object, the orders SOV and SVO are distributed as follows in the texts examined in Table 1: (a) subordinate clauses: 57.1% SOV – 42.9% SVO; (b) conjoined main clauses: 36.1% SOV – 63.9% SVO; (c) non-conjoined main clauses: 15.0% SOV – 85.0% SVO. With respect to these figures, conjoined main clauses fall exactly between the other clause types (21% difference to both of them).

In summary, we can observe a three-way distinction among clause types with respect to the distribution of finite verbs in OE: (i) subordinate clauses where the finite verb frequently occurs in final or near-final position; (ii) conjoined main clauses where such word orders occur regularly but less frequently; (iii) main clauses where such word orders are even less frequent. The question that arises then is how these differences between the different clause types can be accounted for.

2   The structural analysis of Old English

The main/subordinate asymmetry shown in (1) and (2) is reminiscent of the one found in the modern West Germanic SOV/Verb Second (V2) languages like Dutch or German. A first possibility would therefore be to analyze OE along the lines of what has been proposed for Dutch or German (cf. van Kemenade 1987). This would mean that OE has systematic verb movement to C and XP movement to [Spec, CP] in main clauses and that it has head-final projections below C (I and V) which give rise to verb-final word orders with finite verbs in subordinate clauses because the presence of a complementizer blocks verb movement to C.

However, it has been shown that OE has certain syntactic properties which are problematic for a parallel treatment of Dutch/German and OE. First, the V2 syntax in main clauses is less consistent in OE than in Dutch/German. For example, in contexts where a non-subject constituent is fronted, subject pronouns systematically occur between the fronted constituent and the finite verb, thereby giving rise to Verb Third (V3) (cf. e.g. Fourquet 1938, van Kemenade 1987, Pintzuk 1999). In the same context, we can also frequently find V3 with full DP subjects although V2 is the majority pattern here (cf. Koopman 1998, Haeberli 2002a). Systematic subject-verb inversion (i.e. rigid V2) with pronoun and full DP subjects occurs only in contexts that have been referred to as operator fronting contexts (i.e. questions or negation, but also with less operator-like fronted elements such as *þa* or *þonne* ('then')). Thus, the V2 syntax of OE is substantially different from the one found in Dutch or German, and the standard V-to-C analysis of main clauses proposed for these languages cannot satisfactorily account for the situation in OE. Subordinate clauses raise additional problems for the extension of the analysis of modern West Germanic to OE. As shown by Pintzuk (1993, 1999) and Haeberli and Haegeman (1995), aspects of the syntax of particles, pronouns and negative constituents suggest that the structure below C cannot be analyzed uniformly in terms of head-final projections, contrary to what has traditionally been proposed for modern West Germanic. Instead, the projection hosting the finite verb in subordinate clauses seems to be at least optionally head-initial. Finally, another problem that a parallel treatment of OE and Dutch/German raises is the behavior of conjoined main clauses in OE. Given that conjoined main clauses do not exhibit verb-final word order in modern West Germanic, it remains unclear how the occurrence of such word orders could be explained in OE.

Given the problems discussed in the previous paragraph, alternative structural analyses of OE have been proposed in much recent work. With respect to the analysis of main clauses there has been a certain consensus in the literature. Based on the distributional properties of nominal and pronominal subjects in contexts where another constituent is fronted (V2/V3), two main assumptions are generally made (cf. e.g. Cardinaletti and Roberts 1991, Fischer et al. 2000, Haeberli 2000, 2002b, Hulk and van Kemenade 1997, Kroch and Taylor 1997, Pintzuk 1993, 1999):

(i) Finite verbs move to two potential landing sites, namely to C when an operator occurs in clause-initial position and to the head of a head-initial inflectional projection below C when a non-operator is in initial position. As for the nature of the lower target of V-movement, various proposals have been made in the literature. Here, I will adopt the proposal in Haeberli (2000) where this head is identified as Agr on the basis of some observations related to the Middle English dialect variation discussed by Kroch and Taylor (1997).

(ii) Different types of subjects occur in different structural positions. Pronouns, being clitics or weak pronouns, have to occur in a high position ([Spec, AgrP]). Full DP subjects can (at least optionally) remain in a lower position ([Spec, TP]).

Finally, several of the authors cited above make a third assumption:

(iii) Non-operators (like operators) in clause-initial position occur in [Spec, CP].

In terms of these assumptions, we obtain the following general picture for the OE main clause syntax (targets of head movement in italics).

(4)   [$_{CP}$ XP *C* [$_{AgrP}$ SU1(+/-pronominal) *Agr* [$_{TP}$ SU2(-pronominal) T ...]]]

      (4) accounts for the fact that pronominal subjects precede the finite verb when a non-operator XP is fronted (V in Agr) but follow the finite verb when an operator is in initial position (V in C). Non-pronominal subjects, however, generally follow the finite verb in both contexts but can optionally precede the verb in non-operator fronting contexts.

        Although the structure in (4) provides an explanation for the main word order phenomena found in OE main clauses, it raises two important problems for the analysis of subordinate clauses and an additional problem for the analysis of conjoined main clauses. First, according to (4), we would expect the following scenario to be possible for subordinate clauses: (a) C is filled by a complementizer; (b) the finite verb moves to Agr; (c) a non-pronominal subject can remain in SU2. The consequence of (a) to (c) would be a subordinate clause with the word order 'complementizer-finite verb-full DP subject'. This word order would even be expected to occur very frequently in OE subordinate clauses because in main clauses with V in Agr full DP subjects occur more often in SU2 than in SU1 (i.e. more V2 than V3). Yet, this expectation is not borne out. The order 'complementizer-finite verb-full DP subject' is not a productive word order pattern in OE. [3]

        The second problem for (4) is raised by the main/subordinate asymmetry. Let us assume, as in (b) above, that the finite verb moves to Agr in subordinate clauses. While verb-final orders suggest that Agr is head-final, certain other constructions (involving particles, pronouns, or negation) suggest that it is sometimes head-initial. Following Pintzuk (1993, 1999), we can analyze this ambiguous status of AgrP in terms of the double base hypothesis, i.e. the hypothesis that AgrP can be either head-final or head-initial (grammar competition). The different word order patterns discussed in section 1 then suggest that head-final AgrP is frequent in subordinate clauses but very rare in main clauses. In the data Pintzuk (1999:223) discusses, head-final AgrP (IP in her analysis) occurs in 16% of the main clauses and in 53% of the subordinate clauses. But as Pintzuk (1999:223) admits, this considerable contrast remains unexplained in terms of the double base hypothesis. Thus, the main/subordinate asymmetry is problematic from the point of view of the structure in (4).

        A similar problem arises for conjoined main clauses. The higher frequency of verb-final word order in conjoined main clauses as compared to non-conjoined main clauses would suggest that the frequency of head-final AgrP is higher in conjoined main clauses. But it again remains unexplained why there should be such a difference in frequencies. In the next two sections, I will show how the problems raised by subordinate and conjoined clauses can be dealt with in terms of the structural analysis of OE summarized in (4). [4]

3   The main clause / subordinate clause asymmetry

As observed earlier, asymmetries between main and subordinate clauses in the modern Germanic languages have been argued to be the result of the (un)availability of certain projections as the landing sites for verb movement in the different clause types. In this section, I will propose an analysis of OE which differs from the standard analysis of modern Germanic but is based on a very similar idea. More precisely, pursuing proposals made by Bobaljik and Thráinsson (1998) (henceforth BT), I will argue that in OE main clauses the finite verb moves higher than in subordinate clauses.

BT's analysis of verb movement in modern Germanic is based on the following main assumptions made within the Minimalist framework (Chomsky 1995):

(i) Elements move for the purposes of feature checking. Inflectional heads and V have features which require checking against one another.

(ii) Features are checked in any type of local configuration (head-specifier, head-adjoined head, and, *contra* Chomsky 1995, head-complement).

(iii) The splitting of Infl is parametrized (*Split IP Parameter* (SIP)). Some languages have the clause structure AgrSP-TP-AgrOP-VP whereas others have the structure IP-VP.

With respect to the distribution of verbs, these assumptions have the following consequences. According to BT, English is a language with a simple IP-VP structure. Even though Infl may have a feature which has to be checked against V, the verb does not have to move to Infl in English. The reason for this is that under the standard Minimalist assumption that the features of a projection (e.g. VP) are those of its head (V) a checking relation between V and Infl can be established in the head-complement configuration I-VP according to hypothesis (ii) above. In other languages, however, verbs do move and, within BT's framework, movement is related to a split IP structure (postulated e.g. for Icelandic). Given a split IP of the form AgrSP-TP-AgrOP-VP, the occurrence of verb movement out of the VP can be accounted for by assuming that T and V have features which require checking against one another. Given that AgrOP intervenes between T and VP in a split IP structure, *in situ* checking is not possible here. The only option for establishing a checking relation between T and V is therefore V movement out of the VP so that V can enter a local relation with T.

For our purposes, an additional point made by BT with respect to V-movement in Icelandic will be crucial. BT argue that, in cases where the verb does not move to C in Icelandic, V-movement does not target the highest inflectional head (AgrS) but only the head below AgrS, i.e. T. Evidence for this claim comes from two different domains of the grammar of Icelandic. First, in subordinate clauses which generally do not license embedded topicalization (i.e. without V-to-C), BT (1998:63) identify two subject positions above the finite verb, and they suggest that these subject positions are [Spec, AgrSP] and [Spec, TP]. In terms of this analysis of subjects, the finite verb thus has to occur in T when it does not move to C. And secondly, again in embedded clauses which do not license V-to-C, certain adverbs can either follow the finite verb or immediately precede it and thus intervene between the subject and the verb. This phenomenon is illustrated in (5) (examples from BT 1998:64).

(5) a. María las   kvæðið   þegar hún (*loksins*) keypti (*loksins*) bókina.   (*Icelandic*)
         Mary read poem-the when she finally   bought finally   book-the.
         'Mary read the poem when she finally bought the book.'
     b. Það er nú   það sem ég (*ekki*) veit   (*ekki*).
         That is now it   that I   not   know not.
         'That's exactly what I don't know.'

If we assume that finite verbs only move to T, the variation in (5) can be accounted for by proposing that the subject is in [Spec, AgrSP] and the verb in T, and that there is variation with respect to the placement of the adverb (TP-adjoined or VP-adjoined).

I will adopt BT's basic proposals here for the analysis of OE word order. But before doing so, an additional point should be discussed briefly. BT assume that V-movement is triggered by formal features on an inflectional head and V which require checking against one another. Although BT do not discuss this issue in much detail, the claim that Icelandic verbs only move to T and not to AgrS may suggest that only T has a feature which requires checking against V whereas AgrS does not have such a feature. However, there would be an alternative option, namely that all inflectional heads have a feature which requires checking

against V. For languages like English with a simple IP-VP structure, the consequences of this assumption are straightforward, as discussed above. But what about Icelandic which has a rich IP structure (AgrSP-TP-AgrOP-VP) and V-movement to T? I propose that the idea behind the analysis of English can be extended to this case as well. If the features of a projection are those of its head, we can assume that this also holds for complex heads derived through head movement. Thus, a T-head containing V after V-movement has features of both T and V and the maximal projection could then be argued to contain features of both of these heads. As a consequence, AgrS can enter a checking relation with verbal features through the head-complement configuration with TP, and V-movement to AgrS is therefore not necessary. In other words, V-movement to T is sufficient in Icelandic not because AgrS lacks features which require checking with V, but because, by moving to T, the verb is sufficiently close to enter a checking relation with AgrS due to feature percolation within TP.

Given these proposals let us now return to Old English. As discussed in section 2, the assumption made in most recent work on OE is that in main clauses, V-movement can target two possible positions. A head-position in the CP-domain and an inflectional head below C. The two head positions are given in italics in (4) above, repeated here as (6).

(6)   [$_{CP}$ XP *C* [$_{AgrP}$ SU1(+/-pronominal) *Agr* [$_{TP}$ SU2(-pronominal) T ...]]]

A first question that arises in terms of (6) is why verbs which do not move to C move to the inflectional head below C in OE. In terms of the proposals made above, movement of the verb to Agr cannot be triggered by features of Agr (since these features could be checked by V-to-T movement), but it has to be triggered by a head in the CP domain which requires checking by V. If we assume a split CP structure of the type ForceP-TopP/FocP-FinP above AgrP (cf. Rizzi 1997), the crucial head is the finiteness head Fin. We conclude then that Fin has a feature which has to be checked by V and that the verb therefore moves to Agr. The features of V percolate up to AgrP and Fin can enter a checking relation with the verb in the head-complement configuration Fin-AgrP.

The second question raised by (4) is how we derive V-to-C movement, which, as observed in section 2, generally occurs with operator-fronting to CP in OE. There are two main options here. First, extending the feature checking approach outlined above, we could propose that a head above FinP (i.e. the head of the projection hosting the operator) contains a feature which attracts V and thus gives rise to verb movement into the CP-domain. A potential alternative to this analysis would be to derive V-to-C in terms of a structural well-formedness criterion for operators along the lines of Rizzi's (1996) *wh*-criterion.

Having considered main clauses, let us now turn to subordinate clauses in OE. As pointed out in section 2, the main/subordinate asymmetry with respect to the distribution of finite verbs would be surprising if the verb occupied the same structural position in both types of clauses. The theoretical approach discussed in this section now provides the basis for a solution to this problem. Along the lines of BT's analysis of (5), we may assume that in OE subordinate clauses the verb generally moves only to T rather than to the main clause targets Agr or C.[5] Furthermore, in order to account for the ambiguous status of the projection hosting the finite verb in subordinate clauses (head-initial/head-final, cf. section 2), we can adopt Pintzuk's (1999) double base hypothesis and propose that it is TP which can be head-final or head-initial (rather than AgrP/IP as in Pintzuk's analysis). The frequent verb-final word orders in subordinate clauses are thus the result of the frequent use of head-final TP. Given that in main clauses the verb generally moves on at least to Agr, a head-initial projection, the presence of a head-final TP does not have any consequences for main clause word order. Hence, the main/subordinate asymmetry with respect to the placement of finite verbs can be accounted for.[6, 7]

A V-to-T analysis of OE subordinate clauses also immediately solves the first problem raised in section 2. The occurrence of the finite verb in T in (6) means that a subject generally

precedes the verb in subordinate clauses regardless of whether it is pronominal or non-pronominal. This explains the fact that 'complementizer-finite verb-full DP subject' is not a productive word order option in OE.

One additional issue remains to be addressed at this point. Why is it that the verb only moves to T in subordinate clauses whereas it has to move at least to Agr in main clauses? As proposed above, verb movement to Agr in main clauses can be analyzed as the result of the feature checking requirements of the Fin-head. As a consequence, Fin must have a different status in subordinate clauses. I propose that the reason for this is that Fin is the head where the complementizer is inserted in OE (cf. also Rizzi 1997:288 on the option of inserting a complementizer in Fin, and Haeberli 2002c:234 for this proposal for the modern Germanic languages). The presence of a complementizer in Fin can then be argued to have one of the following two possible consequences. First, we could assume that the complementizer actually satisfies Fin's feature checking requirements itself. V therefore does not have to move into a local configuration with Fin, but only with Agr, and it therefore moves to T. Alternatively, we could argue that the Fin-head which allows insertion of a complementizer has syntactic properties that differ from those of the empty Fin-head. It is only the latter which bears a feature requiring a checking relation with V, whereas the former does not bear such a feature. Again the result would be that the finite V remains in T. I will have to leave it open for the moment whether there are any arguments in favor of one approach or the other. What is common to both of them is the idea that the insertion of a complementizer interferes with the movement properties of finite verbs. In this respect, they are similar to the traditional analyses of main/subordinate asymmetries as found for example in Dutch or German.[8, 9]

4   Conjoined main clauses

In this section, I propose that the approach outlined above can also shed light on the observation that OE conjoined main clauses exhibit subordinate clause word order more frequently than other main clauses. In order to obtain this result, one main assumption is necessary, namely the assumption that the input categories for coordination are not always full CP structures but that main clauses in OE can be conjoined either at the CP level or at the AgrP-level. (cf. also Kiparsky 1995:149 for a similar proposal). It is the second option which provides the basis for the analysis of verb-final conjoined main clauses.

Let us assume (following e.g. Johannessen 1998) that conjunction involves a conjunction phrase (CoP) with the two conjuncts as the specifier and the complement respectively. If two AgrPs are conjoined, CoP is the complement of Fin, and the first AgrP occupies [Spec, CoP] while the second AgrP occupies the complement position of Co. Within the AgrPs, the finite verbs undergo movement to T in order to enter a checking relation with Agr (cf. section 3). But the Fin head taking CoP as a complement also has a feature that requires checking by a verb. To establish this checking relation, Fin selects the finite verb in the first conjunct, which can be argued to be the closer one of the two finite verbs in the conjuncts.[10] The finite verb therefore moves to Agr in the first conjunct. As proposed in section 3, the verbal feature then percolates to AgrP. Assuming furthermore (following Johannessen 1998:110) that Co inherits the syntactic features from its specifier conjunct by specifier-head agreement, CoP satisfies the checking requirements of Fin.

Thus, we obtain an asymmetry between the first conjunct and the second conjunct when two AgrPs are conjoined. While the finite verb has to move to Agr in the first conjunct, it remains in T in the second conjunct. Given the proposal made in section 3 that TP is frequently head-final, we can now account for the increased frequency of verb-final word order in conjoined main clauses as compared to other main clauses. As for the fact that verb-final in conjoined main clauses is not as frequent as in subordinate clauses, it can be explained

in terms of variation with respect to the categorial status of the conjoined constituents. As proposed above, conjoined clauses can also be CPs and these clauses do not give rise to verb-final word order because each of them contains a Fin-head that requires checking by V. The AgrP/CP variation with conjoined main clauses is independent of subordinate clause syntax and the distinct properties of the two types of clauses is therefore expected.

The syntax of coordination raises various additional issues, but reasons of space do not allow me to consider these and the extensive literature dealing with them in any detail here. In general, the approach outlined by Johannessen (1998) seems to give the desired results for our purposes, the main exception being that while Johannessen (1998:204ff.) argues that the input categories for coordination are always full CP structures, the OE word order asymmetries suggest that they can at least sometimes be AgrPs. Apart from this, we can adopt Johannessen's proposals. For example, we can account for reduced second conjuncts in terms of her deletion approach. Furthermore, her claim (chapter 6) that extraction out of a conjunct is possible allows us to deal with a remaining open issue concerning AgrP coordination. If, as proposed above, CoP is the complement of Fin in this case, we would expect the entire CP-domain above FinP to be activated as well. But, as observed in Haeberli (2001:210/1), it is plausible to assume that some constituent always has to be fronted to the CP domain in OE main clauses (i.e. to the XP position in 4/6), and the question therefore arises as to how this requirement can be satisfied with a CP above a CoP. Assuming that extraction out of a conjunct is possible, the answer to this question is simple. The requirements of the CP can be met through movement of the initial constituent in the first AgrP conjunct to CP.[11]

5 The loss of verb movement in the history of English

Having discussed the analysis of clause type asymmetries in Old English, let us conclude by briefly considering a possible diachronic consequence of our proposals. As often discussed, verb movement was lost in the history of English (cf. e.g. Roberts 1985, Kroch 1989) and this loss was the source of the rise of *do*-support. The standard analyses of the loss of V-movement in English assume that there was a unique underlying change in the grammar of English, namely loss of V-movement to an inflectional head. However, Han (2000) and Han and Kroch (2000) provide evidence suggesting that the loss of V-movement is actually (at least) a two-step process. First, at the beginning of the 15th century, movement from one inflectional head to a higher inflectional head starts being lost. And second, at the end of the 16th century, movement from V to the inflectional domain starts being lost. Although this sequential loss scenario seems attractive given the evidence Han and Kroch provide, they leave this development unexplained. In particular, it remains unclear why the loss of V-movement between inflectional heads should have begun at the beginning of the 15th century.

The analysis discussed in this paper may shed some light on this issue. The basic hypothesis to be made is that the presence of a feature on Fin that requires checking by the verb (as proposed for OE) is subject to parametric variation. Learners of OE received clear-cut evidence for such a feature in the form of the pronoun/full DP contrast in contexts of non-operator fronting discussed in section 2. This contrast identifies a V-position (i.e. Agr in 4/6) between the subject position for pronouns and a lower subject position which can only be occupied by full DP subjects. This type of evidence for V-to-Agr and hence for the presence of a feature on Fin that attracts V thus depends on the ability of full DP subjects to remain in a lower position than subject pronouns. In the period following OE, i.e. in Early Middle English (EME), full DP subjects maintain this property and the proposals made in this paper can be directly extended to EME (cf. Haeberli and Ingham to appear). However, this type of evidence is disappearing by around 1400. As argued in Haeberli (2002 a, b), full DP subjects cannot remain in [Spec, TP] any more in later Middle English because the fillers of [Spec,

AgrP] in OE/EME, i.e. empty expletives, are being lost in this period. Thus, full DP subjects have to move to AgrP as well. Subject-verb inversion in non-operator fronting contexts is therefore lost and subjects always precede the finite verb regardless of whether the subject is pronominal or non-pronominal. In other words, the crucial evidence for the feature on Fin which requires checking by V and, hence, the crucial evidence for V-movement to Agr is lost. I propose that, as a consequence, the landing site of V-movement in main clauses can be reanalyzed as a lower inflectional head and arguably even must be reanalyzed as a lower head for reasons of economy (assuming that less feature checking and, hence, less movement is more economical). Hence, the parameter value for Fin with respect to attraction of V is changed. This development has the effect of destabilizing the V-movement system outlined before, and it can be argued to have led to the first step in the loss of V-movement around the beginning of the 15th century, as suggested by Han and Kroch.

6. Conclusion

In this chapter, I proposed an analysis of the clause type asymmetries found with respect to the distribution of finite verbs in OE. Following a proposal made by Bobaljik and Thráinsson (1998) on verb movement in Icelandic subordinate clauses and developing their theoretical approach to the syntax of verb movement, I argued that finite verbs in OE generally move only to T in subordinate clauses rather than to Agr/C as in main clauses. If we assume that TP has variable directionality in OE whereas AgrP/CP are head-initial, the contrast in the landing site of verb movement can account for the higher frequency of verb-final order in subordinate clauses as compared to main clauses. The frequency differences between conjoined and non-conjoined main clauses can also be accounted for in terms of this approach because second conjuncts trigger verb movement to T rather than to Agr when coordination involves two AgrPs. Finally, I sketched a potential consequence of the analysis developed here for the diachronic development of verb movement in the history of English.

Footnotes
* This paper owes its existence to several people whose response to presentations of some of my earlier work was: "What about subordinate clauses?". In particular, I would like to thank Thórhallur Eythórsson, Richard Ingham, Susan Pintzuk and Anthony Warner for comments which made me pursue this topic and later on for discussions on the proposals made here. Thanks also go to the audiences at the York-Holland Symposium on the History of English Syntax (University of York, April 2002), the 7th Diachronic Generative Syntax Conference (University of Girona, June 2002) and the 17th Comparative Germanic Syntax Workshop (University of Iceland, August 2002) where earlier versions of this paper were presented.

1. The OE data are taken from the *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (Taylor et al. 2003) and follow the referencing conventions of that corpus.

2. In Table 1, only clauses with an overt subject are counted in which the non-finite verb does not precede the subject. Similar percentages are obtained if clauses without an overt subject (e.g. conjoined clauses with an omitted subject in the second clause) are included.

3. This word order is not entirely absent from the OE corpus, but it is very rare. Among all the subordinate clauses (excluding relative clauses) in *The York-Toronto-Helsinki Parsed Corpus of Old English Prose*, I have found only 120 examples with the finite verb in initial position

after the element(s) in CP (0.2% of the total). Presumably, this word order is best analyzed as a case of main clause syntax in an embedded context (i.e. V1 due to CP-recursion).

4. One potential explanation for the absence of 'complementizer-finite verb-full DP subject' is discussed by Kroch and Taylor (1997:306ff.). Their proposal is based on the assumption that there is a V2 constraint holding at the level of AgrP in OE which, in main clauses, is satisfied by the topic XP on its way to [Spec, CP] and, in subordinate clauses, generally by the subject due to discourse factors which disfavor fronting of non-subjects. However, this approach is rather idiosyncratic as there does not seem to be any cross-linguistic evidence for a V2 constraint at a structural level (AgrP) below the target of topics (CP). Furthermore, the properties of subordinate and conjoined main clauses would remain unexplained.

An alternative explanation for the rarity of 'complementizer-finite verb-full DP subject' is explored in an earlier version of this paper (cf. Haeberli 2001:209-215). There I considered the possibility of dealing with this issue in terms of main clause structure in subordinate contexts (i.e. in terms of a Split CP or CP-recursion). Although such an analysis may indeed hold for some subordinate clauses (possibly of a certain type like complements of bridge verbs), it would again raise the problem that it cannot account for the clause type asymmetries. The goal of the analysis outlined below is to address all the problematic issues raised in this section, and not just the absence of 'complementizer-finite verb-full DP subject'.

5. That V does not move as high in subordinate clauses as in main clauses has been independently proposed by Fuss and Trips (2002). They use the occurrence of the word order 'C-SU(pronoun)-Adv-V(+fin)…V(-fin)…' in embedded clauses and the rarity of such orders in main clauses as evidence for distinct positions for the finite verb (2002:190ff.). However, this evidence is not conclusive, as the contrast could be accounted for in terms of a unique landing site by assuming that the projection whose head the verb occupies is frequently head-final in subordinate clauses (Pintzuk 1999) and that the material to the right of the finite verb has undergone Verb Projection Raising. It therefore seems that the main arguments for an asymmetric V-movement analysis in OE come from the problems raised in section 2.

Fuss and Trips' analysis differs from the one proposed here in that it is based on an Agr-less structure where the verb moves to T in main clauses and remains within the verbal domain in subordinate clauses. However, as shown in Haeberli and Ingham (to appear), there is evidence from Early Middle English suggesting that the finite verb in subordinate clauses moves not as high as in main clauses but nevertheless out of the VP (to T) because it can occur to the left of the negator *not* which is generally assumed to mark the left edge of the VP. The minimal assumption would then be that V-to-T in Early Middle English subordinate clauses is simply a continuation of OE V-to-T. Furthermore, the analysis proposed here has the advantage of allowing us to integrate early English into the larger picture of the syntax of verb movement in Germanic outlined by BT.

6. Alternatively, within a framework which bans head-final projections (cf. Kayne 1994), we could assume that, as sometimes proposed in recent work, verb-final word order is derived through remnant leftward movement of a large constituent and, more specifically, that this remnant movement targets the specifier position of a functional projection immediately below AgrP. Grammar competition then would not concern the directionality of inflectional projections but variation with respect to whether this leftward movement occurs or not.

7. As pointed out by Susan Pintzuk (p.c.), some statistical considerations may raise a potential problem for the proposal that the verb generally does not occupy the same position in main and subordinate clauses. Pintzuk (1999:223/4) shows that, in terms of her structural

interpretation of the corpus she examined, the frequencies of head-final structures in main and subordinate clauses change in parallel in the OE period. If distinct landing sites were involved in the two types of clauses such a constant rate effect would be surprising as it would mean that the two inflectional projections are somehow interdependent and it would not be clear why this should be the case. For the time being, I will have to leave this issue open. To address it fully, a detailed statistical evaluation of the analyses proposed here and in Pintzuk's work would be necessary, a task which we are planning to carry out in future joint work.

8. At first sight, there seems to be a substantial difference, however. In the traditional analyses of Dutch or German, the complementizer and the verb compete for the same head position, which is not the case for the proposal in the text. Yet, if we assume that V-to-C is triggered by a feature on a C-head, it is not clear whether the traditional intuition is sufficient to explain the situation in Dutch/German. A complementizer in subordinate clauses does not necessarily block V-movement. Instead, the verb could adjoin to C, thereby creating a complex Comp-V or V-Comp head. Given that such heads do not occur in Dutch/German, we have to conclude that there is an independent reason why verbs do not move to C in subordinate clauses. Adopting the proposals made in the text, we could either say that a complementizer can check the relevant feature in the CP-domain or that the presence of a complementizer alters the feature specification of the CP-domain. Given these observations, the situation in OE may indeed be directly comparable to the situation in languages such as Dutch/German.

9. As observed in footnotes 3 and 4, it is conceivable that main clause structure can occur in (some types of) subordinate clauses. For the proposals made in the text, this would mean that certain complementizers can be optionally inserted in a higher C-head (Force in Rizzi's Split-CP). The empty Fin-head then attracts the verb to Agr as in main clauses. In what contexts this option is available and how frequently it occurs is an issue for future research.

10. Note that this result cannot be obtained by defining closeness in terms of c-command (as proposed by Chomsky 1995:358) because the verbal features are on TP in the two conjuncts and neither of the two TPs c-commands the other. The verbal feature in the first conjunct can nevertheless be argued to be closer to Fin if, instead, we simply define closeness in terms of the number of the intervening structural nodes (cf. Haeberli 2002c:45, fn. 23), Co' being the additional intervening node between Fin and the finite verb in the second conjunct.

11. Among the basic distributional options for finite verbs discussed in section 1, there is one that has not been discussed yet and that is the (rare) verb-final order in non-conjoined main clauses. For completeness' sake let us briefly consider two options to account for this pattern: (i) AgrP (like TP) has variable directionality and verb-final non-conjoined main clauses have a head-final AgrP. AgrP differs from TP in that it is head-final very rarely. (ii) Main clauses optionally (but rarely) lack a CP layer. The verb then only moves to T (no feature checking with Fin) and can occur clause-finally if TP is head-final.

References

Bacquet, P. (1962). *La structure de la phrase verbale à l'époque alfrédienne*. Paris: Les Belles Lettres.

Bobaljik, J., and Thráinsson, H. (1998). 'Two Heads Aren't Always Better than One', *Syntax* 1: 37-71.

Cardinaletti, A., and Roberts, I. (1991). 'Clause structure and X-second', ms., University of Venice and University of Geneva.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

Fischer, O., van Kemenade, A., Koopman, W., and van der Wurff, W. (2000). *The Syntax of Early English*. Cambridge: Cambridge University Press.

Fourquet, J. (1938). *L'ordre des éléments de la phrase en germanique ancien: études de syntaxe de position*. Paris: Les Belles Lettres.

Fuss, E., and Trips, C. (2002). 'Variation and Change in Old and Middle English – on the Validity of the Double Base Hypothesis', *Journal of Comparative Germanic Linguistics* 4: 171-224.

Haeberli, E. (2000). 'Adjuncts and the Syntax of Subjects in Old and Middle English', in S. Pintzuk, G. Tsoulas and A. Warner (eds.), *Diachronic Syntax. Models and Mechanisms*. Oxford: Oxford University Press, 109-131.

Haeberli, E. (2001). 'Speculations on the Syntax of Subordinate Clauses in Old English', *Reading Working Papers in Linguistics* 5: 201-229.
(http://www.rdg.ac.uk/AcaDepts/cl/slals/workingpapers/haeberli.pdf)

Haeberli, E. (2002a). 'Observations on the Loss of Verb Second in the History of English', in J.-W. Zwart and W. Abraham (eds.), *Studies in Comparative Germanic Syntax*. Amsterdam: John Benjamins, 245-272.

Haeberli, E. (2002b). 'Inflectional Morphology and the Loss of Verb Second in English', in D. Lightfoot (ed.), *Syntactic Effects of Morphological Change*. Oxford: Oxford University Press, 88-106.

Haeberli, E. (2002c). *Features, Categories and the Syntax of A-Positions. Cross-Linguistic Variation in the Germanic Languages*. Dordrecht: Kluwer.

Haeberli, E., and Ingham, R. (to appear). 'The Position of Negation and Adverbs in Early Middle English', to appear in *Lingua*.

Han, C. (2000). 'The Evolution of *Do*-Support in English Imperatives', in S. Pintzuk, G. Tsoulas and A. Warner (eds.), *Diachronic Syntax. Models and Mechanisms*. Oxford: Oxford University Press, 275-295.

Han, C., and Kroch, A. (2000). 'The Rise of *Do*-Support in English: Implications for Clause Structure', *NELS 30*.

Hulk, A., and van Kemenade, A. (1997). 'Negation as a Reflex of Clause Structure', in D. Forget, P. Hirschbuehler, F. Martineau and M.-L. Rivero (eds.), *Negation and Polarity: Syntax and Semantics*. Amsterdam: John Benjamins, 183-207

Johannessen, J. B. (1998). *Coordination*. Oxford: Oxford University Press.

Kayne, R. (1994). *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.

Kemenade, A. van (1987). *Syntactic Case and Morphological Case in the History of English*. Dordrecht: Foris.

Kiparsky, P. (1995). 'Indo-European Origins of Germanic Syntax', in A. Battye and I. Roberts (eds.), *Clause Structure and Language Change*. Oxford: Oxford University Press, 140-169.

Koopman, W. (1995). 'Verb-Final Main Clauses in Old English Prose', *Studia Neophilologica* 67: 129-144.

Koopman, W. (1998). 'Inversion after Single and Multiple Topics in Old English', in J. Fisiak and M. Krygier (ed.), *Advances in English Historical Linguistics*. Berlin: Mouton de Gruyter, 135-149.

Kroch, A., and Taylor, A. (1997). 'Verb Movement in Old and Middle English: Dialect Variation and Language Contact', in A. van Kemenade and N. Vincent (eds.), *Parameters of Morphosyntactic Change*. Cambridge: Cambridge University Press, 297-325.

Mitchell, B. (1985). *Old English Syntax*. Oxford: Clarendon Press.

Pintzuk, S. (1993). 'Verb seconding in Old English: Verb movement to Infl', *The Linguistic Review* 10: 5-35.

Pintzuk, S. (1999). *Phrase Structures in Competition: Variation and Change in Old English Word Order*. New York: Garland.

Rizzi, L. (1996). 'Residual Verb Second and the Wh-Criterion', in A. Belletti and L. Rizzi (eds.), *Parameters and Functional Heads*. Oxford: Oxford University Press, 63-90.

Rizzi, L. (1997). 'The Fine Structure of the Left Periphery', in L. Haegeman (ed.), *Elements of Grammar*. Dordrecht: Kluwer, 281-337.

Taylor, A., Warner, A., Pintzuk, S., and Beths, F. (2003). *The York-Toronto-Helsinki Parsed Corpus of Old English Prose*. York: Department of Language and Linguistic Science, University of York. (http://www-users.york.ac.uk/~lang22/YcoeHome1.htm)

Traugott, E. Closs (1992). 'Syntax', in R. Hogg (ed.), *The Cambridge Encyclopedia of the English Language. Vol. 1. The Beginning to 1066.* Cambridge: Cambridge University Press, 168-289.