

Verb-Object Order in Early Middle English

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1 Introduction

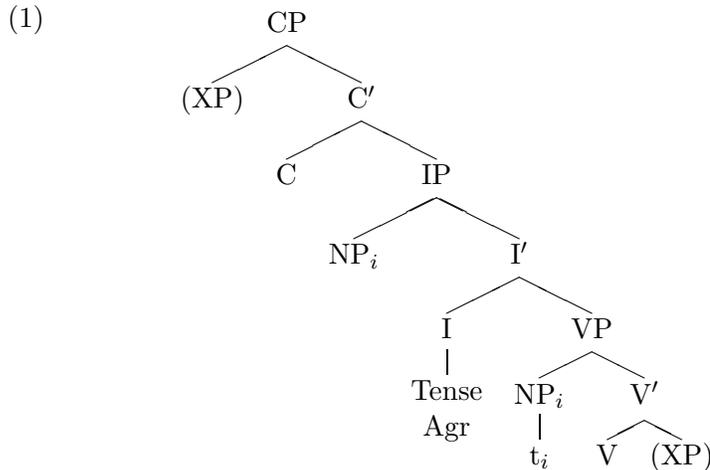
In the standard account (Canale 1978, Kemenade 1987, Lightfoot 1991), there is a sharp divide in word order between Old and Middle English. Old English is INFL-final and OV while Middle English is INFL-medial and VO.¹ Indeed, Lightfoot gives an account of the transition from Old to Middle English based on a catastrophic reanalysis in the twelfth century (Lightfoot 1991, 1999) and, viewed from a certain distance, this story has considerable plausibility. Thus, up until the entry for 1122 CE, the syntax of the Peterborough version of the Anglo-Saxon Chronicle, the manuscript which extends furthest into the twelfth century, is that of standard literary Old English. The brief continuations, which end in 1154, are hard to interpret but are not revolutionary in their syntax. These are the last documents of Old English. Then in the first quarter of the next century, several prose texts of West Midlands provenance appear, the *Ancrene Riwe* and the Katherine group of saints' lives, whose word order is considerably more modern. INFL-final word order seems absent and surface OV word order becomes a minority pattern. Nevertheless, there is reason to doubt the standard account. Pintzuk (1991, 1993, 1995) has shown that the transition from INFL-final to INFL-medial word order was a long term trend characterizing the entire Old English period, so that its disappearance in early Middle English can be taken as a continuation of Old English development rather than a break with it, though the paucity of material in the twelfth century has made it difficult to tell whether this is the case. Moreover, recent work by Haerberli (1999), Koopman (1990), and Pintzuk (1998) has uncovered evidence that underlying VO word order already occurs in late Old English texts, further suggesting continuity between Old and Middle English. In this paper, we will present additional evidence, derived from the grammatical and statistical analysis of five early Middle English texts, for such continuity. Specifically, we will show that these texts exhibit all three of the base orders that have been proposed for Old English: INFL-final with

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an OV verb phrase, INFL-medial with an OV verb phrase, and the modern order – INFL-medial with a VO verb phrase. In addition, we will give evidence for the leftward scrambling of complement noun phrases and we will show that although there are quantitative differences between the texts of the two dialect areas from which our texts come (the Southeast and the West Midlands), the range of possibilities in the two dialects is the same. From this, we conclude that the more innovative West Midlands texts are further along in the transition from Old to Modern English syntax than the more conservative Southeast Midlands ones but that both dialects are following the same trajectory. This conclusion represents a change in emphasis from our views of the relationship among the early Middle English texts in earlier, unpublished work (Kroch and Taylor 1994). In the earlier work, we emphasized the differences between the Southeast Midlands and West Midlands texts, claiming that the former were essentially INFL-medial and OV while the latter were essentially INFL-medial and VO. Under our present view, the differences between the texts do not justify drawing a sharp distinction between the grammars of the texts from the two groups. Rather the differences are of frequency in the use of the available options.

1.1 Structural assumptions and notational conventions

For the purposes of this discussion, we will adopt the phrase structure of *Barriers* (Chomsky 1986); that is, the structure of the clause will be assumed to follow the following schema:



We will further assume that INFL-final IP's and verb-final VP's differ from their head-initial counterparts only in linear order and not in structure. In other words, we are adopting neither the 'exploded INFL' hypothesis of Pollock (1989) nor the 'antisymmetry' hypothesis of Kayne (1994). We want to emphasize, however, that in making these notational decisions, we are not expressing a theoretical commitment but simply adopting the minimally complex structural descriptions needed for our purposes in this paper. Indeed, other work (for example, Han this volume) gives evidence for an exploded INFL in Middle English, and further investigation may

show the antisymmetry hypothesis to be useful in the analysis of the language. We hope to explore this latter possibility in future work, but the results we report here do not bear on the question.

We assume that the tensed verb, in both matrix declarative and tensed subordinate clauses, is located in INFL rather than in COMP. Here we follow Pintzuk's (1991, 1993) analysis of Old English and our own previous work (Kroch and Taylor 1997). The crucial point for current purposes is that in early Middle English INFL-medial clauses, scrambled pronouns commonly appear between the XP in first position and the tensed verb, as they do in Old English. Most often, of course, this initial XP is the subject of the clause, especially in subordinate clauses; but since Middle English is a verb-second language, it may also be a topic. The two possibilities are illustrated by the boldface pronouns in the following examples.

- (2) a. ac 3if min lauerd godd **me** wolde swingen mid ani
 but if my Lord God me would scourge with any
 swinge... (CMVICES1,13.145)
 scourge
 'but if my Lord God would scourge me with any scourge'
- b. & swuch swettnesse **þu** schalt ifinden in his luue & in his
 and such sweetness thou shalt find in his love and in his
 seruise... (CMHALI,131.48)
 service...
 'And such sweetness thou shalt find in his love and in his service.'
- c. hwat so we beseceð at gode, **he us** wile sone teiþin
 what so we beseech at God he us will soon grant
 (CMVICES1,141.1746)
 'Whatever we ask of God, he will soon grant us.'

It is not clear what position the scrambled pronouns occupy in these examples and we will not pursue the question here. It is sufficient for our purposes that the pronouns are to the left of Infl and so must have moved out of VP.

The single most prominent issue in the syntax of early Middle English is that of the transition from OV to VO word order, and this paper is largely devoted to illuminating the problem. The primary descriptive difficulty we face is the high degree of structural ambiguity present in Middle English. To begin with, clauses with a single tensed verb, the most common clause type, generally tell us little about underlying order. As we will see, early Middle English texts, though they contain a remnant of INFL-final word order, are overwhelmingly INFL-medial in both main and subordinate clauses; and, as is well-known, verb-raising to INFL is categorical in the language. It follows, therefore, that if an early Middle English clause contains only a single tensed verb, we cannot determine whether its verb phrase is head-initial or head-final. The verb, having moved to INFL, will in any case precede its complements. Hence, we will analyze primarily clauses that contain both an auxiliary and a main verb. In such cases, we can assume that the main verb is in its

underlying position and we can, therefore, hope to determine the direction of VP-headedness from these cases. Still, there are further complicating factors that must be controlled for. We know that Old English allowed both leftward scrambling and rightward extraposition of complements and adjuncts (Kemenade 1987, Pintzuk and Kroch 1989) and these movements obscure underlying order even in the absence of verb movement (Pintzuk 1991). Only to the extent that such movements are subject to observable constraints limiting their application will we be able to work out the underlying structure of the VP. As we will see, these constraints are quite complex; and in order to keep our study within manageable bounds, we limit the discussion presented here largely to the cases of noun phrase and pronoun complements, leaving to future work the study of the behavior of prepositional phrases and adverbs, whose positional licensing follows quite different principles.

Schematically, an INFL-medial clause can be divided into three regions: the region to the left of the tensed verb, the region between the tensed and the untensed verb, and the region to the right of the untensed verb. We will refer to these regions as the PRE-INFL, the POST-INFL and the POST-VERB regions, respectively, as indicated by the XP's in the following schema.

$$(3) \quad \dots XP_1 \dots I^o \dots XP_2 \dots V^o \dots XP_3 \dots$$

Unsurprisingly, our three regions correspond directly to the 'Vorfeld,' 'Mittelfeld' and 'Nachfeld' into which German verb-second clauses have traditionally been divided. Unlike traditional grammarians, however, we will not be satisfied to note or tabulate the occurrences of constituents in the three surface positions of the schema. Rather we will be looking for grammatical patterns in the sorts of constituents that can occur in each of the positions, with the aim of using these patterns to work out the underlying structures and transformational movements that give rise to the observed surface word orders.

1.2 The texts

Our analysis will be based primarily on five Early Middle English (EME) prose texts from the early 13th century. Three are from the West Midlands (WM) area and two from the Southeast Midlands (SEM). The three texts from the West Midlands are the Lambeth Homilies (ms. Lambeth 487), the Ancrene Riwe (ms. Cotton Cleopatra C vi) and the Katherine Group (ms. Bodley 34), which is comprised of five short texts, Hali Meihad, St. Julian, St. Katherine, St. Margaret, and the Sawles Warde. The latter two manuscripts date to the first quarter of the 13th century and seem to be copies of originals written not many years earlier. The manuscript of the Lambeth Homilies is copied from two exemplars with different orthographies, both of the twelfth century but one probably earlier than the other (Sisam 1951). The earlier exemplar is a compilation of older documents from the 11th century which have been transliterated into Middle English. Homilies ix and x are transliterations of two of Ælfric's Homilies of the same title. Homily xi includes a passage from Ælfric (pp. 121-122 in Morris's edition (Morris 1969)), and Homily ii includes most of Wulfstan's *Be Godcundre Warnunge*. The source of the remainder is unknown.

The other exemplar, in Sisam's view, did not contain any Old English material. Five of the Lambeth homilies also appear in the Trinity Homilies. The Katherine Group is written in the AB language centered on the border of Herefordshire and Shropshire (Tolkien 1929; Dobson 1972, 1976). The Corpus manuscript of the Ancrene Wisse (ms. Corpus Christi College, Cambridge, 402) is also in this dialect. The Cleopatra manuscript, which we use here, is, according to Dobson, from the eastern periphery of the AB area, perhaps Worcestershire. While there are differences in orthography and morphology between the two manuscripts, the syntax is very similar. The Lambeth Homilies have been localized to the same West Midlands area by M. L. Samuels (quoted in Laing 1993).

The Southeast Midlands texts are the Trinity Homilies, a series of homilies found in ms. Trinity 335 (B.14.52) (Trinity College, Cambridge) and Vices and Virtues, a dialogue found only in ms. Stowe 34 (British Library). The manuscript is dated to 1200-1225, but according to Utley (1972) the date of composition is perhaps as early as 1175. The general conservatism of the text and inclusion of Old English forms is considered by Hall (1920), however, to indicate a scribe versed in the older language rather than an Old English exemplar. The Trinity Homilies manuscript dates from before 1225 and may be based on Old English exemplars. Four of the five Trinity homilies that also appear in the Lambeth manuscript, however, are from the part of Lambeth based on the later, non-Old English exemplar (see above). Samuels (again quoted in Laing 1993) considers the language of Vices and Virtues representative of Essex, while the language of the Trinity Homilies is London 'influenced by immigration, perhaps from East Anglia' (Samuels quoted in Hill 1977).

The data in this paper are drawn from the texts of these works as they appear in the second edition of the Penn-Helsinki Parsed Corpus of Middle English (PPCME2) (Kroch and Taylor 1999). Examples cited from the corpus are identified with a decimal number, the integral part giving the page in the book from which the sample comes and the decimal part giving the token number assigned to the example in the electronic corpus. The current edition of the corpus contains exhaustive samples of all of the texts except the Ancrene Riwle, from which a 50,000 word sample was drawn. Sample sizes are as follows:

- Ancrene Riwle: 50,926 words, 3,560 sentences
- Katherine Group: 38,445 words, 2539 sentences
- Lambeth Homilies (E): 20,882 words, 1,409 sentences
- Lambeth Homilies (L): 6,549 words, 525 sentences
- Trinity Homilies: 41,874 words, 3,075 sentences
- Vices and Virtues: 28,358 words, 1,894 sentences

2 INFL-final word order in Early Middle English

It is sometimes thought that INFL-final word order had disappeared entirely from English by the beginning of the Middle English period, but this is an oversimplification. A small number of INFL-final clauses can be found in all our Early Middle English texts.²

As in Old English, the INFL-final clauses in our corpus come in two variants, one in which the tensed auxiliary follows a non-finite main verb (the German order), as in (4),

- (4) a. er þanne þe heuene oðer eorðe **shapen were**.
 before that heaven or earth created were
 (CMTRINIT,133.1776)
 ‘before heaven and earth were created’
- b. for ði ðat godd **isæd hadde** to Adame: Morte morieris!
 because that God said had to Adam Morte morieris
 (CMVICES1,105.1276)
 ‘because God had said to Adam “Morte morieris” ’

and one in which the tensed auxiliary precedes the untensed verb (the Dutch or verb-raising order) as in (5).

- (5) a. þat þurh soð scifte synnes **ben forgeuene**. (CMTRINIT,23.304)
 that through true shrift sins are forgiven
 ‘that through true shrift sins are forgiven’
- b. þen ei wel itohe muð for scheome **mahe seggen**.
 than any well disciplined mouth for shame may say
 (CMHALI,146.262)
 ‘than any well disciplined mouth for shame may say’

Although INFL-final word order was already very rare in main clauses by the late Old English period (Pintzuk 1995: 247), we still find one such case in our most archaic text, Vices and Virtues, which we give in (6).

- (6) Ne dieuel ne mann none mihte ne none strengþe **habben ne**
 neither devil nor man no power nor no strength have NEG
muȝen ouer oðren, bute... (CMVICES1,107.1292)
 may over others, except...
 ‘Neither devil nor man may have power or strength over others, except...’

²It is not clear whether these cases are imitations or copies of Old English or low-frequency but productive forms of Middle English. For our purposes, it is not necessary to distinguish these possibilities since the same can be said for every other clause in the corpus. Our first goal must be to accurately characterize the corpus as a step toward understanding the underlying linguistic competence of the texts’ authors.

In evaluating the distance between Old and Middle English syntax, it would be useful to have a quantitative estimate of the frequency of INFL-final word order. Such an estimate can be constructed for the subordinate clause context, where the number of examples, though low, is not vanishingly small, as it is in the main clause context. Column 1 of Table 1 gives the number of superficially INFL-final subordinate clauses in our texts.

	surface INFL-final	Subject gap cases removed	Pronoun subjects removed	Number of subordinate clauses	% necessarily INFL-final
Ancrene Riwe	12	10	3	560	0.5
Katherine Grp.	54	41	3	416	0.7
Lambeth H. (L)	11	11	1	98	1.0
Lambeth H. (E)	26	23	10	275	3.5
Trinity Homilies	65	55	10	362	2.7
Vices & Virtues	44	31	13	487	2.6
Total	212	171	40	2198	1.8

Table 1: Subordinate INFL-final clauses with an auxiliary verb

This number, however, cannot be used directly to estimate the frequency of INFL-final word order because superficially INFL-final clauses often have another possible analysis; that is, they can also be analyzed as instances of stylistic fronting of the main verb. In a stylistic fronting clause, a participle, infinitive,³ or adverb is moved to the position immediately before the tensed verb. This order is possible only when the subject does not occupy its canonical preverbal position (the so-called ‘subject gap’ condition, Maling 1990). When the stylistically fronted element is the untensed verb of a clause with a single auxiliary, the resultant string word order is not distinguishable from INFL-final order. Among the modern North Germanic languages, stylistic fronting is found only in Icelandic, but it was found in all of the attested medieval Scandinavian dialects. An example from Icelandic is given in (7).

- (7) Honum möetti standa á sama, hvað **sagt** voeri um hann.
 him might stand on same what said was about him
 ‘It might be all the same to him what was said about him.’
 (Example (5) in Maling 1990)

Although stylistic fronting is characteristic of North rather than West Germanic, the possibility that apparently INFL-final clauses are actually instances of

³The fronting of infinitives is not as much discussed in the literature on stylistic fronting as the fronting of participles, but it is possible in both Old and Modern Icelandic (Eiríkur Rögnvaldsson, personal communication). However, the stylistic fronting of infinitives is limited to cases where the infinitival marker *að*, more or less equivalent to English infinitival *to*, is absent (see Jónsson 1991 and the references cited there). In EME, *to*-less infinitives are common and appear to behave just like participles with respect to stylistic fronting.

stylistic fronting cannot be ignored in Middle English texts, due to the substantial Scandinavian influence on English that resulted from the Viking invasions and settlements of the 9th and 10th centuries. Trips (1999) gives evidence that stylistic fronting occurred in the *Ormulum*, a late 12th century Northern poetic text with a considerable Scandinavian element in its vocabulary and other signs of Scandinavian influence. This result considerably increases the likelihood that stylistic fronting occurred generally in early Middle English and makes it clear that we cannot take the surface word order numbers in Table 1 at face value. Indeed, there are a certain number of examples in our texts, many of them in the *Vices* text, that are clear instances of stylistic fronting. These are clauses with an INFL-medial tensed auxiliary, a following non-finite verb, and a subject gap, in which a third non-finite main verb or the adjectival complement of a verb appears before the tensed auxiliary, as in the following example.

- (8) auriche manne **þe** **i-boregen** scal bien (CMVICES1,63.695)
 every man that saved shall be
 ‘every man who shall be saved’

We have found five such examples in the *Vices* text and one in the *Ancrene Riwe*. The case for treating these clauses as instances of stylistic fronting is strengthened by the fact that neither *Vices* nor the other texts contain any instance of such fronting in the clear absence of a subject gap. The *Vices* text also contains the following example, in which the negative adverb *noht* appears before the tensed auxiliary and its following main verb. This is another common type of stylistic fronting in Scandinavian.⁴

- (9) and he besohhte at gode **þat** **naht** ne scolde
 and he sought of God that not NEG should
 reinin (CMVICES1,143.1787)
 rain. . .
 ‘and he asked of God that it should not rain’

Platzack (1988) argues that in Medieval Scandinavian stylistic fronting was not limited to clauses with subject gaps of the modern Icelandic type. In particular, he claims that Medieval Swedish texts exhibit stylistic fronting in subordinate clauses with pronoun subjects. According to Platzack, this was possible because the subject pronoun could cliticize onto the complementizer to its left, leaving a gap to license stylistic fronting.⁵ The same environment appears to license stylistic

⁴There is one sort of stylistic fronting in Icelandic that we have not attempted to find in our early Middle English texts; that is, the fronting of adverbs. Because adverb placement is very variable in English, we have not so far found it possible to define contexts where the stylistic fronting of adverbs can be unambiguously identified.

⁵We should note that Falk (1993) argues against Platzack’s extension of stylistic fronting to clauses with pronoun subjects in medieval Swedish. She gives two grounds for doubting Platzack’s proposal. First, the surface word order of stylistic fronting examples with fronted adverbs is not distinguishable from that of clauses in which V-to-I raising has failed to apply; and second, the surface word order of examples with fronted non-finite verbs is not distinguishable from INFL-final

fronting in early Middle English. The following clauses exhibit the fronting of adjectives and negation with pronoun subjects in the same syntactic contexts as the previous examples with undoubted subject gaps.

- (10) a. þah ich **cwic** beo forbearnd baðe lim & lið (CMJULIA,99.62)
 though I alive be burned both limb and joint
 ‘though I be entirely burned alive’
- b. ha **nawhit** ne þearf of oðer þing þenchen (CMHALI,130.32)
 she not NEG must of other thing think
 ‘she must not think of anything else’

We have found four such examples in our texts, two with fronted adjectives and two with fronted *not*. None of the pronoun subject examples with two verbs and a third fronted element involves participle fronting.

Given the strong possibility that English borrowed the stylistic fronting construction from Scandinavian, we cannot be sure that EME examples like those in (11) are structurally INFL-final.

- (11) a. Cumeð children, ðe **liernien** willeð (CMVICES1,59.653)
 come children that learn will
 ‘Come children who want to learn’
- b. & hef hire heorte up to þe hehe healant þe **iheret** is in
 and raised her heart up to the high saviour that praised is in
 heouene (CMKATHE,21.43)
 heaven
 ‘and [she] raised her heart up to the high saviour who praised is in heaven’

If all subject-gap clauses with surface INFL-final word order are removed from consideration, the result is column 2 in Table 1. If, following Platzack’s analysis, we count clauses with pronoun subjects as potential stylistic fronting contexts and remove them from our data, we are left with very few cases of necessarily INFL-final word order. The numbers of these remaining instances are given in the third column of Table 1.⁶ These remaining examples have either an NP subject, as in (12), or an empty/pronoun subject and a heavy constituent before the untensed verb, as in (13).

word order. Hence, she believes that there is no convincing evidence for the existence of stylistic fronting in clauses with pronoun subjects. In our opinion, however, the EME facts undermine both of Falk’s arguments against Platzack. Firstly, perhaps unlike Medieval Scandinavian, EME is clearly a categorical V-to-I raising language, so that the potential ambiguity with adverbs is not relevant in the English case. Secondly, the quantitative analysis we present below argues against treating as INFL-final all of the clauses with pronoun subjects that are ambiguously cases of INFL-final order or stylistic fronting.

⁶To obtain the figures in column 3 of Table 1 we removed all examples where no heavy element intervenes between the complementizer and the untensed verb. Pronouns and light adverbs in that position are treated as potential clitics on COMP and so as compatible with stylistic fronting of the untensed verb. A pronoun is defined as a single, unmodified personal pronoun, and a light adverb as a one-syllable adverb or *ever/never* in any form.

- (12) er þanne þe heuene oðer eorðe shapen were. (CMTRINIT,133.1776)
 before that heaven or earth created were
 ‘before heaven or earth were created’
- (13) a. ʒef ʒe þus godes heste halden
 if you thus God’s commandment keep
 wulleð. (CMANCRIW,II.141.1889)
 will
 ‘if you will thus keep God’s commandment’
- b. þe on þisse liue her hare scrift enden
 that in this life here their shrift complete
 nalden. (CMLAMBX1,43.544)
 NEG-would
 ‘who in this life here would not complete their shrift’

Note that the frequency of INFL-final word order we are left with does not directly give an estimate of the frequency of such clauses. We have no way of knowing, at least at present, how many of the possible cases of stylistic fronting are actual instances of that construction. The fewer the cases of stylistic fronting, the higher the frequency of INFL-final word order. If, contrary to appearances, stylistic fronting was not borrowed into Middle English at all or occurred at a very low rate, then the average frequency of INFL-final word order in our texts would be on the order of 10%, about five times higher than the frequency of necessarily INFL-final cases. This would imply a much greater continuity with Old English than is generally assumed; and in our opinion, it is implausibly high, especially for the West Midlands texts, whose syntax is otherwise quite modern.

We can find another sort of necessarily INFL-final example in our data among those subordinate clauses with only a single tensed verb. Here we follow Pintzuk (1991) and take any clause in which the tensed verb is preceded by at least two heavy constituents to reflect underlying INFL-final word order. Examples are given in (14).

- (14) a. and wel þeazh þanne þat folc godes word ʒierneliche
 and well throve when that folk God’s word earnestly
 listede. (CMTRINIT,163.2185)
 heard
 ‘and [it] throve well when that folk earnestly heard God’s word’
- b. hwen ameyden ure muchele ouergant þus auealleð.
 when a-maiden our great arrogance thus casts-down
 (CMMARGA,81.408)
 ‘when a maiden thus casts down our great arrogance’

The frequency of such INFL-final cases is given in Table 2, which includes all subordinate clauses with a transitive verb in which one of the heavy constituents before the verb is the object.

	Number INFL-final	Number of sub. clauses	% necessarily INFL-final
Ancrene Riwe	10	514	1.9
Katherine Group	11	278	3.9
Lambeth Homilies (L)	6	152	3.9
Lambeth Homilies (E)	11	232	4.7
Trinity Homilies	27	569	4.7
Vices & Virtues	23	393	5.9
Total	88	2138	4.1

Table 2: Subordinate INFL-final clauses with one transitive verb

The frequencies obtained by this method are, on average, about twice as high as those in Table 1, but are still quite low. Once again, the total against which the necessarily INFL-final cases are being compared contains an unknown number of ambiguous clauses,⁷ so that we cannot consider the frequency calculated here to be an unbiased estimate of the frequency of INFL-final word order either. As with the frequencies in Table 1, the frequencies in Table 2 are only a lower bound. There is no reason, moreover, to expect the size of the underestimate here to be the same as in Table 1.

We can obtain an unbiased estimate of the rate of INFL-final word order at the expense of reducing our sample size (hence increasing sampling error) if we consider only clauses with a full NP subject in preverbal position and an auxiliary verb. In such clauses, illustrated in (15), surface word order is a sure guide to underlying order, given our structural assumptions. Because a full NP subject cannot be a clitic on COMP, these clauses cannot be cases of stylistic fronting.

- (15) þæt neauer mi sawle ne isuled beo in sunne. (CMMARGA,57.36)
that never my soul NEG defiled be in sin
‘that my soul may never be defiled in sin’

Table 3 gives the results for these data. The numbers are, as expected, somewhat higher than the uncorrected ones in Table 1, which are also based on clauses with auxiliary verbs. The fact that this unbiased estimate is lower than the frequencies in Table 2 is unexpected, but the unbiased subsample is so small that the differences between the frequencies based on it and the other two calculations are not statistically significant.

Three conclusions can be drawn from the data on INFL-final word order in the texts. First, all of the texts contain some INFL-final clauses. Second, the Southeast Midlands texts exhibit more INFL-final word order on every measure than do the West Midlands texts, indicating that the Southeastern dialect was syntactically more conservative than the West Midlands one, a conclusion that will

⁷All SVO clauses are ambiguous since underlyingly they could be either SVO or INFL-final with extraposition of the object.

	Number INFL-final	Number of sub. clauses	% INFL-final (unbiased)
Ancrene Riwle	1	95	1.1
Katherine Group	1	84	1.2
Lambeth Homilies (L)	1	26	3.8
Lambeth Homilies (E)	1	60	1.7
Trinity Homilies	6	76	7.9
Vices & Virtues	3	84	3.6
Total	13	425	3.1

Table 3: Subordinate INFL-final clauses with an NP subject and auxiliary verb

be reinforced as we examine more data. Because the rate of INFL-final word order is very low, it can be treated as a non-productive remnant of Old English. On the other hand, the fact that the word order occurs even in the West Midlands texts, which are known not to be derived from Old English originals, suggests that INFL-final word order was still somewhat productive in the writing practices of the Early Middle English period. Third, in addition to the specific examples we have cited from the texts, we have quantitative evidence that early Middle English allowed stylistic fronting. We noted above that if we assume the contrary, the rate of INFL-final word order is implausibly high. We can also give a more precise quantitative argument. Consider the data in Table 4. We can see from the last row in this table that our small unbiased subsample of subordinate clauses with auxiliary verbs shows somewhat less than twice as much INFL-final word order as there are necessarily INFL-final clauses in the whole sample (3.1% vs. 1.8%). This means that some of the clauses that are ambiguous between INFL-final word order and stylistic fronting are likely to be INFL-final. If, however, we suppose that *all* of the ambiguous cases are INFL-final (that is, there is no stylistic fronting), then the rate of INFL-final is 9.6% and the unbiased estimate (3.1%) is three times too low, an unlikely result ($p < .001$).

	% INFL-final unbiased	% necessarily INFL-final	Ratio unbiased/ necessarily	% surface INFL-final	Ratio surface/ unbiased
Ancrene Riwle	1.1	0.5	2.20	02.1	1.91
Katherine Grp.	1.2	0.7	1.71	13.0	10.8
Lambeth H. (L)	3.8	1.0	3.80	11.2	2.95
Lambeth H. (E)	1.7	3.5	.486	09.5	5.59
Trinity Homilies	7.9	2.7	2.93	18.0	2.28
Vices & Virtues	3.6	2.6	1.38	09.0	2.50
All data	3.1	1.8	1.72	09.6	3.10

Table 4: Estimates of INFL-final order in clauses with auxiliary verbs

3 VO word order in Early Middle English

3.1 Diagnostic environments for VO phrase structure

There is considerable superficial VO word order in all EME texts; but, as we have mentioned, the existence of rightward extraposition processes in Germanic, including Old English, renders surface VO word order unreliable as a guide to underlying position. There are instances of surface VO order, however, where extraposition is grammatically excluded, so that surface and underlying order should coincide. In general, prosodically light elements do not extrapose to the right in West Germanic; and in clauses with auxiliaries, we can conclude from the presence of such a light element following the untensed verb that the underlying word order of the clause is VO. We have found three types of light elements that can be used as word order diagnostics in this way: pronouns, verbal particles, and stranded prepositions.

The examples in (16) illustrate that in INFL-medial clauses with auxiliary verbs in our texts, pronouns are found in all three of the regions defined by verb position: PRE-INFL, POST-INFL and POST-VERB.

- (16) a. Halie alde ances **hit** maze don summes weis
holy old anchoresses it may do some ways
(CMANCRIW,II.58.565)
'Holy old anchoresses may do it in a certain way'
- b. Sara **þu** hauest **me** ouercumen (CMANCRIW,II.173.2409)
Sarah thou hast me overcome
'Sarah, thou has overcome me'
- c. oðet he habbe izetted **ou** al **þet** 3e wulleð (CMANCRIW,I.68.229)
until he has granted you all that you desire
'until he has granted you all that you desire'

When the pronoun occurs to the right of the untensed verb, as in (16c), we have evidence for underlying VO word order.⁸ It is necessary for the clause to contain an auxiliary verb, of course, because in clauses without an auxiliary the word order finite verb > pronoun is ambiguous between an underlying postverbal pronoun and underlying post-INFL pronoun with verb movement to INFL. Table 5 shows that by the pronoun position diagnostic all the texts have some VO order, but the West Midlands texts appear to be considerably more VO than the Southeastern ones. The Lambeth text is an exception to this generalization and we will return to the significance of its behavior below (see Section 4.2). Because the larger part of the Lambeth Homilies is apparently derived from an 11th century original (see section 1.2 above) and because the homilies are to some extent based on Old English originals, we do not include the data from it in our West Midlands totals. The designation 'Total WM' in the table below and in subsequent tables, therefore, is an

⁸Since the failure of pronouns to extrapose is a consequence of their prosodic weakness, they should be extraposable when stressed. We are ignoring this possibility because the frequency in texts of pronouns whose discourse function (primarily contrast) would support stress is very low.

abbreviation for the totals from the locally composed 12th century West Midlands works – the Ancrene Riwle and Katherine Group manuscripts.

		Pre-I	Post-I	Post-V	% Post-V
West Midlands					
Ancrene Riwle	main	10	7	36	68
	subordinate	23	15	36	49
	total	33	22	72	57
Katherine Group	main	13	10	49	68
	subordinate	29	17	32	41
	total	42	27	81	54
Total WM	main	23	17	85	68
	subordinate	52	32	68	45
	total	75	49	153	55
Lambeth Homilies (L)	main	6	3	0	00
	subordinate	6	1	1	13
	total	12	4	1	06
Lambeth Homilies (E)	main	28	15	3	07
	subordinate	20	13	4	11
	total	48	28	7	08
Southeast Midlands					
Trinity Homilies	main	13	12	8	24
	subordinate	29	14	8	16
	total	42	26	16	19
Vices and Virtues	main	31	11	1	02
	subordinate	59	19	5	06
	total	90	30	6	05
Total SEM	main	44	23	9	12
	subordinate	88	33	13	09
	total	132	56	22	10

Table 5: Position of pronouns in clauses with an auxiliary verb

Our second diagnostic for VO word order is the position of particles, which like pronouns are light elements and therefore do not move rightward. Again we must examine clauses with an auxiliary verb to avoid the interfering effect of verb movement to INFL. Table 6 gives the distribution of particles in our texts. Particles do not generally appear in the pre-INFL position, with the following single exception from the Vices text.

- (17) þat non godes word **upp** ne mai springen (CMVICES1,69.778)
that no god's word up NEG may spring
'that no word of God's may spring up'

The particle data show the same tendency and incline us to the same interpretation as the pronoun data; however, the data here are very sparse and thus not very reliable. As is well known (Spasov 1966), verbal particles are much rarer in EME than in either Old English or Modern English, for reasons that have yet to be elucidated. To the extent that the data are sufficient to allow interpretation, it seems that they show the same relationship among the dialect areas as the pronoun data. Unfortunately, the data from Lambeth are entirely too sparse for us to be able to determine how that text is behaving relative to the others in this context.

Dialect	Post-INFL	Post-VERB	% Post-VERB
West Midlands	2	12	86
Lambeth Homilies	0	2	100
Southeast Midlands	3	1	25

Table 6: Position of particles in clauses with an auxiliary verb

Our final diagnostic for VO order is the position of prepositions that are stranded when their objects move to the left, as illustrated in (18).

- (18) hel mi blodi saule of al þe blodi sunnen þet ha is wið iwundet
 heal my bloody soul of all the bloody sins that she is with wounded
 þurh mine fif wittes; (CMANCRIW,I.62.202)
 through my five senses
 ‘Heal my bloody soul of all the bloody sins that it is wounded with through
 my five senses’

Leaving aside certain cases that are irrelevant for our purposes, like extraction from noun phrases, it is generally assumed that stranded prepositions, in languages that allow them, must be lexically governed by the main verb of their clause. If we further assume, as in Kayne (1984), that this government must be in the direction canonical for the language, then we will expect the pre- or postverbal position of stranded prepositions to be diagnostic of underlying verb-complement word order. Of course, if stranded prepositions can scramble to the left and/or extrapose to the right, or if they can be stranded after such movements, then their surface position will not reliably correspond to their underlying order. Consider in this light the data in Table 7.⁹ These data, though based on many fewer cases, are similar to the pronoun data in Table 5. As in the earlier table, moreover, the Lambeth text here behaves like the Southeastern texts rather than like its geographical neighbors from the West Midlands, reinforcing the notion that there is a systematic difference between it and the other texts. On another point, the similarity between the stranded preposition data and the pronoun data suggests that preposition stranding in EME

⁹The data in Table 7 is limited to subordinate clauses because there are only two main clause examples of preposition stranding in our dataset. This is not surprising as most of the stranded prepositions are stranded by wh-movement and the overwhelming majority of instances of wh-movement in the corpus occur in relative clauses and indirect questions.

is incompatible with extraposition. If it were not, we would expect to find more stranded prepositions in postverbal position than pronouns, since pronouns do not extrapose. Since the frequency of postverbal stranded prepositions is, if anything, slightly lower than the frequency of postverbal pronouns, this expectation is directly contradicted. In this regard, EME seems to resemble modern English, which also seems to disallow the combination of preposition stranding and extraposition, as illustrated in the examples in (19).

- (19) a. Who_i did you give books to t_i yesterday?
 b. *Who_i did you give books yesterday to t_i?

	Pre-INFL	Post-INFL	Post-VERB	% Post-VERB
West Midlands				
Ancrene Riwe	0	9	9	50
Katherine Group	0	11	10	48
Total WM	0	20	19	49
Lambeth Homilies (L)	0	3	0	00
Lambeth Homilies (E)	0	3	1	25
Southeast Midlands				
Trinity Homilies	(2)	10	1	08
Vices and Virtues	(5)	1	0	00
Total SEM	(7)	11	1	05

Table 7: Stranded prepositions in subordinate clauses with an auxiliary verb (stranding both by wh-extraction and by other types of movement (passivization, etc.))

3.2 Scrambling and VO word order

If we took the data of the three tables in Section 3.1 at face value we would be inclined to say that the West Midlands texts exhibit a robust competition between OV and VO word order while the Southeast Midlands texts and the Lambeth Homilies are still largely OV. This conclusion would, however, be premature. Although postverbal pronouns and other light elements are diagnostic of VO word order, preverbal placement of these elements is *not* diagnostic of OV word order. The reason for this asymmetry is that, while light elements do not extrapose to the right, they are known to scramble leftward in the Germanic languages. Hence, surface OV word order could reflect leftward scrambling from an underlyingly VO structure. We must, therefore, investigate the extent of leftward scrambling in our texts if we are to establish the true extent of VO word order.

To begin with, the frequency with which pronouns appear in the pre-INFL position, as in (2) above, tells us that pronoun scrambling was productive in Middle

English. Whenever a non-subject pronoun appears to the left of an auxiliary verb, we can be sure that it has moved from its base position; and since the topic position in these cases is filled by another phrase, the movement is due either to cliticization or to scrambling, which we take to be closely related processes in Germanic. The scrambling of noun phrases to the pre-INFL position is not possible in Middle English INFL-medial clauses, perhaps on account of the verb-second constraint; but both noun phrases and pronouns can be shown to scramble leftward when they appear to the left of a VP-adjoined adverb, as in the following examples.

- (20) a. þæt heo ne schal þene stude neauer mare changin bute for nede
 that she NEG shall the abode never more change but for need
 ane. . . (CMANCRIW,I.46.52)
 alone
 ‘that she shall never again change her abode except when necessary’
- b. þach god ne cunne him neauer þonc of his
 though God NEG can him never thank of his
 sonde. (CMANCRIW,II.102.1233)
 sending
 ‘though God can never thank him for sending it’

Such scrambling is inherited from Old English, as illustrated by the following examples of direct objects scrambling across VP-adjoined adverbs.

- (21) a. & æghwæþer oþerne oftrædlice utdræfde (ChronA, 80.887.10)
 and every-one other frequently out-drove
 ‘and each of them frequently drove the other away’
 [Haeberli 1999: example (39c), p. 356]
- b. he sæde Bedan þæt se cyning Ecfrið him oft behete mycel on
 he said Bede that the king Ecfrið him often promised much on
 lande and on feo (ÆLS B1.3.21)
 land and on property
 ‘He said to Bede that King Ecfrið often promised him much land and property’

The word order of these Old English examples is underlyingly OV and one might suppose that leftward scrambling is limited to OV structures in Germanic. The Middle English examples in (20) show that Germanic scrambling occurs in INFL-medial clauses but the examples would be consistent with a constraint limiting scrambling to underlyingly head-final verb phrases. Certainly, scrambling is common in German and Dutch, both OV languages, and impossible in modern English, a VO language. However, leftward scrambling is possible in some VO Germanic languages. In modern Icelandic, clearly VO in base order, there is productive leftward scrambling of negative and quantified noun phrases (Rögnvaldsson 1987), a phenomenon we discuss in more detail below; and in modern Yiddish, generally taken to be VO in underlying order, scrambling is very productive. Thus, Yiddish pronouns, when

unstressed,¹⁰ usually, though not always, appear to the left of the untensed verb, as illustrated in (22).

- (22) a. Hot der yingl dos gevizn dem tatn un hot **im** gezogt...
 has the boy that shown the father and has him said...
 ‘So the boy showed that to his father and said to him...’
 [Olsvanger 1947: p. 4]
- b. Farvos host du **mikh** damols geshmisn?
 why have you me then hit
 ‘Why did you hit me then?’
 [Olsvanger 1947: p. 4]
- c. Mit dem posik hot **zikh** undzer rov gemakht a shem.
 with the verse has REFL our rabbi made a name
 ‘With that judgment, our rabbi made a name for himself.’
 [Olsvanger 1947: p. 168]

Note that in examples (22b) and (22c) the pronoun is not only preverbal but has scrambled past another preverbal constituent. The scrambling of noun phrases is also possible in Yiddish, though much less frequent. The examples in (23) illustrate this possibility.

- (23) a. Un er ken **di mayse** beser dertseyln.
 and he can the story better tell
 ‘And he can tell the story better.’
 [Olsvanger 1947: p. 3]
- b. Men zol **dem yidn** araynlozn tsun im.
 one should the Jew in-let to him
 ‘They should let the Jew see him.’
 [Olsvanger 1947: p. 75]

Given the widespread occurrence of leftward scrambling in Germanic and the fact that it seems to occur in VO languages, the EME data we have seen so far can only be interpreted as giving a lower bound on the amount of underlying VO word order in the texts. Indeed, at this point in our discussion, the data are compatible with uniform underlying VO word order in all INFL-medial clauses combined with different rates of leftward scrambling in the different texts. To determine whether there actually is leftward scrambling in EME INFL-medial clauses, however, we need undoubted examples of underlying VO word order in which a potentially scrambled element occurs. In other words, we must look for clauses that contain a diagnostic element in postverbal position and another element which might scramble to the left. If this potentially scrambling element never actually appears preverbally and if our sample of possible occurrences is large enough, then we have evidence that

¹⁰In her corpus of Yiddish texts, Beatrice Santorini reports that focused (therefore, stressed) pronouns in Modern Yiddish normally occur in postverbal position, as expected in a VO Germanic language (Santorini, personal communication).

scrambling is impossible in the language of our texts. If, on the other hand, we find cases of preverbal placement of the relevant element, we can conclude that scrambling is allowed. The most common diagnostic environment in our texts is the clause with a double object verb, with one object a pronominal in postverbal position. The other object will then appear in preverbal position if and only if it has scrambled to the left. As Table 8 shows, scrambling clearly does occur.

	NP-V-pro	V-pro-NP
West Midlands		
Ancrene Riwe	5	9
Katherine Group	3	13
Total WM	8	22
Lambeth Homilies (E)		
Southeast Midlands		
Trinity Homilies	0	4
Vices and Virtues	0	2
Total SEM	0	6
All texts	8	29

Table 8: Position of the remaining object in double-object clauses with a postverbal pronoun object

The scrambled noun phrase in this environment may be either a pronoun or a full noun phrase. We give examples of each type, by way of illustration.

- (24) & he **hit** wule ȝelde þe as his treowe feire. (CMANCRIW,II.91.1090)
and he it will yield thee as his true company
‘and he will yield it to you as his true company’
- (25) For alle þeo þe habbeð **ani good** idon me (CMANCRIW,I.64.212)
for all those that have any good done me
‘For everyone who has done me any good’

The evidence for scrambling that we see in Table 8 is limited to the West Midlands texts, excluding once again the Lambeth Homilies. This fact, however, does not allow us to conclude that scrambling is limited to the West Midlands. The reason is that postverbal pronouns are very rare in the Southeastern texts and Lambeth. As a result, our diagnostic environment arises so rarely that the absence of scrambling is unsurprising and uninformative.

Since, in addition to postverbal pronouns, we treat postverbal particles and stranded prepositions as diagnostic of VO order, we should expect to find instances of scrambling in clauses containing these elements. Unfortunately, there are only a handful of clauses in our texts that contain these diagnostic elements along with a direct object. In all but one of these, the direct object is also postverbal. The single instance of scrambling is, however, from a Southeastern text. Example (26) from

the Trinity Homilies has a stranded preposition to the right of the untensed verb and a pronoun to its left.

- (26) Vnderstondeð get an <þing> þat ich **giu** wile warnie
 understand yet one thing that I you will warn
fore. (CMTRINIT,57.774)
 of
 ‘Understand yet one thing that I will warn you of’

If we are correct in treating postverbal stranded prepositions as diagnostic of underlying VO order, then this example is evidence of the scrambling of a pronoun.

In his study of double-object clauses in Old English, Koopman (1990) found several instances of postverbal pronouns with scrambled second noun phrases, one of which we give below.

- (27) Hwi noldest þu **hyt** secgan **me** (Gen 31.27)
 why NEG-wanted thou it say me
 ‘Why didn’t you want to say it to me?’
 [Koopman 1990: example (108), p. 170]

We take examples like this to show that underlying VO order was possible in Old English, as argued by Pintzuk (1998), and also that underlying VO order coexisted with scrambling in Old English. Based on Koopman’s Old English data and our example from the Trinity text, we think it most plausible to assume that scrambling was possible in the Southeastern dialect of EME as well as in the West Midlands. This conclusion is supported by the fact that the Southeastern texts are conservative relative to the West Midlands ones with respect to the frequency of INFL-final word order, since such conservatism implies that the Southeastern texts should be, if anything, more like Old English than the West Midlands texts are. Indeed, we will give evidence below that the rate of scrambling in the Southeastern dialect is quite high, at least for pronouns, and that this high rate of pronoun scrambling is actually responsible for the shortage of diagnostic clauses in the Southeastern texts.

In addition to the evidence for NP scrambling in VO clauses, there is one bit of evidence in our texts that stranded prepositions also scramble leftward across the verb. In particular, we have found the example in (28), in which a pronoun appears to the right of the untensed verb and a stranded preposition has been scrambled leftward.

- (28) þt he schulde **in** huden **him** 3ef he walde
 that he should in hide him if he would
 libben. (CMANCRIW,II.132.1744)
 live
 ‘that he should hide himself in if he would live’

The existence of preposition scrambling in EME is not surprising given that something similar seems to have been possible in OE. While we have not found examples

of scrambled stranded prepositions in the secondary literature on OE, the examples in (29) from Koopman (1990) do seem to be instances of particle scrambling, arguably a similar phenomenon.

- (29) a. þonne hi ðe forð mid him to ðam ecan forwyrde
 when she thee forth with them to the eternal damnation
 gelædon (ÆCHom i.516.18)
 led
 ‘when she led you forth with them to the eternal damnation’
 [Koopman 1990: example (34), p. 31]
- b. þæt ða tanas up æppla bæron (Sat 479)
 that the branches up apples bore
 ‘so that the branches bore apples’
 [Koopman 1990: example (36), p. 31]

Of course, in OE, the assumption has always been that scrambling was occurring from an OV verb phrase but the example in (27) above indicates that this assumption is unwarranted as a general rule, though we have not so far encountered a demonstrably verb-initial verb phrase with scrambling of a particle or prepositional phrase.

4 OV word order in Early Middle English

Given the evidence for the scrambling of pronouns and other light elements, the possibility exists, as noted above, that EME INFL-medial clauses are all underlyingly VO. We do not, however, believe this to be the case. In all of the Germanic languages that move from INFL-final OV word order to INFL-medial VO word order, there is a period when INFL-medial OV surface order is frequent. It seems plausible that learners would posit this order as an underlying possibility at some point in the course of the transition, unless Universal Grammar precluded it; but, as we know, INFL-medial OV languages do exist, for example the West African language Vata, described in Koopman (1984). The plausibility of the underlying OV hypothesis is increased by the fact that EME continues to manifest INFL-final OV order. The language, therefore, has both OV and VO verb phrases, as well as both INFL-final and INFL-medial clauses. It is natural then to expect that the INFL-medial and OV options would combine. Of course, it is true that INFL-final and VO do not combine, but this failure seems to be due to some property of UG (Kiparsky 1996).

Our problem with INFL-medial OV word order is a methodological one. To decide with certainty whether it is a possible underlying order, we must find diagnostics that distinguish underlying INFL-medial OV from the same order when it is produced by scrambling. In addition, there are statistical facts that could potentially bear on the question. In what follows, we attempt to establish a relevant diagnostic and to present associated statistical evidence in support of the hypothesis that there were INFL-medial clauses with underlying OV word order in all of the

EME texts. As we will see, however, the matter is a difficult one to resolve in a definitive way.

There is certainly a great deal of superficial OV word order in all EME texts, as illustrated below.

- (30) a. ear he hefde his ranceun fülleliche
 before he had his ransom fully
 ipaiȝet. (CMANCRIW,II.101.1218)
 paid
 ‘before he had fully paid his ransom’
- b. for þat hie nedden here synnes er bet. (CMTRINIT,69.950)
 for that they NEG-had their sins before atoned-for
 ‘because they had not atoned for their sins before’
- (31) ðanne hie willeð here ibede to godde bidden, (CMVICES1,143.1773)
 when they will their prayer to God pray
 ‘when they will pray their prayer to God’

None of these illustrative examples, however, is a certain case of INFL-medial OV underlying order, since the objects and prepositional complements could have scrambled leftward across the verb. In the examples in (30), the position of the direct object to the left of the adverb indicates, in fact, that scrambling has occurred, but we do not know whether the original position of the scrambled object was pre- or postverbal. The fact that we commonly find examples like (31), with all arguments of the verb in preverbal position, may indicate that underlying OV order is possible but does not demonstrate it. Consider, however, the following examples.

- (32) a. þeos ne schulen neuer **song** singen in
 these NEG shall never song sing in
 heouene. (CMHALI,142.222)
 heaven
 ‘These shall never sing songs in heaven’
- b. þat ne haue noht **here sinnes** forleten. (CMTRINIT,67.934)
 who NEG have not their sins forsake
 ‘who have not forsaken their sins’
- c. and makede him fleme þere he hadde er **louerd**
 and made him outcast where he had before lord
 iben. (CMTRINIT,61.822)
 ben
 ‘and made him an outcast where he had earlier been a lord’

Here we find direct objects to the right of adverbs that they sometimes scramble across. In the INFL-final/OV West Germanic languages, this order is ordinarily taken to indicate that scrambling has not applied. If this interpretation is correct, then these examples are cases of underlying INFL-medial OV order. Unfortunately, the standard interpretation depends on the assumption that the adverbs are attached

low enough in the clause that any leftward scrambling of the object will move it across the adverb. In Middle English, however, this is probably not the case, as the following example shows.

- (33) Þv qǫ ha keiser nauest nawt þis strif rihtwisliche
 thou said she emperor NEG-have not this strife rightly
 idealet (CMKATHE,30.184)
 settled
 ‘ “Thou, Emperor,” she said, “hast not rightly settled this dispute” ’

Here the direct object appears to have scrambled across one adverb but still to be to the right of a second adverb, indicating that the leftmost adverb is attached too high in the clause to serve as a diagnostic for scrambling.

4.1 A constraint on the scrambling of noun phrases

In a recent paper, van der Wurff (1999) describes a construction in Late Middle English (LME) in which a quantified noun phrase appears immediately before the untensed verb. He suggests this construction is related to the Modern Icelandic possibility of placing a negative or quantified object in the same position. This word order is also found to a limited extent in present-day Norwegian and was more widespread in that language in the last century (Christensen 1986, 1987). Examples from Icelandic and Middle English are given below.

- (34) a. Jón hefur fáar bækur lesið.
 John has few books read
 ‘John has read few books.’
 [van der Wurff 1999: example (7), p. 5]
 b. he haþ on vs mercy, for he may al þynge do (Barlam 2740)
 ‘He has mercy on us, for he can do everything’
 [van der Wurff 1999: example (19), p. 8]

Van de Wurff points out that only quantified, especially negatively quantified, noun phrases can appear in this position in LME and Scandinavian, and we might expect the same construction also to be possible in EME. If it were the case that the scrambling of non-pronominal noun phrases were limited to quantified ones, then we would have evidence for underlying INFL-medial OV word order, since most preverbal noun phrases in our texts are not quantificational. Again, clauses with two objects, one of which is a postverbal pronoun and the other a non-pronominal noun phrase, are diagnostic.¹¹ If the non-pronominal noun phrases that appear preverbally prove to all be quantificational, we have evidence that the LME limitation on scrambling also held in EME. If we remove the cases with two pronominal objects from Table 8 and separate the noun phrases into quantificational and non-quantificational types, we obtain the following results.

¹¹In addition, there are two examples in our corpus (although not in the sample being considered in this paper) with a postverbal particle and a preverbal noun phrase object. In both cases the preverbal noun phrase is quantified (CMAYENBI,109.2100, CMPETERB,58.571).

	NP-V-pro		V-pro-NP	
	quant. NP	non-quant. NP	quant. NP	non-quant. NP
West Midlands				
Ancrene Riwle	2	1	2	7
Katherine Group	2	0	4	8
Total WM	4	1	6	15
Lambeth H. (E)	0	0	1	0
Southeast Midlands				
Trinity Homilies	0	0	1	3
Vices and Virtues	0	0	1	1
Total SEM	0	0	2	4
All texts	4	1	9	19

Table 9: Position of quantified and non-quantified NP objects in clauses with a postverbal pronoun object

The numbers here are, of course, very small, and while they lean toward the hypothesis, the following exceptional case occurs in the Ancrene Riwle.

- (35) <Me schal> leoue sustren þese storien tellen eft ou. (CMANCRIW,II.122.1552)
‘One shall, dear sisters, these stories tell afterwards/later to you’

This instance of a postverbal pronoun not immediately following the verb is unique in our dataset. The fact that the pronoun occurs after an adverb suggests that it is extraposed, although from the context it does not appear to be stressed. No other manuscript of this text has exactly this order, but the other manuscripts do not help us to decide what to make of the example. Two (Royal and Gonville & Caius) lack this sentence entirely and two (Titus and Corpus) have the same order with the adverb absent. The remaining manuscript (Nero) has the noun phrase also in postverbal position (*tellen ou þeos storie*).

If we dismiss the exceptional example as an OV clause with an extraposed pronoun, then we can take the position that non-quantificational noun phrases do not prepose in EME. In other words, noun phrase scrambling in EME obeys the same constraints as in LME. If instead we take this example as an instance of the scrambling of a non-quantified noun phrase, then we can perhaps make use of the large difference in the rates of scrambling for quantified and non-quantified noun phrases. From Table 9 we would estimate the rate for quantified noun phrases to be about one third while it would be about 5% for non-quantified noun phrases. Table 10 shows that the average rate of surface OV word order with non-quantified objects in our texts is 30%, a frequency which is too high to be accounted for by leftward scrambling.

		Post-INFL	Post-VERB	% Post-INFL
West Midlands				
Ancrene Riwe	main	18	75	19
	subordinate	25	80	24
	total	43	155	22
Katherine Group	main	15	51	23
	subordinate	25	49	34
	total	40	100	29
Total WM	main	33	126	21
	subordinate	50	129	28
	total	83	255	25
Lambeth Homilies (L)	main	2	14	13
	subordinate	19	7	73
	total	21	21	50
Lambeth Homilies (E)	main	9	42	18
	subordinate	20	63	24
	total	29	105	22
Southeast Midlands				
Trinity Homilies	main	18	49	27
	subordinate	45	36	56
	total	63	85	43
Vices and Virtues	main	11	45	20
	subordinate	37	54	41
	total	48	99	33
Total SEM	main	29	94	24
	subordinate	82	90	48
	total	111	184	38
All Texts	total	244	565	30

Table 10: The distribution of non-quantified noun phrases in clauses with an auxiliary verb

If the rate of underlying OV word order is the same for quantified and non-quantified objects, then the surface frequency of preverbal position for quantified objects will be higher than that for non-quantified objects as a result of the difference in frequency of leftward scrambling of quantified as opposed to non-quantified noun phrases. As Table 11 shows, this is indeed the case.

		Post-I	Post-V	% Post-I QNP	% Post-I non-QNP
West Midlands					
Ancrene Riwe	main	2	10	17	19
	subordinate	6	12	33	24
	total	8	22	27	22
Katherine Group	main	5	8	38	23
	subordinate	4	6	40	34
	total	9	14	39	29
Total WM	main	10	27	28	21
	subordinate	18	26	36	28
	total	28	53	32	25
Lambeth Homilies (L)	main	0	1	0	13
	subordinate	1	1	50	73
	total	1	2	33	50
Lambeth Homilies (E)	main	3	8	25	18
	subordinate	7	7	50	24
	total	10	15	40	22
Southeast Midlands					
Trinity Homilies	main	4	10	29	27
	subordinate	10	5	67	56
	total	14	15	48	43
Vices and Virtues	main	9	10	47	20
	subordinate	9	7	56	41
	total	18	17	51	33
Total SEM	main	13	20	39	24
	subordinate	19	12	61	48
	total	32	32	50	38
All Texts	total	60	85	41	30

Table 11: The distribution of quantified noun phrases in clauses with an auxiliary verb

Given the assumption that the frequency of underlying OV word order is independent of whether the object is quantified or not, the figures in this table allow us to calculate an estimate of the rate of scrambling for quantified noun phrases that is independent of the estimate we obtained from the sparse double-object data in Table 9. The estimate relies on an auxiliary estimate of the frequency of underlying OV word order in clauses with non-quantificational noun phrases. This auxiliary estimate, which is based on the surface frequency of preverbal non-quantificational noun phrases from Table 11 (30%) and the rate of scrambling for this noun phrase

type from Table 9 (5%), comes out to be 26%,¹² with a corresponding frequency of underlying VO word order of 74%. Turning now to quantified noun phrases, the surface frequency of OV word order in our texts is 41%. Since the difference of 15% between this figure and the frequency of underlying OV word order must be due to scrambling from a VO verb phrase, we obtain an estimated rate of scrambling for quantified noun phrases of 20% (15%/74%). If we assume, on the other hand, that non-quantificational noun phrases do not scramble at all, then the frequency of preverbal non-quantificational noun phrases in Table 11 directly reflects the frequency of underlying OV word order, and we obtain an estimated rate of scrambling for quantified noun phrases of 16%.¹³ In sum, then, the estimated rate of scrambling for quantified noun phrases ranges between approximately 15% and 20%.¹⁴

It is of interest to compare quantitatively the pattern of surface OV word order in EME to that described by van der Wurff for LME. Table 12 gives the frequencies of surface OV word order for quantified and non-quantified objects in the LME texts of the second edition of the PPCME.¹⁵

¹²We arrive at 26% on the basis of the following reasoning. The surface frequency of preverbal non-quantificational noun phrases from Table 11 (30%) includes instances of both underlying OV word order and of leftward scrambling from underlying VO word order. If we let x stand for the frequency of underlying OV word order, then the frequency of scrambling is the product of the frequency of VO word order ($1-x$) and the assumed scrambling rate. Solving the equation in (i) for x yields 26%.

$$(i) \quad .30 = x + (1 - x) \cdot .05$$

¹³Under the assumption that non-quantificational noun phrases do not scramble, the frequency of preverbal quantificational noun phrases that must be derived by scrambling is 11% (41% - 30%), the frequency of underlying VO word order is 70% (100% - 30%), and the rate of scrambling is the quotient of the two.

¹⁴The calculations we have given ignore the effect of the extraposition of noun phrase objects from an underlying OV position to a surface postverbal position, as we currently have no way of estimating the frequency of that process. So long as that movement occurs at the same rate for quantified and non-quantified noun phrases, ignoring it will not distort our conclusions. Unfortunately, we cannot at this stage demonstrate that the assumption of a single rate of noun phrase extraposition is justified.

¹⁵Table 12 is based on the following texts (the designations are those of the PPCME): CMAELR3, CMROLLEP, CMROLLTR, CMASTRO, CMBENRUL, CMBOETH, CMCLOUD, CMCTMELI, CMCTPARS, CMEDTHOR, CMEDVERN, CMEQUATO, CMGAYTRY, CMHILTON, CMHORSES, CMJULNOR, CMMANDEV, CMMIRK, CMNTEST, CMOTEST, CMPOLYCH, CMPURVEY, CMROYAL, CMVICES4, CMWYCSE, CMAELR4, CMCAPCHR, CMCAPSER, CMEDMUND, CMFITZJA, CMGREGOR, CMINNOCE, CMKEMPE, CMMALORY, CMREYNAR, CMREYNES, CMSIEGE, CMTHORN.

	Post-INFL		Post-VERB		% Post-INFL	
	QNP	non-QNP	QNP	non-QNP	QNP	non-QNP
main	28	13	289	1694	9	1
subordinate	42	34	305	2367	12	1
total	70	47	594	4061	11	1

Table 12: The distribution of quantified and non-quantified noun phrases in clauses with an auxiliary verb in Late Middle English

As expected, there is a substantial frequency of OV order with quantified objects but almost no OV word order with non-quantified objects. If we assume that LME is uniformly VO in underlying word order, then these data give evidence for a measurable but very low rate of leftward scrambling of non-quantified object noun phrases. Of course, the other possibility is that the OV word order with non-quantified noun phrases represents a last remnant of underlying OV order. In either case, the data support our conclusion that leftward scrambling of non-quantified objects is too rare to account for the frequencies of OV word order in our EME sample. Note that the frequency of scrambling of quantified objects in LME is only slightly lower than the estimates we obtained above from our comparison of the overall rates of OV word order with quantified and non-quantified objects.¹⁶ This will be true however we treat the small amount of surface OV word order with non-quantified objects in the LME data. Since both the EME and LME estimates are based on substantial amounts of data, the near agreement between them is meaningful. Hence, the LME data indirectly support our hypothesis that underlying OV word order exists in EME.¹⁷

¹⁶Given that scrambling of quantified objects is eventually lost from English, it is possible that the difference between the EME estimate of 15-20% and the LME estimate of 11% reflects the beginnings of a decline in such scrambling in the LME texts.

¹⁷These data also support a suggestion by Pintzuk (cited in Wurff 1999) that Middle English quantified noun phrase scrambling may be historically and grammatically independent of generalized OV word order. She proposes that such scrambling may already be present as an independent process in EME and simply be hidden from the analyst's view by the prevalence of generalized OV order. When generalized OV order is lost, quantified noun phrase scrambling remains and becomes easily observable. Van der Wurff, on the other hand, proposes that quantified noun scrambling results from a reanalysis of certain cases of word order. For some reason, not specified, learners resist the uniform postverbal placement of negative and quantified noun phrases, instead reanalyzing the grammar to allow special overt movements of these elements (to Spec,NegP and via Quantifier Raising, respectively) when generalized OV order, which he treats as movement to Spec,AgrO, is lost. Van der Wurff recognizes that he has found little empirical evidence to choose between his account and Pintzuk's alternative. Pintzuk suggests that quantitative data might provide the missing evidence. Indeed, our data seem to us to provide clear support for Pintzuk's proposal since they indicate that the frequency with which quantified noun phrases are scrambled leftward is constant from early to late Middle English. This fact is most easily interpretable if such scrambling is grammatically independent of generalized OV word order.

4.2 Pronoun scrambling

We noted in Section 3.2 that pronouns as well as noun phrases scramble leftward in EME, and the existence of pronoun scrambling raises the issue of whether the large difference in the frequency of OV word order with pronoun objects between the West Midlands and the Southeastern texts (see Table 5) is due to a difference in the frequency of underlying OV word order or a difference in the frequency of pronoun scrambling. Because the data from our diagnostic double-object environment are so sparse, we have no direct way of answering this question. We can, however, address it based on the estimate of OV word order frequency we arrived at in the preceding section. Looking once again at Table 11, we see that the rates of OV word order with non-quantified objects are 25% and 38% in the West Midlands and Southeastern texts, respectively. The difference is somewhat larger in subordinate clauses and nearly disappears for main clauses. If, as we have done, we take these numbers to be reasonable estimates of the rates of underlying OV word order in the texts, then it follows that the observed differences in the placement of pronouns in the two groups of texts cannot be due entirely to differences in the rate of underlying OV word order. As Table 5 shows, the frequency of OV pronoun placement is 45% and 90%, respectively; and the difference is found in both main and subordinate clauses. Hence, we can conclude that, in addition to a modest difference in the frequency of underlying OV word order between the West Midlands and Southeastern texts, there was a large difference in the rate of pronoun scrambling in the two groups of texts. Assuming no scrambling of non-quantified objects, the rate of pronoun scrambling in the West Midlands texts is 27% and the rate in the Southeastern texts is 84%. The fact that we are led to postulate a difference in the rate of pronoun scrambling in our two text groups helps us to make sense of the behavior of the Lambeth Homilies data. The text, although from the West Midlands, behaves like the Southeastern texts in the placement of pronoun objects and stranded prepositions (see Tables 5 and 7 above). On the other hand, it behaves more like a West Midlands text in the placement of noun phrase objects. Since the Lambeth Homilies text is both somewhat earlier than our other West Midlands texts and probably more influenced by Old English, this pattern leads us to propose that while both OV word order and pronoun scrambling decline earlier in the West Midlands than in the Southeast, the decline of the former predates the decline of the latter. The parallelism between the behavior of pronouns and of stranded prepositions provides, in addition, a bit more support for our tentative claim in Section 3.2 that stranded prepositions scramble. Hence, like pronouns, they can be diagnostics for underlying VO word order in postverbal position but are not diagnostic of OV order in preverbal position. Further evidence for decoupling the rate of pronoun scrambling from the rate of underlying OV word order can be found in the word order patterns of the Ayenbite of Inwit, a Kentish text from the 14th century that we have discussed elsewhere in connection with the verb-second constraint in Middle English (Kroch and Taylor 1997; Kroch et al. 2000). With regard to the verb-second constraint, this text is very conservative. At a time when the constraint is being lost everywhere else in England, it is largely intact and in the Old English form in the Ayenbite.

With regard to object position, the text distinguishes pronouns from noun phrase objects in just the expected way. While the latter are largely postverbal (85%), the former are almost entirely preverbal (97%); that is, the Ayenbite looks here like the Lambeth Homilies; largely VO in underlying order but with consistent pronoun scrambling.¹⁸

¹⁸There is a difficulty in the interpretation of the Ayenbite data which weakens the point we are making. It is a translation from the French, and a poorly constructed word-for-word translation at that. It is possible, therefore, that the placement of pronouns in the text has been influenced by the French original, where the object pronouns are verbal clitics. Detailed comparative work on the Ayenbite and the French original might shed light on the likelihood that syntactic calquing is distorting the data.

We end this section with the following table, which shows that pronoun object scrambling has largely disappeared from LME at a time when the scrambling of quantified noun phrase objects was still productive.

	Pre-INFL	Post-INFL	Post-VERB	% Post-VERB
main	2	10	868	99
subordinate	10	33	1208	97
total	12	43	2076	97

Table 13: The distribution of pronouns in clauses with an auxiliary verb in Late Middle English

4.3 Summary

It is difficult to find unambiguous evidence for underlying INFL-medial OV word order in EME but our double-object data do seem to indicate that non-quantificational objects scramble leftward at only a very low rate, if at all. Assuming these data, though sparse, to be representative leads to three consequences. First of all, about one-third of EME INFL-medial clauses become underlyingly OV, with a somewhat higher frequency in the Southeastern texts and a somewhat lower one in the West Midlands texts. As in the case of INFL-final word order, the Southeastern texts appear to be modestly more conservative than the West Midlands ones. Second, if we assume that the rate of underlying OV word order is the same for quantified and non-quantified objects, then our EME data and comparable data from LME agree on an estimate of 10%–20% for the leftward scrambling of quantified objects. Third, not only is there evidence from double-object clauses that pronouns scramble across the untensed verb in EME but there are also too many preverbal pronouns for them all to reflect underlying OV order. Furthermore, the Southeastern and West Midlands texts exhibit different rates of pronoun scrambling. The Lambeth Homilies, while similar to the other West Midlands texts in their rate of underlying OV word order, behave like the Southeastern texts in their rate of pronoun scrambling.

5 Conclusions

This paper reports the first extensive quantitative analysis of Middle English syntax using the second edition of the Penn-Helsinki Parsed Corpus of Middle English. Using a combination of the methods of modern comparative syntax and of quantitative analysis, we have attempted to work out the underlying positions of noun phrase and pronominal object complements in Early Middle English as well as the transformational movements that such objects undergo. Because transformational movements like scrambling and extraposition can produce surface word orders that are indistinguishable from those that reflect untransformed underlying orders, our project has been a difficult one. Nevertheless, we believe that we have uncovered

solid evidence for the following conclusions. First, all EME texts exhibit a small remnant of INFL-final word order, suggesting continuity with late Old English. The Southeastern texts are more conservative in this and other regards than the West Midlands ones. However, the apparent rate of INFL-final word order is much higher than the actual rate due to the interfering effect of stylistic fronting, which mimics INFL-final word order when the fronted element is an untensed verb. Second, there is leftward scrambling of both pronouns and full noun phrases across the untensed verb in VO clauses with auxiliary verbs. This scrambling mimics underlying OV word order and makes it difficult to determine whether such underlying word order exists at all. Thirdly, despite the empirical difficulties, we have found good evidence for the existence of underlying OV order due to the difference in the behavior of quantified and non-quantified objects. The former appear to scramble productively, as in the Scandinavian languages, but the latter either do not scramble leftward at all or do so at a very low rate. Since the rate of surface OV order is quite high (nearly one-third of clauses with non-quantified noun phrase objects), there is reason to admit OV word order underlyingly. Fourthly, the frequency of preverbal pronouns in all of our texts is too high to be entirely accounted for as a reflex of underlying OV order, leading to the conclusion that pronoun scrambling was very productive in EME, as in modern Yiddish. Comparison of the texts, furthermore, shows that the rate of pronoun scrambling varied independently of the rate of underlying OV word order and that the latter declined more broadly and quickly than the former. Finally, it may be useful to point out a broader implication of our study. We have assumed that variation in underlying word order is possible within texts and, based on that assumption, have been able to account for both categorical and frequentistic aspects of EME word order patterning. The ability of our analysis to account for the facts in detail provides, we believe, solid support for the hypothesis, for a time controversial but now perhaps more widely accepted, that grammar competition is a fundamental feature of the texts of languages undergoing syntactic change.

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