York Papers in Linguistics

Series 2

Issue 1

February 2004
ISSN 0307-3238

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Objects in Old English: Why and How Early English Is Not Icelandic*

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Abstract

It is well-known that English in its history changed from predominantly object–verb (OV) in Old English to categorically verb–object (VO) in Modern English. Van der Wurff (1999) made the important observation that the change from OV to VO did not affect all objects at the same time: negative and quantified objects continued to appear in pre-verbal position in Early Modern English, after non-negative non-quantified (henceforth 'positive') objects were all post-verbal. Van der Wurff proposes that up until the beginning of the 15th century, OV word order for all three types of objects was derived in the same way, and he suggests that 15th century English and Modern Icelandic pattern alike in permitting pre-verbal negative and quantified objects in particular syntactic contexts. Using quantitative evidence, in this paper we show, contra van der Wurff (1999), that negative, quantified and positive objects behaved differently and were therefore derived differently during the Old English period. Moreover, it is not the case that the parallel with Icelandic was in place at an earlier stage: we show that negative and quantified objects in Old English do not conform to the pattern of Modern Icelandic.

1 Introduction

It is well-known that English in its history changed from predominantly object–verb (OV) in Old English to categorically verb–object (VO) in Modern English. It is also well-known (see, for example, Foster and van der Wurff 1995; Pintzuk 1996, 2002; van der

*This material was first presented at ICEHL 12 in Glasgow in August 2002. Thanks are due to the audience there for comments, and also to Sarah Clark-Peasey for much helpful discussion of quantifiers and upward and downward entailment in Modern English. All errors and misunderstandings remain our own responsibility. Pintzuk's work was partly supported by AHRB grant RLS-AN4727/APN13199, and by a matching grant from the Department of Language and Linguistic Science, University of York. Correspondence: sp20@york.ac.uk (Susan Pintzuk), at9@york.ac.uk (Ann Taylor).

Wurff 1997, 1999; Kroch and Taylor 2000) that this change was gradual: the position of objects varied in Old and Middle English texts, pre-verbal vs. post-verbal, as shown in (1) and (2) (object in boldface). What is not well-known or established is exactly how this change occurred.

(1) Verb-object order in Old English

a. Ac he sceal **þa sacfullan** gesibbian
but he must the quarrelsome reconcile
'But he must reconcile the quarrelsome'
(colwstan1,+ALet_2_[Wulfstan_1]:188.256)

b. Se wolde gelytlian **þone lyfigendan hælend**
he would diminish the living lord
'He would diminish the living lord'
(colwstan1,+ALet_2_[Wulfstan_1]:55.98)

(2) Verb-object order in Middle English

a. ear he hefde **his ranceun** fulleliche ipaiȝet
before he had his ransom fully paid
'before he had fully paid his ransom'
(CMANCRIW,II.101.1228)

b. ȝef þu wult habben **bricht sichðe** wið þine heorte echnen
if you will have bright sight with your heart's eyes
'if you will have bright sight with your heart's eyes'
(CMANCRIW,II.73.839)

Van der Wurff (1999) made the important observation that the change from OV to VO did not affect all objects at the same time: negative and quantified objects continued to appear in pre-verbal position in Early Modern English, after non-negative non-quantified (henceforth 'positive') objects were all post-verbal. Van der Wurff analysed the change as follows: prior to the 15th century, all OV word order was derived in the same way, regardless of the type of object: movement from post-verbal position within the VP to the specifier of a functional projection, AgrOP, as illustrated in (3) for example (1a).[1]

(3) Ac he sceal [$_{\text{AgrOP}}$ [þa sacfullan]$_i$ AgrO [$_{\text{VP}}$ gesibbian t$_i$]]

According to van der Wurff, when movement to Spec,AgrOP was lost in the beginning of the 15th century, there was a grammatical reanalysis: children acquired a grammar in which negative objects optionally moved to [Spec, NegP] as shown in (4), and quantified objects optionally moved leftward and adjoined to VP (overt QR), as shown in (5). Van der Wurff suggests that 15th century English and Modern Icelandic pattern alike in

[1]Note that under van der Wurff's analysis, the verb also moves from the VP to adjoin to AgrO.

permitting preverbal negative and quantified objects in this and other syntactic contexts, and he assumes the same structure and movements for both languages.[2]

(4) Movement of negative object to [Spec, NegP] (van der Wurff 1999: 256, ex. 55)
[$_{\text{IP}}$ SUBJ AUX$_i$ [$_{\text{NegP}}$ OBJ$_j$ [$_{\text{VP}}$ t$_i$ [$_{\text{VP}}$ V t$_j$]]]]

(5) Overt quantifier raising (van der Wurff 1999: 256, ex. 57)
[$_{\text{IP}}$ SUBJ AUX$_i$ [$_{\text{VP}}$ t$_i$ [$_{\text{VP}}$ OBJ$_j$ [$_{\text{VP}}$ V t$_j$]]]]

However, there is an alternative analysis available for these data: negative objects, quantified objects and positive objects behave differently throughout the history of English. Under this analysis, the change in the beginning of the 15th century was not a reanalysis, but simply the loss of whatever mechanism derived pre-verbal positive objects.

In previous work (Kroch and Taylor 2000; Pintzuk 2002, 2003; Pintzuk and Taylor to appear), we have shown that there is strong evidence to support this alternative analysis for both Old English and Middle English. We assume a syntactic framework in which maximal projections can vary in headedness, with VPs in Old and Middle English either head-initial or head-final in underlying structure. We have demonstrated that while all three types of objects can be generated in either pre-verbal position (OV, i.e. a head-final VP) or post-verbal position (VO, i.e. a head-initial VP), the different object types are affected by different types of movement: positive objects may postpose from pre-verbal position but in general do not prepose from post-verbal position[3]; negative objects may prepose from post-verbal position but not postpose from pre-verbal position; and quantified objects may either prepose or postpose. Abstracting away from irrelevant detail, this is shown in (6) through (8). For positive objects, OV order has just one derivation: base-generation in a head-final VP, as shown in (6a). But VO surface order is structurally ambiguous, with two derivations: postposition from a head-final VP, as shown in (6b), or base-generation in a head-initial VP, as shown in (6c).

(6) Positive objects in Old and Middle English

a. SUBJ AUX [$_{\text{VP}}$ OBJ V]

b. SUBJ AUX [$_{\text{VP}}$ t$_i$ V] OBJ$_i$

c. SUBJ AUX [$_{\text{VP}}$ V OBJ]

For negative objects, VO order has just one derivation: base-generation in a head-initial VP, as shown in (7a). But OV surface order is structurally ambiguous, with two deriva-

[2]See also Jónsson (1996) and Svenonius (2000) for similar proposals for Modern Icelandic.

[3]We distinguish here between scrambling within the pre-verbal field and preposing from post-verbal position leftward over the non-finite verb to pre-verbal position. Positive objects may scramble, but in general they do not prepose. See Kroch and Taylor (2000), Pintzuk (2002) and Pintzuk (2003) for discussion.

tions: base-generation in a head-final VP, as shown in (7b), or leftward movement from a head-initial VP, as shown in (7c).

(7) Negative objects in Old and Middle English
  a. SUBJ AUX [$_{VP}$ V OBJ]
  b. SUBJ AUX [$_{VP}$ OBJ V]
  c. SUBJ AUX OBJ$_i$ [$_{VP}$ V t$_i$]

And finally, for quantified objects, both OV and VO surface order are structurally ambiguous, since each has two possible derivations: these objects may move leftward from a head-initial VP, as shown in (8b), or move rightward from a head-final VP, as shown in (8d).

(8) Quantified objects in Old and Middle English
  a. SUBJ AUX [$_{VP}$ OBJ V]
  b. SUBJ AUX OBJ$_i$ [$_{VP}$ V t$_i$]
  c. SUBJ AUX [$_{VP}$ V OBJ]
  d. SUBJ AUX [$_{VP}$ t$_i$ V] OBJ$_i$

In this paper, we first present quantitative evidence supporting the hypothesis that the three types of objects behave differently throughout the history of English, beginning in the Old English period; and then present evidence contradicting the hypothesis that negative and quantified objects behave the same way in Old English and Modern Icelandic. The Old English data used for analysis were taken from the York-Toronto-Helsinki Parsed Corpus of Old English Prose (henceforth the YCOE, Taylor, Warner, Pintzuk, and Beths 2003)[4], and consist of I-medial clauses with auxiliary verbs[5] and non-pronominal objects. We included clauses only where the object occurs between the finite auxiliary and the non-finite main verb, as in the (a) examples of (1), (9) and (10), or after the main verb, as in the (b) examples.[6]

(9) a. ða deadan ne magon **nanwuht** witan
  the dead NEG can nothing understand
  'the dead can understand nothing'
  (cocura,CP:55.429.24.3026)

[4]Thanks are due to Beth Randall for CorpusSearch, the software that makes it possible to search large annotated corpora like the YCOE.

[5]The position of the auxiliary verb is the diagnostic for the position of I: in general, if the finite auxiliary comes before the non-finite main verb, the clause is I-medial; if the finite auxiliary comes after the non-finite main verb, the clause is I-final. See Pintzuk (1993, 1999) for further details and discussion.

[6]Clauses with the object before the finite auxiliary were not included, because it is not clear that objects in pre-auxiliary position are derived in the same way as objects between the auxiliary and the main verb.

  b. forþan þe man ne mot halgian **nan husel**
  because one NEG may sanctify no sacrifice
  'because one may sanctify no sacrifice'
  (colwstan2,+ALet_3_[Wulfstan_2]:37.41)

(10) a. Æðeldryð wolde ða **ealle woruldþincg** forlætan
  Aethelthryth wished then all worldly-things abandon
  'then Aethelthryth wished to abandon all worldly things'
  (coaelive,+ALS_[+Athelthryth]:31.4159)

  b. ic wille fordon **eal mancyn** mid wætere
  I will destroy all mankind with water
  'I will destroy all mankind with water'
  (cocathom1,+ACHom_I,_1:185.182.187)

Multivariate analysis was used to determine the strength and significance of the factors influencing the position of objects in these clauses. In most cases, we report frequencies and not probabilistic weights (output from multivariate analysis) for the quantitative data, since the weights did not usually differ from the frequencies in relative order and thus do not add any additional information. We show probabilistic weights only where required for clarity.

2 The behaviour of positive, quantified and negative objects

The first step is to examine the quantitative data to determine whether positive, quantified and negative objects behave differently from each other in Old English. Table 1 shows that the frequency of pre-verbal position is different for the three types: positive objects occur in pre-verbal position less frequently than quantified objects, which in turn occur in pre-verbal position less frequently than negative objects.

	N	% pre-verbal
Positive objects	3893	53%
Quantified objects	376	60%
Negative objects	143	82%

Table 1: Frequency of pre-verbal objects in Old English

However, this does not necessarily mean that the three types of objects are treated differently in the grammar; it is often the case that different environments may favour or disfavour a grammatical option (see Kroch 1989 for a particularly clear case, the rise of periphrastic *do* in the history of English). Different derivations for the three object types are indicated only if different factors influence their position in different ways. To some

extent this is true, as summarised in Table 2 and discussed in more detail below. Table 2 shows that three factors[7] (length of object, clause type, and date of composition) have a statistically significant effect on the position of positive objects. For quantified objects, only length is statistically significant, but the frequencies and probabilistic weights for clause type and date of composition follow the same pattern as for positive objects. And for negative objects, their position is affected by length and date of composition, but the significance of the effect of these two variables cannot be determined because of the small sample size: a minimum of 200 tokens is necessary for multivariate analysis, and there are only 143 clauses in the corpus with negative objects between the auxiliary and the main verb or after the main verb.

	Length of object	Clause type	Date of composition
Positive objects	√	√	√
Quantified objects	√	√?	√?
Negative objects	√?		√?

Table 2: Factors having an effect on the position of objects in Old English (√ indicates a statistically significant effect, √? indicates a similar but not significant effect)

Let us first consider the effect of length on the position of the object. As shown in Table 3, the shorter the object, the more likely it is to appear pre-verbally. The effect of length may reflect the information status of the object: shorter objects represent old information and appear earlier in the clause; longer objects represent new information and appear towards the end of the clause, i.e. after the non-finite main verb. Alternatively, the effect of length may reflect a processing constraint, with center-embedded long constituents more difficult to process and therefore avoided.

Length in words	Positive objects		Quantified objects		Negative objects	
1	787	75%	56	84%	16	100%
2	1753	61%	159	74%	103	84%
3	656	44%	73	52%	14	86%
4 or more	697	19%	88	27%	10	30%
Total	3893	53%	376	60%	143	82%

Table 3: The effect of length on the position of objects in Old English (N, % pre-verbal)

Although the correlation between length and position holds for all three types of objects, the distribution in Table 3 indicates a difference in the behaviour of negative objects compared to the other two types. Length grading is quite regular for positive and quantified objects; but for negatives, 2-word objects and 3-word objects behave about the same. And although the number of negative objects of four or more words is quite

[7]Other factors (case, influence of Latin exemplar) have a significant effect; see Pintzuk and Taylor (to appear) for discussion.

small (there are only ten in the database), the frequency difference between objects three words long and objects four or more words long is much greater for negative objects (86% compared to 30%) than for positive objects (44% compared to 19%) or for quantified objects (52% compared to 27%).

Table 4 shows the effect of clause type on the position of objects in Old English. The clauses were divided into four categories: main clauses, conjoined main clauses, subordinate clauses, and conjoined subordinate clauses. Conjoined main clauses were considered separately from non-conjoined main clauses, since it has frequently been suggested that conjoined clauses in Old English behave syntactically more like subordinate clauses than like main clauses (e.g. van Kemenade 1987). Conjoined subordinate clauses are subordinate clauses which do not have overt complementisers or subordinating conjunctions and which are conjoined to other subordinate clauses whose subordination is overtly marked; for these as well, it is not always clear whether they are main or subordinate in their structure and behaviour. If we look first at positive objects in Table 4, we can see that subordinate clauses favour objects in pre-verbal position more than main clauses (60% vs. 40%), with the two conjoined clause types falling in between (49% and 51%). In other words, subordinate clauses favour OV, main clauses favour VO. The same pattern holds for quantified objects: subordinate clauses favour objects in pre-verbal position more than main clauses (66% vs. 50%); conjoined main clauses have a frequency between these two extremes (56%). Although quantified objects in conjoined subordinate clauses appear in preverbal position with a lower than expected frequency (44%), this is probably the effect of the small number of clauses (only nine).[8] In contrast, the frequencies for negative objects do not follow this pattern at all. Thus the position of positive objects and quantified objects is affected by the type of clause in a clearly interpretable way, while the position of negative objects is not. We see that the behaviour of the three types of objects is not uniform during the Old English period.

Clause type	Positive objects		Quantified objects		Negative objects	
Main	879	40%	78	50%	33	91%
Conjoined main	694	49%	72	56%	43	79%
Subordinate	2163	60%	217	66%	60	78%
Conjoined subordinate	157	51%	9	44%	7	100%
Total	3893	53%	376	60%	143	82%

Table 4: The effect of clause type on the position of objects in Old English (N, % pre-verbal)

Finally, let us consider the effect of date of composition of the text on the position of objects in Old English, as shown in Table 5.[9] The texts were divided into two groups

[8]If one more quantified object had been pre-verbal, the frequency would have been 56%, the same as for conjoined main clauses.

[9]Note that the totals shown in Table 5 are different from those in previous tables. This is because

according to date of composition: early (before 950) and late (after 950).[10] For positive objects, the factor group is statistically significant; the early texts favour pre-verbal position (OV), the later texts disfavour pre-verbal position (and therefore favour VO). For quantified objects, the factor group is not statistically significant, but the frequencies (and probabilistic weights) show the same pattern as for positive objects. Similarly for negative objects: although there is not enough data to obtain significant results from multivariate analysis, the frequencies pattern with the positive object data.

Date of composition	Positive objects		Quantified objects		Negative objects	
Early	1416	57%	178	63%	49	92%
Late	2310	50%	179	56%	83	78%
Total	3726	53%	357	61%	132	83%

Table 5: The effect of date of composition on the position of objects in Old English (N, % pre-verbal)

In summary, we have shown that although the general patterns of distribution are similar, there are some quantitative differences between positive, quantified and negative objects in Old English. The position of positive objects is significantly influenced by length, clause type and date of composition; the position of quantified objects is influenced by the same factors, but the effect of clause type is not statistically significant; and the position of negative objects is influenced by length and date of composition, with the significance of the effects unmeasurable. In addition, the effect of length is the same for positive and quantified objects, but very different for negative objects. Since the factors influencing the position for the three types are different, we conclude that the hypothesis that they are derived by different processes is supported by the quantitative data.

The fact that OV surface order for negative and quantified objects has two derivations explains the fact that these objects occur in pre-verbal position more frequently than positive objects do, in the following way. Let us assume that the frequency of head-final VP structure is decreasing over the Old English period, a reasonable assumption given the fact that OV order is decreasing for positive objects.[11] Let us further assume

some of the Old English texts could not be dated, and were therefore excluded from this factor group.

[10] It would have been desirable to date the texts more precisely so that date of composition could be used as a continuous rather than a discrete variable. To do this, a precise date must be assigned to each text. This is straightforward in the case of texts like Aelfric's *Lives of Saints*, which most scholars agree was composed between 993 and 998: a date of, say, 995 can be assigned. But for some texts, estimates for the date of composition span 100 years; assigning the midpoint of a 100-year period as the date of composition for the purposes of quantitative analysis seems meaningless.

The dividing point of 950 was chosen for two reasons. First, it coincides with the dividing point of the Helsinki Corpus periods 2 and 3, and thus was easy to implement. Second, of the Old English texts which are more precisely datable, almost none were written in the middle of the 10th century, and thus there were very few difficult decisions to make.

[11] Another possibility is that the frequency of postposition increases over the Old English period; Pintzuk (2002) shows that that hypothesis is not supported by the data.

that the frequency of head-final structure is independent of type of object. Then the frequency of OV order for negative objects is the frequency of head-final VP structure plus the frequency of negative object preposing from head-initial VP structure, a total frequency that by definition must be higher than the rate of head-initial VP structure alone. Similarly, the frequency of OV order for quantified objects is the frequency of head-final VP structure plus the frequency of quantified object preposing from head-initial VP structure; again, this must be higher than the rate of head-initial VP structure alone. Similarly, the fact that negative objects appear pre-verbally at a higher frequency than quantified objects is explained by the fact that while quantified objects may postpose, negative objects may not.

3 Comparing Old English and Modern Icelandic

Now that we have seen that positive, negative and quantified objects behave differently in Old English, the next step is to determine whether Old English looks like Modern Icelandic with respect to the behaviour of objects. The constraints on OV word order in Icelandic are shown in (11), with Icelandic examples illustrating the constraints in (12) and (13).[12]

(11) Constraints on OV order in Modern Icelandic (Rögnvaldsson 1987; Svenonius 2000)

a. Positive objects are categorically VO.

b. Negative objects are categorically OV, and always appear immediately before the highest non-finite verb.

c. Quantified objects are optionally OV; when they are pre-verbal, they always appear immediately before the highest non-finite verb.

d. According to Rögnvaldsson (1987), the position of quantified objects is influenced by three factors,

i. speaker: not all Icelandic speakers accept quantified objects in pre-verbal position;

ii. length: the shorter the object, the more likely it is to appear pre-verbally;

iii. negativity: the more 'negative' the quantifier, the more likely it is to appear pre-verbally.

The contrast between (12a) and (12b) shows that negative objects in Icelandic must occur pre-verbally. (12c) through (12f) illustrate the contrast between quantifiers that

[12] It should be noted that not all Icelandic speakers agree in their judgements of the acceptability of the examples given below. Thanks are due to Gunnar Hrafn Hrafnbjargarson for his judgements on Icelandic data.

are more or less negative: (12c) and (12d) show that the quantified object *lýtið* 'little', a strongly 'negative' quantifier, favours pre-verbal position; while (12e) and (12f) show that the quantified object *mikið* 'much', a more 'positive' quantified object, favours post-verbal position.

(12) Modern Icelandic examples (from Rögnvaldsson 1987)

a. * Jón hefur getað lesið **ekkert**
John has could read nothing

b. Jón hefur **ekkert** getað lesið
John has nothing could read
'John has not been able to read anything'

c. * Jón hefur getað lesið **lýtið**
John has could read little

d. Jón hefur **lýtið** getað lesið
John has little could read
'John has not been able to read much'

e. Jón hefur getað lesið **mikið**
John has could read much

f. ?? Jón hefur **mikið** getað lesið
John has much could read
'John has been able to read much'

The examples in (13) demonstrate that when the quantified object appears in pre-verbal position, it must be immediately adjacent to the (highest) non-finite verb.

(13) More Modern Icelandic examples (from Svenonius 2000)

a. Hann getur ennþá **fáar bækur** lesið
he can yet few books read

b. * Hann getur **fáar bækur** ennþá lesið
he can few books yet read

Let us now test the following hypothesis: Old English differs from Modern Icelandic in only one respect; positive objects in Old English, in contrast to Icelandic, are permitted in pre-verbal position. In terms of the analysis presented in Section 1, this means that Old English has variation in the structure of the VP, head-initial vs. head-final, while Modern Icelandic is uniformly head-initial in VP structure. We will now examine the constraints on negative objects and quantified objects in Old English and compare them to the Icelandic data.

As we have seen above, Old English negative objects do not behave quite like Icelandic objects: OV order is not categorical for Old English negative objects, and the position of the object is influenced by its length. Moreover, pre-verbal negative objects are not

always adjacent to the highest non-finite verb, as illustrated by the contrast between (14a) and (14b).

(14) a. & ne dorste ofer þæt **nan þing** biddan
and NEG dared after that no thing ask
'and he didn't dare to ask anything after that'
(cogregdC,GD_2_[C]:31.164.27.1983)

b. Ac we ne magon **nænne sædere** **Godes lare** rihtlicor
but we NEG can no sower (of) God's doctrine more-rightly
undergytan
perceive
'But we cannot perceive more rightly any sower of God's doctrine'
(cocathom2,+ACHom_II,_6:54.58.1100)

But the difference in the position of pre-verbal objects illustrated in (14) is not limited to negative objects: pre-verbal positive objects in Old English are not always adjacent to the verb, as shown in (15). We will assume that Old English objects of all types, once they are in pre-verbal position, can scramble leftward over VP adverbials. This means that it is only the optionality which makes the behaviour of Old English negative objects different from Icelandic negative objects.

(15) æfter þæm þe Lacedemonie hæfdon **Perse** oft oferwunnen
after Lacedaemonians had Persians frequently overcome
'after the Lacedaemonians had frequently overcome the Persians'
(coorosiu,Or_3:1.53.10.1020)

Now let us consider quantified objects. Quantified objects in both Old English and Modern Icelandic exhibit similar behaviours: pre-verbal position is optional, and the position of the object is influenced by its length. In Old English, quantified objects, like negative objects, are not necessarily adjacent to the verb, as shown in (16). According to our assumptions so far, this difference between Old English and Icelandic is accounted for by the possibility of scrambling in the middle field in Old English.

(16) a. ond he ne mihte longe tid **owiht** gangan
and he NEG could (for) long time anything gain
'and for a long time he could not gain anything'
(comart3,Mart_5_[Kotzor]:Jy6,B.4.1073)

b. ac he hine wyle swiðe seldon **ænegum mæn** swa openlice
but he him(self) will very rarely (to) any men so openly
geawian
display
'but he will very rarely display himself to any men so openly'
(cosolilo,Solil_1:42.17.541)

However, the favouring effect in Icelandic for pre-verbal position of the more negative quantifiers is not exhibited by the Old English data, as shown in Table 6.[13]

Quantifier	N	% pre-verbal	Prob. weight	'Negativity'
mæst 'most'	3	100%	–	+
æghwæt 'each'	1	100%	–	+
aht 'any'	8	100%	–	+
feawe 'few'	1	100%	–	–
begen 'both'	2	100%	–	+
ma 'more'	33	82%	[.74]	+
ænig 'any'	32	75%	[.58]	–
manig 'many'	22	68%	[.57]	+
lyt 'little'	7	71%	[.53]	–
fela 'much'	15	60%	[.52]	+
ælc 'each'	39	59%	[.46]	+
eall 'all'	151	52%	[.46]	+
hwæthugu 'some'	15	60%	[.40]	–
hwilc 'any'	7	43%	[.39]	–
micel 'much'	25	40%	[.39]	+
Total	361	60%		

Table 6: The effect of quantifier type on the position of objects in Old English

First, note that a multivariate analysis of quantified objects shows that the effect of quantifier type is not significant for the position of these objects in Old English. Second, the quantifier types themselves do not pattern as they do in Icelandic. The quantifiers are grouped into three categories: those that are categorically pre-verbal, and therefore could not be included in the multivariate analysis run[14]; and those with probabilistic weights above .5, that favour pre-verbal position; and those with weights below .5, that disfavour

[13]In Table 6 we report probabilistic weights, since the frequencies may be misleading. Probabilistic weights fall between 0 and 1. If the weight is greater than .5, the factor favours pre-verbal position; if the weight is less than .5, the factor disfavours pre-verbal position; if the weight is close to .5, the factor has very little effect on the position of the object. We use the standard notation of bracketing the weights for factor groups that are not statistically significant, like this one.

Note that the total shown in Table 6 is different from those for quantified objects in previous tables. This is because some Old English quantifiers (e.g. *gehwa* 'each one, every one, any one', *gehwilc* 'each, any, every, all, some, many') can have two meanings, one 'negative' and one not, and it is difficult to interpret the meaning from the context.

[14]It should be pointed out that the numbers for quantifiers that show categorical behaviour are quite small, and therefore the lack of variation may well be due to chance. Variants that are categorical are known as 'knockout factors'. They cannot be included in the multivariate analysis because the statistical algorithm requires that all factors included exhibit variation. There are two methods for dealing with knockout factors: either they can be combined with another factor that is similar both linguistically and statistically; or they can be excluded from the analysis altogether. We have chosen the latter option so that statistical differences between quantifiers with the same meaning are revealed.

pre-verbal position. If Old English followed the Icelandic pattern, we would expect the more negative quantifiers (those marked '–' in the 'Negativity' column) to favour pre-verbal position and the more positive quantifiers (those marked '+') to disfavour pre-verbal position. Instead, Table 6 shows that the pattern is random.

4 Conclusions

A quantitative study of the position of objects in Old English, using a large corpus of annotated texts, permits the following conclusions. First, negative, quantified and positive objects behaved differently during the Old English period. Second, negative and quantified objects in Old English do not conform to the pattern of these types in Modern Icelandic. Thus, the quantitative evidence does not support the analysis of van der Wurff (1999). It should be emphasised, however, that while the data presented in this paper provide a clear description of the behaviour of negative and quantified objects, it is a description, not an analysis or explanation. Svenonius (2000) has proposed that the position of quantified objects in Modern Icelandic (pre- vs. post-verbal) is due to scopal relations. Scope is notoriously difficult to determine in languages without native speakers, but that is the next obvious hypothesis to investigate, along with the interaction of object position, polarity and negative concord.

References

Foster, T. and W. van der Wurff (1995). The survival of object–verb order in Middle English: some data. *Neophilologus 13*, 309–327.

Jónsson, J. G. (1996). *Clausal Architecture and Case in Icelandic*. Ph. D. thesis, University of Massachusetts at Amherst.

Kroch, A. S. (1989). Reflexes of grammar in patterns of language change. *Language Variation and Change 1*, 199–244.

Kroch, A. S. and A. Taylor (2000). Verb-complement order in Middle English. In S. Pintzuk, G. Tsoulas, and A. Warner (Eds.), *Diachronic Syntax: Models and Mechanisms*, pp. 132–163. Oxford: Oxford University Press.

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

Pintzuk, S. (1996). Old English verb–complement word order and the change from OV to VO. *York Papers in Linguistics 17*, 241–264.

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

Pintzuk, S. (2002). Verb-object order in Old English: variation as grammatical competition. In D. W. Lightfoot (Ed.), *Syntactic Effects of Morphological Change*. Oxford: Oxford University Press.

Pintzuk, S. (2003). Quantified and non-quantified objects in Old English: problems for a universal base account. Talk presented at the 18th Comparative Germanic Syntax Workshop, University of Durham, September 2003.

Pintzuk, S. and A. Taylor (to appear). The loss of OV order in the history of English. In A. van Kemenade and B. Los (Eds.), *Blackwell Handbook of the History of English*. Oxford: Blackwell.

Rögnvaldsson, E. (1987). OV word order in Icelandic. In R. D. S. Allan and M. P. Barnes (Eds.), *Proceedings of the Seventh Biennial Conference of Teachers of Scandinavian Studies in Great Britain and Northern Ireland*, pp. 33–49. London: University College London.

Svenonius, P. (2000). Quantifier movement in Icelandic. In P. Svenonius (Ed.), *The Derivation of VO and OV*, pp. 255–292. Amsterdam: John Benjamins.

Taylor, A., A. Warner, S. Pintzuk, and F. Beths (2003). The York-Toronto-Helsinki Parsed Corpus of Old English. University of York, Department of Language and Linguistic Science. Available via the Oxford Text Archive.

van der Wurff, W. (1997). Deriving object–verb order in Late Middle English. *Journal of Linguistics 33*, 485–509.

van der Wurff, W. (1999). Objects and verbs in modern Icelandic and fifteenth-century English: a word order parallel and its causes. *Lingua 109*, 237–265.

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