

# Inflectional Morphology and the Loss of V2 in English

Eric Haeberli, University of Reading  
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## 1 Introduction

Old English (OE) exhibits word order patterns which are reminiscent of the Verb Second (V2) phenomenon found in many modern Germanic languages. Thus, fronting of some constituent often leads to subject-verb inversion and hence to a word order in which the finite verb occurs in second position. This is illustrated in the following examples (if no secondary source is cited, the OE data in this paper are taken from the "Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English").

- (1) a. [Ðas gifu] *sealde* seo ceasterwaru on Tharsum Apollonio þam tiriscan  
(Apollo,16.10.16)  
This gift gave the citizens in Tharsus Apollonius the Tyrian  
'The citizens of Tharsus gave this gift to Apollonius the Tyrian.'
- b. [Him] *geaf* ða se cyngc twa hund gildenra pænega  
(Apollo,42.51.20)  
Him gave then the king two hundred golden pennies  
'Then, the king gave him two hundred pence in gold.'
- c. [On his dagum] *sende* Gregorius us fulluht  
(ChroA2,18.565.1)  
In his days sent Gregory us baptism  
'In his time, Gregory sent us Christianity.'

V2 patterns have been lost to a large extent in the history of English and the word orders found in the OE examples in (1) would be ungrammatical in Modern English. The loss of V2 in English is an issue which has received considerable attention in the literature (cf. e.g. Fuss 1998, van

Kemenade 1987, Kroch et al. 2000, Lightfoot 1995, 1997, Platzack 1995, Roberts 1993, Stockwell 1984). However, the discussions in the literature generally raise two main problems. First of all, detailed data describing the change are rare. And secondly, no satisfactory explanation has been found so far as to why this change occurred.

This paper addresses the second issue, i.e. the question why V2 was lost in the history of English (for a discussion of the first issue, cf. Haeberli 2000). The main proposal will be that the loss of V2 in English is a consequence of the loss of empty expletives and ultimately of a change in the verbal morphology. The paper is organized as follows. Section 2 contains some general observations concerning the loss of V2 in English. In section 3, two previous explanations of the loss of V2 will be discussed and rejected, and a new account will be developed which is based on comparative evidence from modern Germanic. Section 4 shows how, on the basis of the approach proposed in section 3, the loss of V2 can be related to a change in the verbal morphology of English. Finally, section 5 addresses some remaining issues and section 6 summarizes the paper.

## **2 The Loss of V2 in English – Some General Observations**

Before we start investigating the reasons for the loss of V2 in the history of English, a few remarks are necessary as to what exactly was lost and how it was lost. With respect to what was lost, we first can observe that for OE, i.e. the earliest attested period of the history of English, two V2 contexts have been distinguished in the literature (cf. e.g. van Kemenade 1987, Pintzuk 1991), namely (i) V2 contexts involving a fronted operator and (ii) V2 contexts involving a fronted non-operator. In context (i), Modern English still requires the presence of a finite verbal element in a position immediately following the fronted operator (cf. e.g. *When (will) he (\*will) leave?*). The main difference between OE and Modern English is that the fronted verbal element cannot be a main verb any more in Modern English, but this restriction is the consequence of a more general development affecting the movement properties of main verbs (cf. e.g. Kroch 1989)

rather than a substantial change concerning the syntax of V2. The crucial context for changes in the V2 syntax of English is therefore context (ii) in which a non-operator is fronted, as illustrated in the examples in (1) above. The Modern English equivalents of these examples would be ungrammatical even if an auxiliary followed the fronted non-operator. Thus, what was lost in the history of English is the frequent occurrence of V2 patterns when a non-operator is fronted.

However, if we consider the situation with respect to V2 with fronted non-operators in OE more closely, we can observe that, even at that stage, English was not a V2 language which would be entirely comparable to the modern Germanic V2 languages. There are two main properties which distinguish OE from modern Germanic. First of all, the occurrence of V2 orders depends on properties of the subject. More precisely, genuine V2 orders with fronted non-operators generally occur only with non-pronominal subjects. As for pronominal subjects, they precede the finite verb, thereby giving rise to 'XP-subject-V' orders (V3) rather than to V2 (cf. e.g. van Kemenade 1987, Pintzuk 1991; example from Pintzuk 1991:202)

(2) [hiora untrymnesse] [he] *sceal* ðrowian on his heortan (CP, 60.17)

their weakness he shall atone in his heart

'He shall atone in his heart for their weakness.'

The OE word order in (2) corresponds to the order found in Modern English and not to that found in the modern Germanic V2 languages. Clauses with a fronted non-operator and a pronominal subject therefore do not manifest any observable changes with respect to their surface word order in the history of English.

The second difference between OE and the modern Germanic V2 languages is that even with non-pronominal subjects the V2 pattern is not entirely systematic in OE. Thus, we regularly find clauses in which a non-operator is fronted but in which the full DP subject and the finite verb are not inverted. This again leads to V3 orders.

- (3) a. & [fela ðinga] [swa gerad man] *sceal* don (Law4, 448.5.4)  
 and many things so wise man must do  
 'And such a wise man must do many things.'
- b. [Sumum monnum] [God] *seleð* ægðer ge good ge yfel gemenged, ... (Bo, 133.21)  
 Some persons God gives both good and bad mixed  
 'God gives some people both good and bad things.'
- c. & [from Offan kyninge] [Hygebryht] *wæs* gecoren (ChronA, 52.785.1)  
 and from Offa king Hygebryht was chosen  
 'and Hygebryht was chosen by king Offa.'

Although V2 orders are much more frequent in such contexts than V3 orders, the frequency of exceptions to the V2 pattern as shown in (3) is by no means negligible. For example, in ten text samples taken from the "The Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English", 654 clauses with non-pronominal subjects have a fronted non-operator in initial position. Subject-verb inversion occurs 466 times (71.3%) whereas non-inversion (i.e. V3) can be found in 188 clauses (28.7%) (cf. Haeberli 2000 for a more detailed discussion of these data).<sup>1</sup> Non-inversion occurs most frequently with fronted adverbial elements. However, fronted arguments also regularly do not give rise to inversion. In the same ten text samples, we can find 130 clauses with a fronted object of which 22 (16.9%) have the order subject-finite verb. Similar observations are made by Koopman (1998). In the text samples Koopman studied, 7 to 49% of the clauses involving a fronted object lack subject-verb inversion when the subject is non-pronominal (23.7% non-inversion if the figures of all samples are taken together).

To sum up, the context which is of interest for the discussion of the development of V2 in the history of English is the type of clause in which a non-operator is fronted and the subject is non-pronominal. In such a context, subject-verb inversion is the clear majority pattern in OE whereas

in Modern English V2 is generally not possible any more. Let us now briefly consider the development of this change from OE to Modern English.

The situation in Early Middle English (EME) is still comparable to that found in OE. Kroch and Taylor (1997:311) discuss the frequencies of subject-inversion in seven texts from the early 13<sup>th</sup> century. These frequencies show that, as in OE, inversion is still predominant with full DP subjects when a non-operator is fronted. If all of Kroch and Taylor's figures for the different texts are taken together, we obtain a frequency of inversion of 71.4%. This figure is very close to the one mentioned above for the OE text samples from the "Brooklyn-Geneva-Amsterdam-Helsinki Parsed Corpus of Old English" (i.e. 71.3%). Hence, the status of V2 does not seem to have changed yet at the beginning of the Middle English (ME) period.

During the Middle English (ME) period, however, the frequency of inversion (V2) decreases considerably and, as observed by van Kemenade (1987:183ff.), V2 starts being lost by around 1400. This observation is confirmed by data from 31 text samples from the "Penn-Helsinki Parsed Corpus of Middle English" which cover the period between 1350 and 1500 (cf. Haeberli 2000 for discussion). In 27 out of the 31 texts, the frequency of subject-verb inversion in contexts of non-operator fronting which would not allow inversion in Modern English is below 50%, and in 19 out of the 31 texts this frequency is even below 25%. Thus, by the 15<sup>th</sup> century V2 orders have become a minority pattern, with some variation among different texts. However, as observed by Bækken (1998), V2 orders do not disappear entirely in the ME period and remaining instances of V2 still can be found in the Early Modern English period.

Given the observations made in this section, the main question that arises now is how the loss of subject-verb inversion in the context of non-operator fronting or, more precisely, the drastic decrease in the frequency of such constructions in the Middle English period can be explained. This is the issue that will be addressed in the next section.

### 3 Explaining the Loss of V2

#### 3.1 Previous Analyses

Two main types of explanation for the loss of V2 in English can be identified in the recent literature. According to the first type of proposal, V2 is lost as a consequence of a decliticization process affecting subject pronouns (cf. Fuss 1998, van Kemenade 1987, Platzack 1995, Roberts 1993). As pointed out above, subject pronouns in OE have the property of systematically preceding the finite verb when a non-operator is fronted, thereby giving rise to V3 orders. This is in contrast with non-pronominal subjects which generally follow the verb in these contexts (V2). Pronouns therefore have been argued to be clitics in OE. Decliticization approaches to the loss of V2 propose that pronominal elements lose their clitic status in the ME period and that therefore both pronominal and non-pronominal subjects start behaving alike in syntactic terms. This assimilation of the two types of subjects is then argued to be the cause for the elimination of the V3/V2 contrast and the V3 option (i.e. non-inversion when a non-operator is fronted) remains the only option. This basic idea is implemented in different ways by the authors quoted above, and it would lead us too far afield to discuss each of these approaches in detail here. Instead, I will simply focus on a few problems that arise within some (problem I) or all (II and III) decliticization approaches to the loss of V2:

(I) As pointed out already by Lightfoot (1995:49, fn. 3), the assumption that pronominal and non-pronominal subjects start having the same syntactic properties does not explain why the V2 option was lost. Since pronouns are argued to lose their clitic properties in the ME period, one might expect them to start behaving like non-pronominal subjects and hence to start occurring in V2 structures. Such a development should have reinforced rather than weakened V2.

(II) Another important problem of decliticization approaches to the loss of V2 is that they simply shift the problem of explanation to another domain of the grammar. The question these

approaches raise is why subject pronouns should have lost their clitic-status in the ME period but no convincing explanations for such a development have been given in the literature.

(III) There is also some empirical evidence against the claim that pronouns started behaving like full DPs during the ME period. For example object pronouns show several syntactic properties which clearly distinguish them from full DP objects well beyond 1400 (cf. e.g. Allen 1995:419, Haeberli 1999a:400, 412ff., Roberts 1995). This means that, if there had been a decliticization process in the ME period, object pronouns would not have been affected by it. What would be unexplained then in terms of decliticization approaches to the loss of V2 is why decliticization only affected subject pronouns but not object pronouns. However, even for subject pronouns the assumption that they stopped being clitics in the ME period may be problematic from an empirical point of view. Data involving sentential negation indeed suggest that there are contrasts between pronominal and non-pronominal subjects with respect to their syntactic behavior even in the Early Modern English period (cf. Rissanen 1998).

Given these problems, an analysis of the loss of V2 in terms of a change in the syntactic status of pronouns does not seem to be attractive. Let us therefore turn to a different type of approach that has been proposed in the literature. According to Kroch et al. (2000) and Lightfoot (1997), the loss of V2 in English is the result of a grammar contact situation. This proposal is based on the observation made by Kroch and Taylor (1997) and Kroch et al. (2000) that there may have been dialect variation with respect to the syntax of V2 in ME. Kroch et al. identify a southern dialect of ME which is characterized by an OE type of V2 system with a contrast between pronominal and non-pronominal subjects and a northern dialect which exhibits a regular V2 pattern occurring with both types of subjects. The loss of V2 is then argued by Kroch et al. and Lightfoot to be a consequence of a contact situation between the two dialects. Although this proposal may not be implausible, its main disadvantage is that, on the basis of the data that are

available, it is relatively difficult to find clear empirical evidence for or against such a scenario. The grammar contact explanation therefore only seems to be attractive if no alternative independent explanation for the loss of V2 can be found. In the following section, I will propose however that such an independent explanation is indeed available and that it is supported by comparative evidence from the modern Germanic languages.

### 3.2 An Alternative (Syntactic) Explanation

#### 3.2.1 The Analysis of V2 in OE

Before we can turn to our analysis of the loss of V2 in English, some observations concerning the analysis of V2 in the earliest attested period, i.e. OE, are necessary. Two properties of OE V2 have played a central role for its analysis in the recent literature. First of all, as pointed out above already, V2 is generally only possible with non-pronominal subjects but not with pronominal subjects when a non-operator is fronted (cf. examples 1 and 2). And secondly, when the fronted element is an operator, the contrast between types of subjects disappears and we obtain V2 orders even with pronominal subjects (cf. van Kemenade 1987, Pintzuk 1991). This is illustrated in (4).

(4) [hwi] *sceole* [we] opres mannes niman (ÆLS 24.188)

why should we another man's take

'Why should we take those of another man?'

On the basis of the data in (1), (2) and (4), V2 in OE has generally not been analyzed like modern Germanic V2 in the recent literature. Instead two main assumptions are made (cf. e.g. Cardinaletti and Roberts 1991, Hulk and van Kemenade 1997, Kroch and Taylor 1997, Pintzuk 1991, 1993):

- (i) V-fronting targets two possible positions, namely C when an operator is fronted and a head below C in the inflectional domain in cases of non-operator fronting. As for the nature of the lower target of V-movement, various proposals have been made in the literature. Here, I will



adopt the proposal made in Haerberli (to appear) where this head is identified as Agr on the basis of some observations related to the ME dialect variation discussed by Kroch et al. (northern vs. southern ME; cf. section 3.1 above).

- (ii) Different types of subjects occur in different structural positions. Pronouns, being clitics or weak pronouns, have to occur in a high position (above the Agr-head), full DP subjects can remain in a lower position (below the Agr-head).

These proposals can be summarized as follows (targets of V-movement in italics).

- (5) [CP XP C [<sub>AgrP</sub> SU1 *Agr* SU2 ... ]]

Pronouns are always in the position SU1. They are therefore postverbal when V moves to C (operator XP, cf. 4) but preverbal when V moves to Agr (non-operator XP, cf. 2). As for full DPs, they can remain in the lower subject position SU2. V2 orders therefore occur even with V in Agr, i.e. with non-operator XPs (cf. 1).

### 3.2.2 A Parallelism between OE and Modern Germanic

What will be important for our purposes is the fact that the contrast between pronominal and non-pronominal subjects found in OE has a very close analogue in the modern Germanic V2 languages (cf. Haerberli to appear). As observed sometimes in the literature (cf. den Besten 1983, Haerberli 1999b, Vikner 1995), some modern Germanic V2 languages allow the occurrence of an adjunct between a fronted verb and a full DP subject. An illustration of this option is given in (6).

- (6) Wahrscheinlich *wird* [später] *Hans* dieselbe Uhr kaufen (German)

Probably will later John the-same watch buy

'Probably, John will buy the same watch later.'

However, this option is only available with full DP subjects. Weak pronominal subjects generally have to be adjacent to the verb (cf. e.g. den Besten 1983, Vikner 1995:103ff.)

- (7) Wahrscheinlich *wird* (*er*) [später] (*\*er*) dieselbe Uhr kaufen. (German)

Probably will (he) later (he) the-same watch buy

'Probably, he will buy the same watch later.'

The contrast between (6) and (7) can be analyzed exactly like the OE contrast in (1) and (2). Subject pronouns obligatorily move to the highest subject position and are therefore adjacent to the fronted V in V2 contexts. Non-pronominal subjects, however, can remain in a lower subject position. Non-adjacency between the fronted verb and the subject is therefore possible.

Thus, we find the same basic contrast between different types of subjects in the modern Germanic languages as in OE. The only difference is the diagnostics that is used to identify this contrast. In OE it is a fronted finite verb which distinguishes the two subject positions whereas in modern Germanic adjuncts identify the two positions. Schematically, the parallelism between OE and modern Germanic can be illustrated as follows:

- (8) a. OE: [CP XP [AgrP SU1 V SU2 ... ]]
- b. Modern Germanic: [CP XP V [AgrP SU1 adjunct SU2 ... ]]

### 3.2.3 The Licensing of Subjects below AgrP

An important question that the structures in (8) raise is why non-pronominal subjects can remain in the lower subject position SU2. The answer to this question is crucial for the issue of V2 in the history of English because OE V2 can only be maintained as long as non-pronominal subjects can occur in SU2 and do not have to move to SU1. As for the modern Germanic languages, an analysis of the distribution of subjects is proposed in Haerberli (1999b). It is based on the observation that 'adjunct-subject' orders with full DP subjects, i.e. constructions with a subject occurring in the lower position, are not possible in all modern Germanic V2 languages. For example among the West Germanic languages, 'adjunct-subject' orders are grammatical in German, Dutch and Frisian but not in West Flemish (WF).

- (9) a. Wahrscheinlich *wird* (später) *Hans* dieselbe Uhr kaufen (German)

- b. Waarschijnlijk *zal* (later) *Jan* hetzelfde horloge gaan kopen (Dutch)
  - c. Wierskynlik *wol* (letter) *Jan* itselde horloazje keapje (Frisian)
  - d. Misschien *goa* (\*loater) *Jan* tzelfste orloge kuopen (WF)
- Probably will (later) John the-same watch buy

Interestingly, the contrast in (9) coincides with a contrast concerning the licensing of expletive *pro*. Empty expletives are licensed in German, Dutch and Frisian but not in WF.

- (10) a. daß *pro* klar ist, daß sie kommen wird (German)
- b. dat *pro* duidelijk is dat zij komt (Dutch)
- c. dat *pro* dúdlik is dat sij komme wol (Frisian)
- d. dat \*(et) dudelijk is da ze goa kommen (WF)
- that (it) clear is that she (will) come (will)
- 'that it is clear that she will come'

- (11) a. daß *pro* überall getanzt wurde (German)
- b. dat *pro* overal gedanst werd (Dutch)
- that everywhere danced was
- 'that people danced everywhere'
- c. dat *pro* op it lân arbeide waard (Frisian)
- that in the field worked was
- d. dat \*(er) overal gedanst wier (WF)
- that (there) everywhere danced was

In Haerberli (1999b), the correlation observed in (9) to (11) between the licensing of empty expletives and the occurrence of 'adjunct-subject' orders in the West Germanic languages is accounted for under the assumption that what allows a subject to remain in a position below an adjunct is the occurrence of an empty expletive in the subject position above the adjunct. Thus,

'adjunct-subject' orders are possible in German, Dutch and Frisian because the SU1 position under AgrP in (8) is occupied by an empty expletive. In WF, however, empty expletives are not licensed and the subject has to move to AgrP itself. 'Adjunct-subject' orders are therefore not possible. This analysis of the contrast between German/Dutch/Frisian and WF with respect to 'adjunct-subject' orders is summarized in (12).<sup>2</sup>

- (12) a. [CP XP V [AgrP SU1 *adjunct* SU2 ... ]] (cf. 8b)  
 b. [CP *Wahrscheinlich* *wird* [AgrP *pro* *später* Hans ... ]] (*German*)  
 c. [CP *Misschien* *goa* [AgrP Jan *loater* t<sub>i</sub> ... ]] (*WF*)

As for the ungrammaticality of 'adjunct-subject' orders with weak pronouns in languages like German which allow such orders with full DP subjects (cf. 7), we may assume that weak pronouns obligatorily move to AgrP, possibly due to licensing requirements which force weak pronouns to move to higher positions than non-pronominal subjects (cf. e.g. Cardinaletti and Starke 1994).

### 3.2.4 Explaining the Loss of V2 in English

Given the parallelism between OE and modern Germanic summarized in (8), the analysis of modern Germanic discussed in the previous section can now be extended straightforwardly to the development of V2 in English. As observed in the literature (cf. e.g. Hulk and van Kemenade 1995:232) and as illustrated below, empty expletives are licensed in OE (13) and EME (14) (the ME data discussed in this paper are taken from the "Penn-Helsinki Parsed Corpus of Middle English").<sup>3</sup>

- (13) a. ... þæt *pro* for mannum gesewen wære, þæt ... (GregD4,77.10.77.7)  
 that before people seen was that ...  
 '...that it could be seen by people that ...'  
 b. And eft *pro* is awriten, þæt se bið awyrged, þe ... (ÆLEt4,31.147)

And again is written that he is cursed who ...

'And again it is written that he is cursed who ...'

- c. And scandlic *pro* is to specenne þæt ... (WHom3, 270.79)

And shameful is to say that

'And it is shameful to say that...'

- (14) a. Of hire *pro* is Ġewriten: ... (Vices1, 5.26)

Of her is written

'About her, it is written: ...'

- b. & wel *pro* is riht þt we þe liðeliche lustnin. (Sawles, 178.202)

and well is right that we you attentively listen

'and well it is right that we listen to you attentively.'

- c. Þ-e Ġet *pro* weren monie ma þene ... (Marga, 54.5)

Still were many more than

'Still there were many more than...'

In terms of the proposals made in the previous section for the modern West Germanic languages, the occurrence of empty expletives in a language does not only mean that no overt nominal subject is required in sentences like (13) and (14) but also that full DP subjects do not have to move to the highest subject position (SU1). Instead, full DP subjects can remain in a lower subject position, i.e. in OE/EME in a position below the landing site of finite verbs in contexts of non-operator fronting. V2 in OE/EME can therefore be considered as a consequence of the licensing of empty expletives. This is illustrated in (15).

- (15) a. [<sub>CP</sub> XP [<sub>AgrP</sub> SU1 V SU2 ... ]] (cf. 8a)

- b. [<sub>CP</sub> Ðas gifu [<sub>AgrP</sub> *pro* *sealde* seo ceasterwaru ... ]] (OE, EME; cf. 1a)

The analysis in (15) has an important consequence now for the issue of the development of V2 in the history of English. In terms of (15b), the OE/EME type of V2 can only be derived as long as non-overt expletives are licensed. We therefore would expect that, once empty expletives start being lost, English should also start losing V2 structures in contexts of non-operator fronting because the subject now has to move to the higher subject position itself.<sup>4</sup> This conclusion seems to be very desirable. As Hulk and van Kemenade (1995:249) observe, "the loss of verb second and the loss of expletive *pro*-drop coincide" in the history of English (cf. also van Kemenade 1997:350). Various constructions which have been analyzed as involving empty expletives indeed undergo changes at the time when the frequency of V2 structures decreases. For example, impersonal constructions start being lost in ME (cf. Allen 1995:290). Furthermore, the frequency of the use of the overt expletive *there* in existential constructions rises rapidly after the EME period (cf. Breivik 1990). Finally, *adjective+to-infinitive* constructions often occur without an overt nominal subject in OE/EME (cf. 13c). Such structures become less and less frequent in ME and instead an overt expletive subject starts being used (cf. van der Wurff 1990:101). Thus, the loss of V2 and the loss of empty expletives seem to coincide and, in terms of the proposals made here, this observation follows straightforwardly from the way in which OE/EME V2 are analyzed (cf. 15b).

In summary, I propose that the loss of V2 in the history of English is a consequence of the loss of the licensing of empty expletives. Non-pronominal subjects in OE/EME can occur in the lower one of two subject positions in the inflectional domain and this lower subject position is below the inflectional head to which the finite verb moves in contexts of non-operator fronting. Fronting of a non-operator therefore can create V2 orders. Based on proposals made in Haeberli (1999b) for the modern West Germanic languages, I argued that non-pronominal subjects in OE/EME can remain in a lower subject position because the higher subject position is occupied

by an empty expletive. V2 orders with fronted non-operators in OE/EME therefore depend on the licensing of non-overt expletives.<sup>5</sup> Once empty expletives start being lost, V2 orders with fronted non-operators also start disappearing because the subject then has to move to the highest subject position and thus precedes rather than follows the finite verb, thereby giving rise to V3 orders.

The analysis of the loss of V2 in English proposed here has two main advantages. First of all, no stipulations have to be made which are specific to the loss of V2 in English. Instead, the diachronic variation found in English can be analyzed in terms of proposals which have been made for entirely independent reasons for synchronic variation found in the modern Germanic languages (cf. Haeberli 1999b). The OE/EME V2 structures are comparable with 'adjunct-subject' orders in languages like German, Dutch or Frisian, and they cannot be derived any more in later stages of English for the same reason that 'adjunct-subject' orders cannot be derived in WF. And the second advantage of the analysis proposed here is that it provides a simple explanation for the observation made in the literature that the loss of V2 and the loss of empty expletives coincide historically.

#### **4 Inflection and the Loss of Empty Expletives**

The proposals made in the previous section suggest that the loss of V2 is related to the loss of empty expletives in the history of English. The question that arises then is what the causes of the latter loss are, i.e. why empty expletives started disappearing during the ME period. The standard hypothesis made in the literature is that the licensing of non-overt pronouns is related to properties of the verbal agreement morphology. More particularly, it has been proposed that expletive *pro* is found in languages with a relatively rich agreement paradigm (cf. e.g. Platzack 1987). In this section, I will explore to what extent such a hypothesis may account for the loss of empty expletives in the history of English and hence ultimately for the loss of V2.

Before considering what aspect of the diachronic developments in the inflectional morphology of English could be relevant for the loss of expletive *pro*, let us first look again at the synchronic variation found in the modern West Germanic languages. As pointed out in section 3.2.3, empty expletives are licensed in languages like German, Dutch and Frisian but not in WF. In terms of the hypothesis that the licensing of empty expletives depends on the richness of verbal agreement, we may wonder then what makes the agreement morphology in WF poorer than that found in the other languages. The relevant present tense paradigms are given in (16).

(16)	<i>German</i>	<i>Frisian</i>	<i>Dutch</i>	<i>WF</i>
	Inf. spiel- <b>en</b>	mean- <b>e</b>	lach- <b>en</b>	spel- <b>en</b>
	('to play')	('to mow')	('to laugh')	('to play')
	1sg ich spiel- <b>e</b>	ik mean- <b>Ø</b>	ik lach- <b>Ø</b>	ik spel- <b>en</b>
	2sg du spiel- <b>st</b>	do mean- <b>st</b>	jij lach- <b>t</b>	gie speel- <b>t</b>
	3sg er spiel- <b>t</b>	hy mean- <b>t</b>	hij lach- <b>t</b>	zie speel- <b>t</b>
	1pl wir spiel- <b>en</b>	wy mean- <b>e</b>	wij lach- <b>en</b>	wunder spel- <b>en</b>
	2pl ihr spiel- <b>t</b>	jimme mean- <b>e</b>	jullie lach- <b>t</b>	gunder speel- <b>t</b>
	3pl sie spiel- <b>en</b>	hja mean- <b>e</b>	zij lach- <b>en</b>	zunder spel- <b>en</b>

The paradigms in (16) only differ minimally. For example Dutch and WF are only distinguished by the 1sg form and, at first sight, it is not clear why the Dutch paradigm is rich enough to license empty expletives whereas the WF paradigm is not. However, as pointed out to me by Liliane Haegeman (p.c.), there is one property of WF inflection which may be crucial in our context. In WF, the 1sg form corresponds to the form of the infinitive. In the other languages in (16), all the singular forms can be distinguished from the infinitive. WF agreement therefore can be argued to be impoverished in the singular because one form contains an infinitival morpheme rather than an agreement morpheme.<sup>6</sup>



What is interesting for our purposes now is that the observations made for WF can be extended to the history of English. Later ME differs in exactly the same way from OE/EME as WF differs from German/Dutch/Frisian. This is illustrated in (17).

(17)	<i>Old English</i>	<i>Early Middle English</i>	<i>Later Middle English</i>
Inf.	<b>-an</b>	<b>-en</b>	<b>-e</b>
1sg	<b>-e</b>	<b>-e</b>	<b>-e</b>
2sg	<b>-st</b>	<b>-st</b>	<b>-st</b>
3sg	<b>-þ</b>	<b>-þ</b>	<b>-þ</b>

The verbal agreement morphology does not change substantially in the Middle English period. What changes is the ending of the infinitive due to the loss of the final consonant (cf. also e.g. Baugh and Cable 1978:162). As a consequence of this change, the infinitive and the 1sg form start being identical. An illustration of this development is given in (18) (EME) and (19) (later ME).

- (18) a. & let us *ontswerien* (Kathe, 31.205; c1225)  
 b. ... ich þe *ontswerie* (Kathe, 40.344)
- (19) a. ... whanne no man may *worche* (NTest, IX, 1.803; a1425 (c1395))  
 b. My fadir worchith til now, and Y *worche*. (NTest, V, 1.356)

The loss of the final consonant in the infinitive and, hence, the assimilation of the 1sg form and the infinitive coincide with the loss of empty expletives, which, as observed in section 3.2.4, also start being lost in the ME period. Thus, exactly the same correlation as observed for modern West Germanic holds for the history of English. Empty expletives are licensed if all singular verb forms bear clear agreement morphology (OE/EME/German/Dutch/Frisian). If one of the singular

forms bears an ending which corresponds to the infinitival ending, empty expletives are not licensed any more (late ME/WF).

As in the case of WF, the presence of an infinitival form in the singular paradigm of late ME could thus be argued to impoverish agreement in such a way that empty expletives are not licensed any more. And in terms of the analysis proposed in section 3.2.4, V2 structures then also cannot be derived any more because V2 structures depend on the presence of an empty expletive in the highest subject position. The loss of V2 can therefore ultimately be related to a change in the inflectional morphology of English.

Some evidence supporting such a conclusion can be found once we take a closer look at the 31 ME text samples from between 1350 and 1500 studied in Haeberli (2000). As observed in section 2 above, non-inversion (i.e. V3) in non-operator fronting contexts is the clear majority pattern in most of these texts. Furthermore, most texts contain either no infinitive ending in *-n* at all or only a few isolated cases. There are only 11 texts in which the frequency of *-n* infinitives is higher than 3% and, even among those, the *-n* infinitive is generally the clear minority form. However, there is one main exception. In the text sample from *The Mirror of St. Edmund (Vernon Ms.)*, 382 out of 469 infinitives (81.4%) have an *-n* ending. Interestingly, the same text is also characterized by a distinctive behavior with respect to inversion. Among the texts studied in Haeberli (2000), *The Mirror of St. Edmund* is the text which has by far the highest frequency of inversion in contexts of non-operator fronting (around 80%). Thus, the productive occurrence of the *-n* infinitive and, hence, the morphological distinction between infinitives and 1sg forms seem to go together with the preservation of a productive V2 grammar in *The Mirror of St. Edmund*. This observation can be accounted for in terms of the proposal made above that the assimilation of a singular verb form with the infinitive is ultimately the source for the loss of V2

in the history of English. In *The Mirror of St. Edmund*, this assimilation has not taken place yet and V2 therefore remains a productive option in contexts of non-operator fronting.

In summary, the observations made in this section suggest that the licensing condition on empty expletives can be formulated as follows: Empty expletives are licensed if all the forms in the singular paradigm bear agreement morphology. Although this hypothesis is fairly tentative at this stage and more research based on a larger range of languages will be necessary to strengthen it, it is nevertheless very striking that this condition accounts for both the synchronic variation found in the West Germanic languages (German/Dutch/Frisian vs. WF) and the diachronic variation found in the history of English (OE/EME vs. English after EME). In terms of the analysis pursued in this paper, such a licensing condition on empty expletives has an additional interesting consequence, namely that the loss of V2 in the history of English is ultimately a syntactic effect of a morphological change (i.e. the loss of the infinitival *-n* ending).

## **5 Reconsidering OE/EME and Late ME/Early Modern English**

Let us conclude this paper by briefly reconsidering some issues related to the situation in OE/EME and Late ME/Early Modern English in the light of the proposals made in the previous sections.

### *5.1 OE/EME*

As observed in section 2, fronting of a non-operator does not always lead to subject-verb inversion in OE/EME. Instead V3 orders are fairly frequent even when the subject is non-pronominal. Thus, the OE/EME V2 pattern is not as rigid as the one found in the modern Germanic V2 languages. Given the analysis proposed in section 3.2.4, this observation is not surprising. Our analysis suggests that V2 in contexts of non-operator fronting in OE/EME is generally the result of the insertion of an empty expletive in the highest subject position ([Spec, AgrP]) and, hence, of the occurrence of the subject in a lower position which follows the finite

verb in Agr. Suppose, however, that a derivation is based on a numeration which lacks an empty expletive. In this case, the subject has to move to AgrP itself, and we therefore obtain V3 orders when a non-operator is fronted. V2 and V3 with non-pronominal subjects in OE/EME therefore co-occur because the two orders are simply the result of two distinct numerations, one containing an empty expletive and the other lacking an empty expletive.

Although this analysis explains why the V2 syntax in OE/EME is not entirely rigid, one issue remains open at this point. As discussed in section 2, V2 orders are more frequent than V3 orders when a non-operator is fronted and the subject is non-pronominal (ratio of approximately 3:1). The question that arises then is why the V2 option, i.e. insertion of an empty expletive, is used more frequently than the V3 option, i.e. subject movement. There seem to be two main ways to deal with this issue. First of all, the two orders (V2 or V3) may have distinct discourse properties. Thus, the frequency of the uses of the two options would be determined by pragmatic factors (related e.g. to properties of the subject). Alternatively, there may be syntactic factors which influence the frequencies. For example, in Haeberli (1999a:346ff.) it is suggested that the syntactic factors which are responsible for the occurrence of impersonal constructions in OE may have the side effect of creating an additional option for deriving V2 orders. This additional option would then lead to a more frequent occurrence of V2. However, both of these hypotheses are very speculative at this point and I will have to leave a more detailed investigation of this issue for future research.

### *5.2 Late ME/Early Modern English*

V2 is a marginal pattern by the end of the ME period and, in terms of the analysis proposed in this paper, the decrease in the frequency of V2 orders is a consequence of the loss of empty expletives. However, V2 has not completely disappeared yet in late ME (LME). Two illustrations of V2 orders are given in (20).

(20) a. and [on the same day] *send* the Kinge the third privye seale to you

(1461; Priv, CPaston, 202.258)

and on the same day sent the King the third privy seal to you

'And on the same day, the king sent you the third privy seal.'

b. and [muche sorow] *had* sir Gawayne to avoyde his horse (a1470; Malory, 201.420)

and much difficulty had Sir Gawayne to dismount-from his horse

'And Sir Gawayne had much difficulty to dismount from his horse.'

The question these examples raise is how V2 still can be derived in this period of transition when V2 is on its way out of the grammar of English but still has not entirely disappeared yet.

I propose that there are two possible ways for deriving the remaining V2 orders in LME. First of all, some instances of V2 may be remnants of the old (OE/EME) grammar licensing empty expletives. They therefore have the same status as some occasional instances of subjectless constructions in LME as in (21).

(21) ... howe *pro* is best fore me to sywe to hym (1472; Priv, JPaston, 450.604)

how is best for me to say to him

'how it is best for me to talk to him.'

Although the use of empty expletives has decreased dramatically during the ME period, examples like (21) suggest that some remnants of expletive *pro* are still available in LME. A certain number of V2 orders can therefore be related to the remaining marginal option of licensing empty expletives in LME and can be analyzed along the lines proposed for OE/EME.

However, an additional observation concerning V2 in LME suggests that there is another option for deriving V2 orders. In contrast to OE/EME where the fronting of a non-operator generally does not give rise to subject-verb inversion with subject pronouns, V2 in LME does not distinguish very clearly between pronominal and non-pronominal subjects any more. Although

V2 is still a bit more frequent with full DP subjects, V2 can also be found with pronominal subjects in most LME texts (cf. Haeberli 2000 for statistical data). Two illustrations are given in (22).

(22) a. And [many mervayles] *shall* he do (a1470; Malory, 47.79)

And many wonders shall he do

'And he will do many wonders.'

b. [þis question] *wolde* I knowe of you (1472; Priv, Tmull, I, 126.623)

this question wanted I know of you

'I wanted to ask you this question.'

The fact that the contrast between pronominal and non-pronominal subjects in V2 contexts is not maintained in LME suggests that V2 in LME is not always derived in the way it was derived in OE/EME. Instead, I propose that some LME V2 orders involve the movements found in the modern Germanic V2 languages, i.e. V-movement to C and XP-movement to [Spec, CP]. Due to these movements, V2 can be obtained independently of the properties of the subject. As for the reason why the V-to-C option for deriving V2 is introduced, at least as a marginal option, in the grammar of LME, there are two possible scenarios. First of all, V-to-C may simply have been introduced as a means of dealing with the remaining V2 orders in the data to which the language learners were exposed at the point when empty expletives started being lost. Or alternatively, the V-to-C option could have been introduced through language contact with the northern dialect of ME which, as argued by Kroch and Taylor (1997), had a V2 grammar in which V2 systematically involved XP- and V-movement to CP.

The syntactic options used for deriving V2 in LME then seem to have been maintained well into the Early Modern English (EModE) period. In this period, we still can find occasional occurrences of V2 (cf. Bækken 1998).

(23) a. [This man] *hath* God accompanied all his life

(c1620; DSEA 79, 10; Bækken 1998:158)

b. [Good lambes-wooll] *have* we for their lambe skins

(1594; TNUT 54, 18; Bækken 1998:159)

Again, the OE/EME contrast between different types of subjects does not seem to be crucial any more (cf. 23a full DP, 23b pronoun), suggesting that V2 in EModE can be derived in terms of the second option discussed for LME, i.e. XP- and V-movement to CP. Being a marginal option, it then was eliminated from the grammar during the EModE period and the equivalents of the examples in (23) are not grammatical any more in Modern English.

## 6 Conclusion

In this paper, I proposed an analysis of the loss of V2 in the history of English. On the basis of comparative evidence from the modern West Germanic languages, I argued that the loss of the frequent occurrence of V2 patterns in contexts of non-operator fronting is a consequence of the loss of empty expletives during the ME period. Given the standard assumption that the licensing of empty pronominal elements is related to properties of the verbal agreement morphology, I then proposed that the loss of V2 in the history of English can ultimately be reduced to a change in the inflectional morphology during the ME period. This conclusion thus supports much recent work which suggests that the morphological properties of a language can play an important role in determining its syntactic properties.

## Footnotes

<sup>1</sup> Note that some cases of non-inversion (V3) could potentially be analyzed as V-final main clauses, an option which was possible in OE. However, as Pintzuk (1991:312) and Koopman (1995:139) observe, V-final main clauses are generally very rare (presumably not more than 6%

of all main clauses). Hence, it does not seem to be plausible to assume that the V-final option is the only source for the occurrence of non-inversion clauses (cf. also Koopman 1998:145ff.).

<sup>2</sup> The Scandinavian languages raise some additional issues for the analysis summarized in the text. Cf. Haeberli (1999b:23ff.) for discussion. However, for the purposes of our discussion here, a comparison of OE/EME with the situation found in West Germanic is sufficient.

<sup>3</sup> Based on a study of existential constructions in ME, Williams (to appear) suggests that empty expletives in EME are only licensed in contexts in which the finite verb moves to C, i.e. in contexts of operator fronting. However, this claim seems to be too strong. It would entail that empty expletives are ruled out when the verb moves to the inflectional head below C, i.e. in contexts in which a non-operator is fronted (cf. section 3.2.1). But the data in (13) and (14) show that such a restriction does not hold. Empty expletives are licensed in these examples although none of the fronted constituents generally triggers V-movement to C in OE/EME. Note also that the examples in (13) and (14) do not simply constitute a few isolated exceptions among a large number of examples of the same type containing an overt expletive. For example, in the corpus studied by Williams (existential constructions in the Penn-Helsinki Corpus), examples with a fronted non-operator (as in 14c) are very rare to start with (if, as argued by Williams, one eliminates clauses with fronted locatives). And among the few examples that do occur, we can find examples involving both an overt or a non-overt (cf. 14c) expletive but there is no preference for the former option. Thus, there does not seem to be any clear evidence for restricting the licensing of empty expletives in EME (and in OE) to contexts in which the verb moves to C, and I will therefore assume that expletive *pro* is licensed in [Spec, AgrP] in OE/EME regardless of whether the verb moves to C or to Agr.

<sup>4</sup> Alternatively, the expletive could be realized overtly thereby also creating V3 orders. The question that may arise then, however, is why non-overt expletives could not simply all be



replaced by overt expletives, i.e. why the former V2 orders did not simply all become expletive constructions with an overt expletive. To deal with this issue, I will adopt the proposals made in Haerberli (1999a:305ff., 1999b:19) according to which *there*-expletives as used in English expletive-associate constructions are not the exact syntactic equivalents of non-overt expletives because the former generally give rise to a definiteness restriction on the associate whereas the latter do not. Thus, the option of inserting an overt expletive in AgrP is not available with definite subjects in English and the subject has to move to AgrP itself. A general replacement of V2 structures by overt expletive constructions as a consequence of the loss of empty expletives is therefore not possible because expletive-associate constructions are restricted to cases involving indefinite subjects. As for the contrast between different types of expletives with respect to the definiteness restriction, cf. Haerberli (1999a:307f.) for an analysis.

<sup>5</sup> Note that this property crucially distinguishes OE/EME from the modern Germanic V2 languages which have a more systematic V2 syntax. For these languages I assume that V2 always involves the CP-domain (i.e. V-movement to C). V2 therefore does not depend on the licensing of empty expletives and the scenario of the loss of V2 described here does not make any predictions as to how the type of V2 grammar found in the modern Germanic languages could be lost.

<sup>6</sup> As suggested in the text, the relevant parts of the paradigms are only the singular forms. In the plural, all the languages in (16) have some forms which correspond to the infinitive. This restriction to the singular paradigm could be related to the fact that expletives generally go together with singular agreement if agreement is not determined by an associate (i.e. an argument). Thus, plural agreement could be argued to be irrelevant in the context of expletives and hence also with respect to the licensing of empty expletives.

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