The Middle English verb-second constraint: a case study in language contact and language change[†]

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0. Abstract.

This paper reports the discovery of a syntactic dialect difference between northern and southern Middle English in the grammatical implementation of the so-called "verb-second" constraint and argues that this difference is most likely a linguistic contact effect of the Viking invasions of northern and eastern England in the eighth and ninth centuries. In the South, the Middle English V2 constraint behaves as it had in Old English; that is, as a variant of the IP-V2 type, the type found in modern Yiddish and Icelandic. In the North, however, the constraint is of the CP-V2 type, as found in modern Mainland Scandinavian and in German or Dutch. It is argued that the northern form of V2 arises as a consequence of the collapse of agreement inflection in northern Middle English, which leads to a loss of V-to-I movement, just as happened in mainland Scandinavian when agreement inflection was lost there. Once, V-to-I movement is lost, IP can no longer host the topic-verb configuration that defines the verb-second phenomenon. The collapse of agreement is further argued to result from imperfect second language learning by the Scandinavian invaders, who formed a large enough proportion of the population of the North to impose substratum effects on the northern dialect. Investigation of the available documentary evidence is shown to support dating both the collapse of endings and the appearance of CP-V2 word order to the period of the Viking invasions. It is suggested that the loss of V2 word order in English, which has made it the only Germanic language that does not respect the constraint, may have resulted from the extensive contact between northern and southern speakers that lead to the mixture of northern and southern features that characterize the language of the Midlands (and London) in the late Middle English period.

1. Introduction.

As has long been known, the northern and southern dialects[1] of Middle English differed considerably in their phonology, morphology and lexicon. Many of these differences have been traced to the linguistic influence in the North of the eighth and ninth century Viking invaders who first plundered, then conquered and settled in, large territories in Northumbria, Lincolnshire and East Anglia. In this paper, we will add to the list of known differences between the dialects a

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[1] The dialect divisions of Middle English are complex and controversial. Divisions based on phonology recognize three to five major dialect areas. In this paper, however, we will be concerned only to show that there was at least one northern dialect and one southern dialect with the characteristics that we describe. Roughly, the two syntactic dialects at issue were found in the North and in the Northeast Midlands, on the one hand, and the South and Southwest Midlands on the other. Within these areas further distinctions can be made that are beyond the scope of this paper.

hitherto apparently unnoticed syntactic one and will give evidence that it too is an effect of Norse influence. In particular, we will show that the northern and southern dialects of Middle English differed in the way that they implemented the verb-second (V2) constraint common to the Germanic languages and then argue that this difference was a syntactic consequence of contact-induced simplification in the verbal agreement paradigm of the northern dialect.

The syntactic difference between the two dialects that we have discovered is an instance of a recently discovered typological distinction within the Germanic language family in the precise structure of verb-second sentences. Several studies have indicated that the V2 constraint can involve placement of the tensed verb in either of two different positions, depending on the language investigated. In the better known languages (German, Dutch, and modern Mainland Scandinavian), verb-second (V2) word order results from transformational movement of the tensed verb from its underlying position as head of the Verb Phrase (VP) to the Complementizer (C^0) position, with concomitant movement of some phrasal constituent to the specifier of the Complementizer Phrase (Spec,CP). In other Germanic languages (Yiddish and Icelandic), however, V2 word order can reflect movement of the tensed verb to a lower position. In studies using the phrase structure of Chomsky 1986, that position is lNFL (I^0) (Diesing 1990; Pintzuk 1991; Santorini 1992). Hence, we will distinguish the two types of languages terminologically as "CP-V2" versus "IP-V2" languages.[2] The difference in the position to which the verb moves in different languages leads to subtle but clearly observable differences in the shape and distribution of verb-second clauses. Most strikingly, while all V2 languages exhibit verb-second word order in main clauses, the two subtypes differ in the availability of this word order in subordinate clauses. The CP-V2 languages allow verb-second order only in those embedded clauses that in some way have the structure of matrix clauses, either because the complementizer position is empty or because there is an additional complementizer position embedded below the one that introduces the subordinate clause (the so-called "CP-recursion" structure discussed in de Haan and Weerman 1986 and Iatridou and Kroch 1992).

As the cited authors show, instances of these exceptional subordinate clauses are largely confined to the complements of bridge verbs (verbs like 'think', 'say' or 'believe', which often seem to function pragmatically as assertions). The IP-V2 languages, on the other hand, show V2 word order in a broad range of subordinate clauses (Diesing 1990; Rögnvaldsson and Thráinsson 1990; Santorini 1989, 1992). Pintzuk 1991, 1993 has recently shown that the verb in Old English V2 clauses surfaces in the I^0 position; and despite certain empirical difficulties pointed out by Kemenade (1995), her analysis seems to us basically sound (see Kroch and Taylor 1997 for a detailed evaluation). We will further see that the southern dialect of Middle English preserves the V2 syntax of Old English, despite having become, unlike Old English, overwhelmingly INFL-medial and VO in basic word order (see also Kemenade 1987). In striking contrast to the southern dialect, however, the northern dialect of Middle English appears to have developed the verb-movement syntax of a standard CP-V2 language and hence to be similar in its syntax to the modern Mainland Scandinavian languages. Despite the similarity between the northern dialect and Mainland Scandinavian, however, the historical origin of northern V2 syntax is not obvious. It is not likely to be a direct borrowing from the language of the Scandinavian invaders because this language, Old Norse, was most probably an IP-V2 language like modern Icelandic, which it resembles very closely in its syntax from the earliest written records. Instead, as we will argue, the transition from

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[2] Vikner (1991) calls the IP-V2 languages ``generalized verb-second'' languages because the two he considers, Yiddish and Icelandic, are said to exhibit verb-second word order in all types of main and subordinate clauses rather than in the more limited set of environments where it is found in German, Dutch and Mainland Scandinavian. This appellation has the terminological advantage of theoretical neutrality as to the landing site of the verb in the IP-V2 languages; but as we have shown elsewhere (Kroch and Taylor 1995) it is inaccurate. IP-V2 languages do not allow V2 word order as freely in subordinate clauses as in main clauses, though this fact will not be relevant in the present discussion.

IP-V2 to CP-V2 in the North was probably an effect of imperfect learning by the Scandinavian immigrants of the English to which they were exposed. We will give evidence that this imperfectly learned English contained a crucial simplification of the verbal agreement paradigm and, further, that this simplification led to the postulation by learners of C^0 as the landing site for verbs in V2 sentences. Because in many areas of northern England the Scandinavian population was very substantial, even forming the majority in a few places, this second-language learning effect was passed on to the children of the immigrants, along with a number of true substratum effects (as we will see), and so became an established feature of the northern dialect.

In the following pages, we begin with a discussion of the historical context of dialect differentiation between North and South in Old and Middle English, focusing on the linguistic character of the influence of the Scandinavians on northern Middle English. We give evidence that many of the contact effects are best understood as remnants of imperfect second-language acquisition by the invaders, the "imposition" effect of van Coetsem (1988). Following this sociolinguistic discussion, we give a sketch of the complex syntax of Old English; and against this background, we analyze the V2 syntax of the southern and northern dialects of Middle English. We show that V2 clauses in the two dialects differ in the landing site of the tensed verb and further that the loss of V2 in modern English was probably the result of contact, mixture and grammar competition between them. We then go on to the matter of the origins of the northern pattern. First, we give evidence that the northern pattern is a syntactic consequence of a morphophonological imposition effect on the verbal agreement paradigm, as mentioned above. Then, and finally, we show, through an examination of the late Old Northumbrian (10th century) Lindisfarne and Rushworth glosses, that the date when the northern patterns of verbal agreement and of word order first appear in the surviving documents supports an association with the Scandinavian invasions.

2. The historical and sociolinguistic context.

The sociolinguistic history of population contact and diffusion which underlie the establishment of the Middle English dialects is crucial to understanding their linguistic character. The features that distinguish the northern dialect of Middle English derive largely from its extensive contact with Old Norse, contact that resulted from the Danish and Norwegian population influx into the North and East of England during the late Old English period. In the course of its history, English has been more heavily influenced by Norse than by any other language. The only comparable influence was the effect of French and Latin on the literary and learned vocabulary, but these languages influenced English grammar hardly at all. The strength of Scandinavian influence resulted from the large numbers of Norwegians and Danes who settled in England in the three centuries before the Norman Conquest (Geipel 1971; Stenton 1967). The Viking seafarers that harassed the British Isles from the 9th to the 11th centuries came at first to plunder but eventually stayed permanently. For long periods in the 9th and 10th centuries, the Danes or Norwegians ruled extensive kingdoms in England, and place name evidence indicates that the population of several shires was predominantly Scandinavian (Darby 1936; Ekwall 1936; Geipel 1971). Since the first settlers were soldiers of the Danish armies that plundered the English coastline, there must have been a great deal of intermarriage and intimate language mixture; but there were also substantial numbers of immigrants who came later, after areas of foreign control were established. Among these were substantial numbers of women as well as men (Stenton 1967: 513). In the northwest of England, the major focus of Norwegian settlement, the settler-invaders came from already established Norse settlements in Ireland and may often have come as families. Moreover, in that region the density of Anglo-Saxon settlement was low and the newcomers necessarily formed a majority of the population in many places (Ekwall 1936). The linguistic effect of this combination of population movement and population mixture was extensive, comparable in some ways to the pidginization/creolization phenomena of more recent centuries, though not as extreme (but see Thomason and Kaufman 1988 for a somewhat different assessment).

It is well-known that many originally Norse vocabulary items were borrowed into northern English; for example, Norse 'egg' for Old English (and general West Germanic) 'ey', Norse 'sister' for Old English 'swuster', and so forth. More significantly for our purposes, however, a number of the borrowings from Norse were of closed-class items which functioned mainly as morphosyntactic signals of grammatical relations. The most celebrated example of this sort was the borrowing of the third person plural pronoun 'they' into northern English from Norse and its subsequent spread into other dialects (Morse-Gagné 1992, 1993 and the references cited there). Similarly, the anaphoric noun 'same' is Norse in origin. Other grammatical forms remained restricted to the North and never became general. The Middle Scots demonstrative system, for instance, contains an important Norse element (Morse-Gagné 1993). Also, northern texts often show 'till' for 'to' and 'fra' for 'from' as prepositions and 'at' as a complementizer introducing both tensed clauses and infinitives (McIntosh et al. 1986). We also find, on occasion, 'oc' for 'and' or 'but' (Kluge 1904). All of these features are clearly borrowed from Norse and so may be the use of an empty complementizer to introduce relative clauses and object complement clauses (Jespersen 1938).

The borrowing of grammatical elements from Norse into northern Middle English has long been taken as a sign of the intimacy of contact that must have obtained between the native English and the invading Scandinavians after the initial period of hostilities (Geipel 1971). Only recently, however, have linguists come to appreciate that such borrowing gives clear evidence of the character of that contact. Such researchers as van Coetsem (1988) and Appel and Muysken (1987) have pointed out that certain kinds of borrowing actually reflect interference effects in second-language learning, van Coetsem's "imposition." Ordinary borrowing standardly occurs when speakers of one language come into contact with speakers of another and borrow words from the contacted group's language into their speech when speaking their native language. This is what happened, for example, with the numerous borrowings from French into English and German. In such cases, the borrowed words seem always to be content words rather than grammatical forms, like the English borrowing of 'garage' or the German borrowing of 'serviette' from French. There is, however, another sort of language contact that leads to transfers from one language to another which may be mistaken for ordinary borrowings. This is the contact that occurs when adults immigrate into a speech community and acquire the local language. In these circumstances, the immigrants often impose not only content words but also grammatical features of their native language (also simplifications – that is, shifts from marked to unmarked forms) on the language they are learning because, due to their age, they cannot learn the new language perfectly. These effects ordinarily disappear in subsequent generations, as the children of the immigrants acquire the new language natively, but not always. If the immigrant community is large and/or isolated enough, its children may in part target their learning on the language as spoken by their parents, since that is so much of what they hear. This sort of transmission produces substratum and creole-like effects; and if these effects enter the speech of the general community, they may appear to be ordinary borrowings from the substrate language, rather than the learners' interference effects that they actually are.

The most obvious way in which adult learners impose structure on their second language is in their foreign accent, which is a mixture of transfers from their native language and phonological simplifications (Broselow 1992; Davis 1994; Eckman 1981); but accent is not the only form that imposition takes. Adult learners also impose structure on their second language by transfering native language grammatical formatives to it. An example of such transfer is given by Prince and Pintzuk (1984), who show that speakers of Yiddish who learned English as adults and who speak fluent Yiddish-accented English exhibit a striking asymmetry when code-switching between the two languages. In predominantly Yiddish sentences, they almost never switch to an English function word; but in predominantly English sentences, they regularly introduce Yiddish function words, as in the following examples:

(1) a. (pronoun) It was MAYN [my] daughter's house.

b. (complementizer) ...there wasn't an item VOS [that] we didn't have.
c. (preposition) ...we go MIT [with] the bus ...
d. (article) ...DER [the] operation came out wonderful.

This use of Yiddish function words in English results from the speakers' lack of native command of English. Under the pressures of real-time automatic speech processing, they make use of native language resources when their control of English fails them.

The number of Norse-origin impositions on Middle English, particularly in the northern dialect, is very substantial. We listed above some of the clearest cases of borrowed function words, which must be considered, in the light of modern sociolinguistics and second-language acquisition studies, to be cases of imposition. We even have, by good luck, a preserved case of the appearance of a Norse function word in an English sentence seemingly written by someone of Norse descent, an example exactly parallel to the English/Yiddish examples in (1). There are no preserved texts of the right sort to show such an effect; but there are two inscriptions on stone from Yorkshire written in Norse-influenced Old English (Kluge 1904; Page 1995). Each contains a single Norse word in the midst of the English. In one, on a sundial from Kirkdale, we find the content word 'solmerca' ('sundial'); but on the other, an inscription from Aldbrough, we find the Norse dative singular masculine pronoun 'hanum' in place of the expected Old English 'him' (Lang 1991:123ff):

(2)	Ulf	het		aroeran	cyrice	for	hanum	and for	Gunwara saula.
	Ulf	ordered	(to)	build	church	for	him	and for	Gunware's soul

In addition to the appearence of Norse origin function words, there are phonological effects of Norse on northern Middle English which have long been remarked on. Thus, we find the replacement of Old English /sh/ by /sk/ in place names in the North (e.g., "Skipton", "Skirlaugh" for "Shipton", "Shirley"); and this has traditionally been taken as a sound substitution due to the absence of the palatal fricative in Norse (Ekwall 1963). Similarly, and for a similar reason, we find /k/ and /g/ for the palatalized /ch/ and /j/ (e.g., "Kildwick", "Marrick" for "Childwick", "Marige"). These phonological substitutions, like the function word borrowings, are from a modern point of view best understood as imposition effects. The absence of a phoneme in the native language of an adult second language learner is the most common reason, after all, for sound substitutions in second language acquisition, as when English /th/ is replaced by /s,z/ or /t,d/ in the speech of non-natives (Eckman 1981). We reserve for later in our exposition discussion of the importance of phonological imposition in the reduction in the North of the number of distinct person/number agreement endings on the finite verb (see section 5 below), which is crucial to our understanding of the origins of the V2 syntax of the dialect.

3. The syntax of Old English.

Old English is a West Germanic language with a syntax roughly similar to that of modern German. In several ways, however, its word order exhibits more complex variation than do the modern West Germanic languages. For instance, it freely allows postposition of complements and adjuncts, both nominal and prepositional, to the right of the uninflected VP-final verb. This postposition leads to superficially free word order in texts; but recent studies have demonstrated that the apparent freedom of order of the verb in Old English with respect to its complements or adjuncts results almost entirely from the greater freedom of rightward extraposition in that language relative to its modern West Germanic cousins (Kemenade 1987; Pintzuk and Kroch 1989). In addition, and of more immediate relevance to the present discussion, there is work by Kemenade, Pintzuk, and others on the V2 pattern in Old English; and they have shown that it too is highly patterned and rule governed (Kemenade 1987; Pintzuk 1991, 1993). Here too, the superficial behavior of sentences is highly variable, leading earlier scholars to say that V2 was only a tendency, not a rule, in Old English but the cited studies have substantially reduced the amount of variability that must be postulated.

Pintzuk (1991) and Haeberli and Haegeman (1995) do demonstrate, however, that Old English texts manifest competition between two underlying phrase structures for clauses, one INFL-final and the other INFL-medial.[3] Both main and subordinate clauses exhibit this variation, though main clauses are more often INFL-medial and subordinate clauses more often INFL-final. Examples of INFL-final and INFL-medial sentences from both main and subordinate clauses are given in (3) and (4) below. See Pintzuk's discussions (1991, 1993) for detailed analysis of these cases:

(3) a. ... ðeah hit ær upahæfen wære (CP 34.6)
... although it before up-raised was

b. Se manfulla gast þa martine gehyrsumode. (AELS 31.1050)
the evil spirit then Martin obeyed

(4) a. ... þæt he ahof upp þa earcan (GC(C) 42.6)
... that he lifted up the chest

b. þa sundor-halgan eodun þa ut soþlice. (WSCp, Matt. 12.14)
the Pharisees went then out certainly

The relative frequency of these two phrase structures changes over time, with the number of INFL-medial sentences increasing steadily in both main and subordinate clauses. By the end of the Old English period, the language has become entirely INFL-medial, though the character of the reanalysis which leads to this outcome is obscured by the collapse of Old English as a written language in the early 12th century and the paucity of Middle English documents in the earliest period (see Lightfoot 1991; Pintzuk 1991, 1993 for further discussion). The existence of INFL-final main clauses in Old English indicates that, at some point before the period documented by texts, its grammar must have been consistently SOV and INFL-final, a configuration presumably inherited from proto-Germanic and ultimately from proto-Indo-European (Kiparsky 1994). Verb-second word order, as far as one can tell, arose and spread along with INFL-medial phrase structure; and by the time of the earliest texts, it was dominant in main clauses. In subordinate clauses, the INFL-medial structure also became increasingly common during the course of the historic Old English period. Significantly, only underlyingly INFL-medial clauses seem to be V2; that is, unlike in German or Dutch, V2 sentences in Old English do not derive transformationally from an underlying INFL-final phrase structure. Instead, INFL-final phrase structure is a feature of the declining proto-Germanic grammar, whether it appears in main or subordinate clauses; and it is driven out of use in Old English by the competing INFL-medial *cum* V2 option. Pintzuk argues that the association in Old English between INFL-medial underlying structure and V2, and the corresponding absence of the German/Dutch derivational relationship between INFL-final and V2 can be explained only if we suppose that Old English is an IP-V2 language like Yiddish or Icelandic and not a CP-V2 language like German or Dutch. We agree that only this perspective permits an adequate explanation of the occurrence of INFL-final main clauses in a V2 language while also accounting in detail for the word order patterning in the V2 sentences of the language.

The range of superficially distinct word orders in Old English V2 sentences is broad and has been difficult to account for in a principled way. Pintzuk's IP-V2 analysis, however, accounts quite simply for the different word orders, without the postulation of numerous special rules or principles. We list here the types of V2 sentences found in Old English and explain how the analysis accounts for them.

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[3] For further discussion of the notion of competition between grammars see Kroch (1989b, 1994); Pintzuk (1991); Santorini (1992); Taylor (1990, 1994a).

3.1 Subject-initial sentences.

The single most common sentence type in Old English is the subject-initial sentence, in which the first constituent is the subject and the second is the tensed verb. The subject is a nominative case noun phrase or pronoun which moves from the specifier of VP to Spec,IP, while the tensed verb moves to the head of IP (I^0). Subject-initial matrix clauses are not SVO sentences but just V2 sentences in which the topic happens to be the subject.[4]

3.2 Sentences with non-subject topics.

The second sentence type consists of those cases in which the first constituent is a topicalized non-pronominal complement, prepositional argument or adjunct, or adverb. In this type, word order depends on whether the subject is a pronoun or a non-pronominal NP. In the latter case, the tensed verb appears immediately after the first constituent – that is, in second position; hence, it is inverted with respect to the subject. Some examples, taken from Pintzuk (1991) and Kemenade (1987), are listed in (5) below:

(5) a. & of heom twam is eall manncynn cumen (WHom 6.52)
and of them two is all mankind come

b. þæt hus hæfdon Romane to ðæm anum tacne geworht (Or 59.3)
that building had Romans with the one feature constructed

c. þær wearþ se cyning Bagsecg ofslægen (Anglo-Saxon Chron., Parker, 871)
there was the king Bagsecg slain

When the subject is a pronoun, however, it ordinarily appears before rather than after the tensed verb, yielding superficial verb-third word order. This special behavior of pronoun subjects is due to their clitic status (Kemenade 1987; Pintzuk 1991) and is not evidence of variability or irregularity in the adherence of Old English to the verb-second constraint. Here are some examples of the use of pronoun subjects yielding verb-third word order, taken from Pintzuk (1991):

(6) ic þæm godan sceal for his modþræce madmas beodan (Beow 384)
I the-dative good-dative ought for his daring treasures offer

(7) a. Ælc yfel he mæg don (WHom, 4.62)
each evil he can do

b. scortlice ic hæbbe nu gesæd ymb þa þrie dælas... (Or 9.18)
briefly I have now spoken about the three parts

c. æfter his gebede he ahof þæt cild up... (AEChom. 2.28)
after his prayer he lifted the child up

Under Pintzuk's analysis of Old English as an IP-V2 language, the word orders in (6) and (7) reflect movement of the verb to I^0 and movement of a topic to Spec,IP. Clitic pronouns in Old English, like pronouns in the other verb-final West Germanic languages, move to the boundary between CP and IP and so should appear sentence initially; and in the Beowulf example (6), they do. However, the later language allowed variation in the surface placement of clitics between the position *before* the first constituent of IP and immediately *after* that constituent, with the "after"

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[4] See, however, Heycock and Kroch (1994) for a more nuanced analysis of V2 sentences with subjects in topic position.

option, illustrated in (7) heavily favored. This variation is, according to Pintzuk, an instance of variation in the value of the clitic "precedence" parameter proposed by Klavans (1985), whose analysis she adopts. By her analysis Pintzuk accounts for the fact that in post-Beowulf texts, when the verb moves to I^0, the pronominal subject usually appears immediately before it, between Spec,IP and I^0. Full NP subjects, as in (5), remain in their underlying position in the specifier of VP and are assigned nominative case under government, as has been proposed for the modern IP-V2 languages (see Hulk and Kemenade 1988; Santorini 1992). With pronominal objects of verbs and of prepositions, as in the examples from Pintzuk in (8) below, the same sort of verb-third effect appears, and for the same reason, since they generally behave as clitics and move to the CP/IP boundary.

(8) a. þin agen geleafa þe hæfþ gehæledne (BlHom 15)
thine own faith thee has healed

b. & seofon ærendracan he him hæfde to asend (ASC, Parker, 905)
and seven messengers he him had to sent

Example (8b) shows that the verb will appear in fourth position when a sentence contains both a subject and an object clitic. In addition to pronouns, certain adverbs (for example, 'so') may also move to this position, suggesting that the clitic behavior of Old English pronouns may actually be a grammaticized form of the leftward scrambling of constituents commonly found in Germanic.

3.3 Sentences with verb movement to C^0.

The third Old English V2 sentence type is found in four exceptional environments where subject pronouns regularly appear after the tensed verb. These environments are: non-subject wh-questions, sentences introduced by 'þa' and 'þonne'[5] (when they are equivalent to modern English 'then'), sentences with preposed negated and subjunctive verbs, and certain verb-initial sentence types (principally so-called "Narrative Inversion"). Examples of these four environments are given in (9):

(9) a. hwi sceole we oþres mannes niman? (AELS 24.188)
why should we another man's take

b. þa ge-mette he sceaðan (AELS 31.151)
then met he robbers

c. ne mihton hi nænigne fultum æt him begitan (Bede 48.9–10)
not could they not-any help from him get

d. hæfdon hi hiora onfangen ær Hæsten to Beamfleote come (ASC, Parker, 894)
had they them received before Hæsten to Benfleet came

Under Pintzuk's analysis, the exceptionality of the four environments arises because in these cases the verb moves further leftward than it does in ordinary declaratives, thereby passing the position of the clitic pronoun subject. Specifically, the verb moves to C^0 in these sentences, perhaps because it must pick up certain morphosyntactic features in C^0. Crucially, the structural position of the verb in wh- questions is not the same as in topicalized sentences, in contrast to the situation in CP-V2 languages, where the verb is always found in the higher functional projection. The split between questions and topicalizations helps to explain why, when English lost the V2 constraint,

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[5] Other narrative sequencing adverbs (for example, 'nu' "now") sometimes behave like `þa', and sometimes like ordinary adverbs.

word order in questions was unaffected. Like Old English, the other IP-V2 languages also exhibit movement to C^0 in questions and certain other sentence types;[6] but they do not show the verb-third effect with pronominal clitics, since they do not have clitic pronouns that move to the CP/IP boundary.

3.4 Sentences with true verb-third order.

While most adverbs behave as described above, temporal adverbs functioning as "scene setters" may fail to trigger subject-verb inversion of either pronoun or full NP subjects. These are cases of adjunction to CP to the left of the specifier position and are true exceptions to the verb-second constraint as it is known from the modern Germanic languages.[7] Here are some examples from the Anglo-Saxon Chronicles:

(10) a. Ða þy ylcan gere onforan winter þa Deniscan þe on Meresige sæton tugon
Then the same year before winter the Danes that on Merseyside sat pulled

hira scipu up on Temese... (ASC, Parker, 895)
their ships up on Thames

b. On þisum geare Willelm cyng geaf Raulfe eorle Willelmes dohtor
In this year William king gave (to) Ralph earl William's daughter

Osbearnes sunu (ASC, Laud 1075)[8]
Osborn's son

c. Her Oswald se eadiga arcebisceop forlet þis lif. (ASC, Laud, 992)
in-this-year Oswald the blessed archbishop forsook this life

We should note that even in modern German, extremely strict in its expression of the V2 constraint, there are sentences with verb-third word order. These are of two types, 'if-then' sentences and left-dislocations, as illustrated in (11):

(11) a. Wenn du kommst, dann amüsieren wir uns.
if you come then amuse we ourselves

b. Diesen Mann, den kenne ich nicht.
this man him know I not

Significantly, however, verb-third word order in German is limited to cases where the adjoined sentence-initial constituent is a clause or phrase coindexed with the sentence topic. (We assume that such a coindexation relation obtains between the 'if' clause and the pro-form 'then' in conditionals.) Examples like (11) with correlative conjunctions also occur in Old English (for example, the 'þa ... þa' construction); but the range of constituents that can adjoin to CP goes beyond these cases to sentences without correlative syntax. There are even rare cases where adverbs other than scene-setting temporals adjoin to CP to generate verb-third word orders. The examples given in (12) below are cases from the last Old English portion of the Peterborough

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6 This statement is not entirely uncontroversial. See Diesing (1990).

7 Examples similar to those found in Old English are apparently found in all older West Germanic dialects. Medieval German (Behaghel 1932: 15; Ebert 1986) appears to have been intermediate between Old English and modern German in its tolerance for this kind of adjunction. Further work on the V2 syntax of the medieval Germanic languages is needed to determine the proper analysis of these cases.

8 The correct translation of this example appears to be: "In this year King William gave William Fitzosbern's daughter to Earl Ralph." See Plummer (1899, 2:427).

Chronicle:[9]

(12) a. Eac þis land wæs swiðe afylled mid munecan. (ASC, Laud 1086)
Also this land was very filled-up with monks.

b. þeahhweðer his hiredmen ferdon ut mid feawe mannan
Nevertheless his household-men went out with few men

of þam castele. (ASC, Laud 1087)
from the castle

c. & syððan litlan & litlan his leoht wanode swa þæt ... (ASC, Laud 1110)
and afterwards little-by-little his light waned so that

The possibility of verb-third word order in Old English gives additional evidence for Pintzuk's IP-V2 analysis. Though we do not know exactly how to formalize the constraint, the CP-V2 phenomenon in languages like German involves a prohibition against adjunction to CP; for if it did not, there would be no constraint against adverb-initial verb-third sentences. In an IP-V2 language, therefore, we might expect the prohibition against adjunction to apply at the IP level, leaving open the possibility of adjunction to CP. Determining the precise conditions under which such adjunction can occur requires further investigation and is beyond the scope of this paper, but we will see it again in our Middle English data.

3.5 Limitations of Pintzuk's analysis.

While Pintzuk's analysis of Old English V2 yields an economical description of many relevant facts of the language, it faces two significant problems. First, it is not clear how to make the analysis consistent with the fact that, CP-recursion environments apart, Old English texts do not generally exhibit subordinate clauses with non-subject topics and V2 word order. Kemenade (1995) states that V2 order with non-subjects in first position occurs only in limited types of subordinate clause in the texts, and Pintzuk's data (personal communication) confirm this finding. Pintzuk's analysis, however, predicts the free appearance of V2 order in subordinate clauses. Second, the "after" setting of Klavans' precedence parameter, needed by Pintzuk to account for the placement of pronouns between topic and verb in V2 clauses, has no counterpart elsewhere among the Germanic languages; and the parameter itself does not have clear theoretical justification (see Halpern 1992; Taylor 1996). In consequence, we have elsewhere (Kroch and Taylor 1997) proposed a modification of Pintzuk's approach which preserves its essential claim – that the verb moves to I^0 in Old English V2 clauses – while alleviating its difficulties. A detailed account of our modification goes beyond the scope of the present work and we direct the reader to the cited reference for a full discussion. The character of that discussion can be summarized as follows: Let us suppose that, while the tensed verb in an Old English V2 sentence moves to I^0, the topic moves, not to Spec,IP but to Spec,CP. Then, when a clitic pronoun moves to the CP/IP boundary, the correct word order will result directly, and no appeal to Klavans' precedence parameter is needed. Kroch and Taylor (1997) also show that the other problem with Pintzuk's analysis – the absence of

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[9] The differences between modern German and the older Germanic languages may be exaggerated by differences in the conventions of the written language at different times. Jack Hoeksema has pointed out to us that in Modern German and Dutch sentences like (12b) are perfectly acceptable with a pause after the initial adverb:

(i) a. Nichtsdestotrotz, wir müssen weiter.
b. Desalniettemin, we moeten verder.
nevertheless we must further (go)

Without the comma as a indicator of the pause, verb-second order is obligatory in the written language. In medieval texts punctuation was much less regular than now, so the absence of commas in (12) does not mean that there were not obligatory pauses after the sentence-initial adverbs.

V2 word order in subordinate clauses – is addressed by splitting the landing sites of verb and topic. In this paper, therefore, we will proceed on the assumption that the verb in Old English V2 sentences (the exceptions in section 3.4 aside) moves to I^0 as Pintzuk claims and that the difficulties with her analysis can be overcome by modifications that do not affect its central tenet.

4. The V2 syntax of the Middle English dialects.

The V2 pattern we have described for Old English is largely maintained in the earliest Middle English of the West Midlands and southern dialects, except for the entire loss of the INFL-final phrase structure option. This loss occurs in all dialects but is irrelevant to the INFL-medial *cum* verb-second pattern, which persists into the fourteenth century. From the beginning, however, there are a certain number of exceptions to expected word order, and these grow in number with time. Except in Kentish, a particularly archaic southern dialect, by the mid-fourteenth century the V2 constraint is being lost across the Midlands and South. The analysis of the exceptions and how they pattern is a matter of considerable interest; and we will address it in section 4.3 below. We believe that the loss of V2 is the result of competition between the grammars of the northern and southern dialects in the speech of people who have been exposed to both systems. This competition, however, can only be studied once we have a reasonable picture of the competing systems, which is our goal in the present discussion. The texts we have chosen to discuss first, therefore, are as close to pure representations of single grammatical systems as the surviving Middle English data afford.

In the North and in the Northeast Midlands, the areas of greatest Scandinavian settlement and linguistic influence, the history of the V2 pattern is different from its history in the South. Unfortunately, there are no manuscripts of northern prose before 1400, which makes direct comparison with early southern dialect material impossible; but evidence from poetry indicates a pattern unlike the Old English one. A recent investigation of the Ormulum (Morse-Gagne 1992), a very early Middle English poem written in Lincolnshire, an area with a large Scandinavian population, reveals that pronoun and full NP subjects are more alike than different in their behavior. Both exhibit inversion of subject with tensed verb nearly categorically in sentences with noun phrase objects in topic position. In sentences with adverbs in topic position, inversion is categorical with full NP subjects and variable with pronoun subjects. While we do not understand this variability, it is sufficient for present purposes to note that it does not follow the pattern described above for Old English, but is rather more random. As with the variability found in the later southern texts, the variability of inversion with pronouns in northern texts apparently reflects contact between a Norse-influenced northern V2 system and the Old English system. Fortunately, however, we have also found material, to be described below, in which this variability is minimized and allows us relatively direct access to a single, coherent northern grammar.

4.1 The southern dialects.

As noted, the early southern manuscripts of Middle English exhibit the same basic patterning of the V2 constraint as is found in Old English. This patterning is clearly shown in Table 1, which combines data on positive declarative sentences from seven Midlands texts of the early to mid-thirteenth century: the Trinity Homilies, the Lambeth Homilies, Sawles Warde, Hali Meiðad, Vices and Virtues, St. Katherine, and the Ancrene Riwle. The sample consists of a total of 3064 matrix clauses, an exhaustive sample of the text excerpts in the Penn-Helsinki Parsed Corpus of Middle English (1994), the source of all our Middle English data.[10] The contributions of the individual

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[10] The Penn-Helsinki Parsed Corpus of Middle English (PPCME) is a syntactically annotated and somewhat extended version of the prose Middle English section of the Helsinki Corpus of English Texts originally assembled under the direction of Matti Rissanen at the University of Helsinki, Finland (see Kytö1993). The annotation work was done under the direction of Anthony Kroch at the University of Pennsylvania with the support of the National Science Foundation (Grant # BNS89-19701) and with supplementary support from the University of Pennsylvania

texts in this early southern group range from 230 to 689 clauses. They have been grouped together to increase the size and reliability of the figures in the table, since there is no evidence of any difference in their V2 syntax.

	NP subjects			Pronoun subjects		
Preposed expression	Number inverted	Number univerted	% inverted	Number inverted	Number univerted	% inverted
NP complements	50	4	93	4	84	05
PP complements	12	4	75	0	11	00
Adj. complements	20	1	95	7	14	33
þa/then	37	2	95	26	10	72
now	12	1	92	8	22	27
PP adjuncts	56	19	75	2	99	02
adverbs	79	59	57	1	181	01

Table 1: V2 in seven early Midlands texts.

We see above, with a few exceptions, the expected Old English pattern. Preposed complements generally trigger inversion of subject and verb with full NP subjects and almost never do so with pronoun subjects. The temporal adverbs 'þa' and 'then' trigger inversion with both NP and pronoun subjects, though not as regularly with pronoun subjects as in Old English, an indication that these adverbs are losing their special status. The adverb 'now' is included in the table because in Old English it sometimes behaves like 'þa' and sometimes like other adverbs; and as in Old English, it here behaves variably. If we look at a sample of approximately 200 clauses from a text of the Kentish dialect, the "Ayenbite of Inwit," we see the pattern repeated:

	NP subjects			Pronoun subjects		
Preposed expression	Number inverted	Number univerted	% inverted	Number inverted	Number univerted	% inverted
NP complements	14	3	82	1	11	08
PP complements	2	0	100	0	1	00
Adj. complements	5	0	100	0	1	00
then (no *þa* in text)	4	12	25	7	5	58
now	1	0	100	7	7	50
PP adjuncts	5	9	36	1	30	03
adverbs	19	15	56	5	52	10

Table 2: V2 in the Ayenbite of Inwit (Kentish).

Research Foundation. The annotation scheme was designed by Anthony Kroch and Ann Taylor and implemented by Taylor. The PPCME is available to scholars without fee for educational and research purposes via anonymous ftp from babel.ling.upenn.edu and over the World-Wide Web (http://www.ling.upenn.edu/~mideng).

These data are interesting because the Ayenbite text is from a holograph manuscript of the mid-fourteenth century, at least 100 years later than the Southwest Midlands manuscripts. By this time, the language of most of England was well on its way to losing the V2 constraint entirely; but Kentish, an isolated dialect that eventually died out, still preserved the Old English pattern of V2 nearly intact. The only detectable difference between the Kentish data and the earlier texts is a further erosion in the exceptional status of 'then' and 'now' and a generally freer attachment of adjuncts to CP, reflected in the lower rates of inversion of full NP subjects after PP adjuncts and adverbs.

4.2 The northern dialect.

Because of the gap in the surviving record mentioned earlier, the syntax of the northern dialect is not easy to investigate. Nevertheless, there is sufficient evidence to support our claim that northern Middle English was a CP-V2 language. Well before 1400, the date of the first prose manuscripts from the North, Midlands documents show less than half of appropriate sentences inverting subject and verb in order to obey the V2 constraint; and almost all of the 15th century manuscripts that preserve works of 14th century northern writers also show this variability (Kemenade 1987). The variable word order in these texts indicates a mixture between V2 and non-V2 grammars (see the references cited in note 3), so that they cannot be easily analyzed. However, there is one northern document, the so-called "Northern Prose Rule of St. Benet" (Kock 1902), that is grammatically uniform, exhibiting V2 word order quite generally. We came across this important text in surveying for descriptive purposes the syntax of the text samples in the PPCME. The text is preserved in the oldest surviving prose manuscript of the northern dialect and the manuscript comes from central west Yorkshire, hence either within or directly bordering the major area of Norwegian settlement in the North (McIntosh et al. 1986; Wells 1916). Until the rise of the cloth industry in the late 14th century, the area was thinly populated and isolated, due in part to the famous devastation of the region wrought by William the Conqueror. Hence, like Kent in the South, it is a relic area in which a dialect once spoken more widely might have survived longer than elsewhere. Indeed, the linguistic evidence of the Benet text itself is clear. In sentences with non-subject topics, the text exhibits nearly categorical inversion of subject and verb, in accordance with the requirements of the V2 constraint. Crucially, this inversion occurs whether the subject is a full NP or a pronoun and also independently of the grammatical function or lexical identity of the topic. In other words, the complex conditioning of V2 found in Old English and in the Early Middle English of the South is absent. The syntax of the Benet text is captured in the following table.[11]

[11] The discussion in this section is based on an exhaustive sample of the Benet text, which was entered in its entirety into the PPCME once its importance was discovered.

	NP subjects			Pronoun subjects		
Preposed expression	Number inverted	Number univerted	% inverted	Number inverted	Number univerted	% inverted
NP complements	7	0	100	58	3	95
PP complements	18	0	100	10	0	100
Adj. complements	1	0	100	4	2	67
then (no *þa* in text)	15	0	100	28	1	97
now	no data			2	0	100
PP adjuncts	42	5	89	73	7	91
adverbs	25	1	96	51	5	91

Table 3: V2 in the Northern Prose Rule of Saint Benet.

As is evident, there are two major differences between the frequencies of V2 in Benet and in the Midlands and southern texts. First, pronoun subjects, instead of failing to invert in most environments, invert nearly as frequently as full NP subjects do; and second, there is no tendency for preposed adverbs and PP's to adjoin to CP without triggering inversion. These differences show that the V2 pattern of the northern dialect differs sharply from the southern and give us an indication as to how it does. One possible analysis that we have discussed (Kroch 1989a; Morse-Gagné 1992) is that the grammar of pronouns has changed in the North. Instead of being leftward moving clitics of the Old English sort, they might have become like the pronouns of modern English, behaving syntactically more or less like full NPs. The plausibility of such a change occurring in the North is supported by the fact that the Norse pronoun 'they', which was first borrowed into the northern dialect (Morse-Gagné 1992), was a demonstrative in origin. That borrowing could thus have altered the syntactic character of the entire pronoun system. As we will see, however, the syntax of pronouns in Benet does not appear to be different from that of pronouns in the southern texts, apart from those environments where the grammar of V2 is at issue. Pronouns do change character in the course of later Middle English, losing their tendency to move leftward across the verb as VO order becomes stricter, but this change is common to North and South and is not responsible for the differences in V2 patterning between the dialects.

The most evident defect of an appeal to pronoun syntax as the source of the differences in the V2 patterns of Benet and the southern texts is that it accounts for only one of the two major differences between those texts that are apparent from Table 3. As noted, in addition to what happens in sentences with pronoun subjects, the table shows nearly categorical inversion of full NP subjects in sentences introduced by adverbs or adjunct PP's. The character of pronouns is irrelevant to this distribution; hence, even if the pronouns in the North had changed character and so came to invert in V2 environments, some additional difference with the South would have to be invoked to account fully for the V2 pattern of the Benet text. The obvious candidate would be the difference between verb movement to I^0 and to C^0. If the language of Benet were CP-V2, then, like German or modern Mainland Scandinavian, it should exhibit inversion nearly categorically when preposed adverbial and prepositional phrase adjuncts were attached at the CP level, where they regularly fail to trigger inversion in Old English or southern Middle English. Of course, as in German, there would be cases of verb-third word order as well; but, in general, we would expect elements that adjoin to CP in Old English to move to Spec,CP in Benet and to trigger inversion from that position. Under this analysis, categorical inversion with pronoun subjects would have to occur even if the pronouns did not change their clitic status, because the verb would always move beyond the CP/IP boundary to C^0, and so appear to the left of any subject, NP or pronoun. Thus, a single difference between the grammars of Benet and the southern texts would account for both of the differences revealed by our table.

Another problem with reducing the differences between northern and southern V2 to a difference in the clitic status of pronouns is that there is reason to consider subject pronouns in Benet to be clitics that move to the CP/IP boundary, just as in Old English and in the South. Consider the following examples:

(13) þat **erin** hauis, herkins wat þe haly spirt sais in haly writ. (Benet 2.4)
whoever ears has harkens what the holy spirit says in Holy Writ.

(14) a. Bot yef it **sua** bi-tide, þat any falle in mis-trouz; þan sal scho pray
but if it so betide that any fall into mistruth than shall she pray

gerne to god. (Benet 19.30)
earnestly to God.

b. Yef yt **sua** may be, alle sal lie in a hus, þat ilkain wite of oþir. (Benet 20.18)
if it so may be all shall lie in a house that each know of the-other

Example (13) is an instance of stylistic fronting, a process known from the Scandinavian languages (Maling 1990) and found in all dialects of Middle English. It is possible only where the subject position is empty (Maling's "subject gap condition"). The examples in (14) might also be analyzed as instances of stylistic fronting (and are not easily amenable to any other analysis), but in these cases there is a preverbal subject present. Such examples, however, are limited to sentences with pronominal subjects; and if the pronouns are analyzed as clitics which move leftward out of Spec,IP, then these examples too conform to the subject gap condition. Indeed, just such an analysis has been proposed for entirely parallel cases in Old Swedish (Platzack 1988). The application of Platzack's analysis to northern Middle English is simply incompatible with the claim that pronouns in the North have lost their clitic status.

4.3 The mixed language of later texts and the loss of V2.

Our analysis of the difference between the northern and southern dialects is supported by the pattern of language mixture found in later Middle English texts that are on the way to losing the V2 constraint. These texts exhibit a mixture of inversion and non-inversion of the subject and verb after preposed elements (that is, of V2 and non-V2 word order); but the character of this mixture differs according to the dialect of the text. We found clear evidence of how mixed texts differ by dialect in their V2 related word order in a comparison we made of the Thornton and Vernon manuscripts of the "Mirror of St. Edmund," a fourteenth century translation into English of a 13th century Latin text orginally written by the canonized Edmund Rich, Archbishop of Canterbury in the reign of Henry III. These two manuscripts are at least one-third word-for-word identical; and, even where not identical, they are quite similar, showing that they are ultimately derived from the same original. The Thornton manuscript, however, which dates from the 15th century, is overall northern in language while the Vernon manuscript, of a somewhat earlier date, is southwestern (Wells 1916). The frequencies of subject-verb inversion by topic type are given for the two manuscripts in the following tables:[12]

[12] In these tables we have collapsed PP complements and adjuncts since they behave alike in the two documents.

	NP subjects			Pronoun subjects		
Preposed expression	Number inverted	Number univerted	% inverted	Number inverted	Number univerted	% inverted
NP complements	8	0	100	16	9	64
PP compl./adjuncts	21	3	88	48	21	70
Adj. complements	10	0	100	2	6	25
then (no *þa* in text)	6	1	86	24	23	51
now	4	0	100	14	3	82
PP adjuncts						
adverbs	20	5	80	35	26	57

Table 4: V2 in the Northern ms. (Thornton) of the Mirror of St. Edmund.

	NP subjects			Pronoun subjects		
Preposed expression	Number inverted	Number univerted	% inverted	Number inverted	Number univerted	% inverted
NP complements	12	1	92	5	13	28
PP compl./adjuncts	24	5	83	9	41	18
Adj. complements	14	0	100	0	1	00
then (no *þa* in text)	6	2	75	13	13	50
now	3	0	100	5	9	36
PP adjuncts						
adverbs	20	5	80	4	41	09

Table 5: V2 in the southern ms. (Vernon) of the Mirror of St. Edmund.

The most striking feature of these tables is the high degree of variability they show in the inversion of verbs with pronoun subjects. Leaving aside the behavior of the exceptional sequencing adverbs 'then' and 'now', the manuscripts show neither the near categorical non-inversion of the early southern texts nor the categorical inversion of Benet. This variability must either result from language mixture in the documents, due to repeated imperfect copying by scribes speaking different dialects, or from mixture in the actual linguistic usage of the scribes, due to the co-presence of competing grammars in their linguistic competence. Given that variability in V2 word order is common to most works from the middle of the 14th century onward, including those for which we have manuscripts close to the authors' originals, the second explanation may be the more plausible. In either case, however, these documents attest to the effect of contact between the northern and southern dialects in blurring the patterns of each. But the blurring does not go so far as to eliminate evidence of the difference between the dialects. In the northern manuscript, the average rate of inversion for pronoun subjects (excluding the sequencing adverb environments) is 62%, while the corresponding rate in the southern manuscript is only 16%. The corresponding figures for Benet and the early Midlands texts are 92% and 3.5%, respectively. These statistics reveal clearly both the effects of language mixture and of the dialect difference between North and South.

Looking now at the behavior of full NP subjects, we find that the two manuscripts are very similar. Both show an average frequency of inversion of somewhat more than 80% in clauses introduced by PP's and adverbs (85% in Thornton; 82% in Vernon). In clauses introduced by NP or adjective complements, the frequencies are somewhat higher and also very similar (100% in Thornton; 96% in Vernon). The difference in these manuscripts between inversion after complements and after adjuncts/PP's is about the same as what is found in Benet and is smaller than what is found in the early Midlands texts. In other words, both manuscripts obey the northern pattern of almost categorical inversion after adjuncts as well as complements rather than showing markedly less inversion after adjuncts, as in the South. Given that the pattern in the early Midlands texts is a continuation of the Old English pattern, we consider the pattern in Vernon to reflect northern influence; but if so, we are left with the question of why the influence is present in the behavior of full NP subjects but almost entirely absent in that of pronoun subjects. The best answer we can give in the current stage of our research is to say that somewhere in the stemma of the Vernon manuscript there must have been a version by a northern scribe, which is responsible for the high frequency of inversion of full NP subjects in sentences with adjunct/PP topics. Since such inversion is perfectly possible in the southern dialect, southern copyists relying on this northern version would have had little reason to change the word order here. On the other hand, since the behavior of pronoun subjects is categorically different in the North and South, southern copyists would have tended to change the word order of topicalized sentences in which the subject was a pronoun. The fact that as many as 16% of pronoun subjects do show inversion – despite the categorical prohibition against it in the southern dialect and despite the fact that 14th century English was losing its V2 character – is additional evidence of the existence of a northern version in the genealogy of the Vernon manuscript.

Our comparison of the Thornton and Vernon manuscripts of the Mirror gives us a way of thinking about the historical process by which V2 word order was lost in English, suggesting that the loss of V2 should have begun in the North. From the point of view of a northern speaker in contact with southern speakers, say in the border region between the two dialects, the speech of the southerners would appear to have many exceptions to V2; namely, all topicalized declarative sentences with pronoun subjects and all those sentences with full NP subjects and topicalized adjuncts in which inversion has not occurred. Assuming that northern speakers would try to accommodate in the usual way to their interlocutors, they would do so by postulating a non-V2 grammar (the unmarked option from a cross-linguistic perspective) and mixing it with their V2 grammar in some proportion. This mixture would necessarily have included considerable use of V2 with pronouns, as we see in Thornton, since this usage is consistent with the V2 grammar of the speaker. Once developed in contact, the mixed language would have been picked up by children as a case of grammar competition; and subsequently it would have evolved so as to drive out the V2 option over a period of time (see Kroch 1994 for discussion of this process). For southern speakers, on the other hand, contact with the North would not have induced the postulation of a non-V2 grammar. Since their interlocutors used V2 order more frequently than they themselves did, accomodation would have led to their postulating a generalized V2 grammar (presumably a CP-V2 grammar) and mixing it with their native one. This mixture could not have led to the loss of V2 since both of the grammars in competition contain forms of the V2 constraint. Hence we can conclude that the loss of V2 in modern English is an instance of the general phenomenon of the spread of northern features into the South, especially London, in the fourteenth century.

We might now ask whether a minority dialect ever developed in the South, based on the grammar mixture that southerners themselves would have induced from contact. Fortunately, the writings of Chaucer, whose dialect seems to have been southeast Midland in phonology, give positive evidence on this point. Most late 14th century authors, like the Thornton manuscript, show a sharp but not categorical difference in the frequency of V2 with full NP and with pronoun subjects; but Chaucer inverted pronoun and full NP subjects with nearly equal frequency and nearly categorically in the appropriate environments (Kemenade 1987, Kroch 1989a). This pattern is exactly what one would expect of a dialect in which general CP-V2 had gone most of the way toward replacing the Old English IP-V2 system in a southern dialect. Interestingly, both in this case and in the case of the dialect that loses V2, the competition between grammars is won by the grammar that is typologically less marked: Non-V2 languages are more common than V2 languages and CP-V2 languages are more common than IP-V2 languages.

5. The origin of the northern V2 pattern.

The confidence with which we can propose an explanation for the origin of the northern V2 pattern is limited by the amount of available historical material, as well as by the general character of textual evidence. There is, however, evidence to suggest a scenario for the development of the northern V2 pattern that brings together superfically disparate factors of phonology, syntax, and second language acquisition into a unified account. This scenario, expanded upon below, can be summarized follows: We have seen (see section 2 above) that the Scandinavian invaders of northern and eastern England must have learned English imperfectly and must have passed on certain features of their learners' English to subsequent generations. Among these features would have been a radically simplified verbal agreement system, which resulted from imperfect learning of the verbal endings due to phonological interference from Norse. Given the collapse of verbal agreement, morphosyntactic considerations entail that IP should no longer be available as a landing site for the tensed verb; and, therefore, it could no longer serve as the site where the V2 constraint was enforced. In consequence, the site of V2 shifted to CP, the only other possible position, given our syntactic framework.

5.1 Phonological aspects.

It is well-known that northern Middle English had a reduced set of agreement endings on its verbs (Brunner 1938; Mossé 1968; Roberts 1993). Indeed, in the present tense in all persons and numbers but the first singular, which had -e, the ending was -(e)s; and in Scotland even the first person singular was occasionally -s (Brunner 1938). This system represents a simplification by comparison to the Old English and southern and Midlands ME pattern which had -e, -(e)s(t), -(e)th in the three persons of the singular and -(a)th (-(e)n in the Midlands) in all persons of the plural. As the Old Norse system of endings was richer even than Old English, it has not been clear where the northern simplification came from. However, if we follow modern sociolinguistic approaches to the relationship between language change and second language acquisition (e.g., Appel and Muysken 1987), we are led to suggest that the simplification is the result of imperfect second language learning of English by the Norse invaders of the 9th to 11th centuries. The appearance of Norse-origin grammatical markers in the northern dialect (see section 2 above) is clear evidence that second language learners with an imperfect command of English grammar were a sufficiently large fraction of the population in the North to pass on their mixed language to succeeding generations. One feature of imperfect learning, as is well known, is the imperfect acquisition of inflectional endings; and the northern Middle English endings seem to have originated in this way. The simple replacement of the marked anterior fricative /θ/ by the unmarked anterior fricative /s/ is nearly all that is needed to transform the Old English paradigm into the northern Middle English one, and there is evidence of this substitution in 9th century Northumbrian (that is, the northern dialect of Old English), which is not found in any other dialect (Brunner 1965) or in earlier Northumbrian. Late Old Northumbrian scribes quite often wrote /s/ for /θ/ despite their efforts to follow the practices of the standard language (i.e., West Saxon), showing that their native English dialect had made the sound subsitution. In addition, they occasionally wrote a hypercorrect /θ/ for /s/ in verbal endings (Brunner 1965), strongly confirming our conclusion regarding their native dialect.

It might seem odd that Norse speakers should fail to acquire the word-final /θ/ of Old English in verbal endings, since their native language contained the sound. In support of the possibility, however, are three facts. First, as noted, the replacement of /θ/ by /s/ is the replacement of a marked by an unmarked segment, which often happens in second language acquisition by adults. Second, the distribution of the voiced and voiceless allophones of the phoneme was different in Old Norse and Old English. Norse had the voiced allophone everywhere but word-initially, while Old English had only the voiceless allophone in word-final position (Brunner 1965; Noreen 1923). Thus, speakers of Norse apparently heard final /θ/ as the phonetically similar /s/ because in their language [s] but not [θ] could occur in word-final position.[13] Again, it is common to find replacement of a phoneme A by another phoneme B in the course of borrowing or second language acquisition when the morpheme structure constraints of the borrower's/learner's native language do not permit A in the phonological context where it appears in the source/target language. A salient example is found in the speech of Chinese learners of English, who replace syllable final /l/ by /r/ because Chinese has syllable-final /r/ but no syllable-final /l/, even though Chinese does have /l/ in syllable-initial position.[14] Another example, involving the replacement of aspirated velar stops by unaspirated ones in foreign words borrowed into Zulu is discussed in Khumalo (1987).[15] Third, verbal endings in Old English must have been weakly articulated, hence perceptually unsalient and prone to being misheard by non-native speakers. Evidence for the phonetic weakness of the endings appears in the phonologically unmotivated syncope of the vowel in the endings in the West Saxon and Kentish dialects of Old English (Brunner 1965). Therefore, given the above considerations, we propose that imperfect learning in a language contact situation was responsible for the simplification in the agreement paradigm of the northern dialect.

5.2 Grammatical reanalysis.

Now we have the basis for understanding the origin of the northern V2 grammar. Generative grammarians have proposed that V-to-I movement of tensed verbs occurs only or most naturally in languages with a rich paradigm of agreement endings on the verb. Indeed, the history of mainland Scandinavian shows a gradual loss of such movement as agreement inflection collapses (Falk 1993). According to most analyses, the northern Middle English system of endings does not make enough distinctions to support movement[16] (Platzack and Holmberg 1989; Roberts 1993; Rohrbacher 1994); and if there is no V-to-I movement in the northern dialect, the dialect must be a CP-V2 language in a notation which permits only these two landing sites for a tensed verb. With the verb not moving to I^0, IP could not be the locus where the V2 constraint is satisfied, since V2 languages are defined by the requirement that the topic and tensed verb appear in the specifier and head, respectively, of the same functional projection at some point in the derivation of every V2 sentence (see Kroch and Taylor 1997 for a discussion of the technicalities involved here). Therefore, the reduction of the verbal agreement system would lead directly to the reanalysis of an IP-V2 grammar into a CP-V2 one.[17]

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[13] Relevantly, /s/ in Old Norse was always voiceless.

[14] We thank Shizhe Huang for pointing out these facts. See also Paolillo (1995).

[15] We thank Laura Downing for pointing us to this case.

[16] There is one exception to the general collapse of verbal endings in the North: the copula; but we assume that the persistence of a single verb with person-marking would have had minimal effect on the syntax of verb movement. The example of Modern English shows that the persistence of V-to-I movement with auxiliary verbs (i.e., with 'have' and 'be') did not prevent the loss of such movement with other verbs. It is worth noting that although Middle English inherited two forms of the copula from Old English, in the North only one of the forms retains the old person inflections. The other form exhibits the same collapse of inflection as all other verbs (Mossé 1968). In the Midlands and the South, on the other hand, both forms of the copula retain extensive person marking.

[17] The periphrastic auxiliary use of 'do' did not exist at the time of this reanalysis. Had it been available, the historical evolution of the dialect might well have been different.

There is, however, one substantial obstacle to this simple scenario. As Roberts (1993) points out, sentences like (15) below indicate that, contrary to our hypothesis, northern Middle English did exhibit V-to-I movement:

(15) þe barnis þat ere yunge þat vnderstandis noht what paine
the children that are young that understand not what punishment

fallis til cursing... (Benet 23.101)
falls to cursing

Since the negation in (15) is in a relative clause (not a domain for CP-recursion – that is, for main clause effects in subordinate clauses), the order of tensed verb and 'not' must be due to movement of the verb to a lower functional projection than C^0; that is, to I^0 under the phrase structure we have been assuming. Not only is the word order in (15) possible, it is obligatory for all verbs, as one would expect if it reflected V-to-I movement. Further effects of this movement are exemplified in a sentence like (16), in which the order of pronoun object and 'not' reflect modern Mainland Scandinavian-type object shift of pronominal objects, which is also obligatory when the verb moves and is impossible when the verb remains *in situ*:

(16) rennes fast do wilis ye haue liht þat þe mirkenes o ded
run fast the while ye have light so-that the murkiness of death

our-take **þe noht**. (Benet 2.6)
overtake thee not

These data make it clear that the northern dialect, despite its impoverished verbal inflections, does not share the apparent lack of verb movement characteristic of modern Mainland Scandinavian. In the latter languages, negation invariably precedes the tensed verb in sentences like (15) and object shift is impossible in sentences like (16) (see Roberts 1993 for further discussion).

If we accept the conclusion that northern Middle English had verb movement, we cannot maintain our scenario for the history of the dialect in its simplest form. There is, however, a modified version that can be maintained, based on the so-called "split INFL" hypothesis of Pollock (Pollock 1989). Under this hypothesis IP is replaced by two projections, Agr(eement) and T(ense). We assume, as is usual, that Agr is the highest projection below CP and that T is the next highest. Let us further suppose (following a suggestion by Naess cited in Thráinsson 1994) that the modern Mainland Scandinavian languages have verb movement to T, though not to Agr. This proposal has the virtue of maintaining a strict relationship between overt morphology and verb movement. Since Scandinavian has overt tense marking in both the present and the past, it has verb movement to T. By the same logic, so does northern Middle English; and if so, then limited raising to T could explain why we see movement across negation and object shift. If northern Middle English 'not' is an adverb adjoining to VP, as it certainly was in Old and earliest Middle English (see Frisch 1994 for detailed discussion), then verb movement to T will produce the attested order of V_{finite} > 'not'. Further, if object shift is movement to any position above VP (see Kroch and Taylor 1997 for details), the order pro_{object} > 'not' found in examples like (16) will also be correctly generated. The remaining question is why the order of 'not' and tensed verb should be different in northern Middle English and modern Mainland Scandinavian, given that we take the verb movement facts to be the same in the two cases. But the answer here is straightforward: Northern Middle English inherited the Old English double negative construction 'ne ... not' in which, Frisch shows, 'ne' is the negative head and 'not' is a VP-adjoined adverb. Hence, we expect to find 'not' below and to the right of T. In modern Mainland Scandinavian, on the other hand, there is no counterpart to 'ne', so that the single negative 'inte/ikke' must be the primary negation, which is located above T in both English and Scandinavian. Therefore, movement of the verb out of VP to T does not change its relative order with respect to negation.

Using a split INFL forces us to reformulate slightly our account of the role of the V2 constraint in the reanalysis in the northern dialect. We have argued that the constraint is met in Old English by a surface pairing of the fronted topic (or its trace in the analysis of Kroch and Taylor 1997) in Spec,IP and the verb in I^0; and this relationship requires overt verb movement to I^0. Once INFL has been split, we must ask where the V2 constraint will now be satisfied in an IP-V2 language. The obvious answer is Agr; and if Agr is the locus of the constraint, our analysis of the northern dialect as a CP-V2 language remains viable, since we claim that the verb in the northern dialect does not move as high as Agr. If, however, the constraint could met at the level of T, our analysis would fail, since we have claimed that the verb in northern dialect *does* move to T. Hence, we conclude that T is not the position in which the V2 constraint is met in an IP-V2 language.

6. Dating the CP-V2 grammar.

If, as we have argued, the difference in V2 syntax between Benet and our southern texts is due to contact with Old Norse in the North, the language of the North must have acquired its properties much earlier than 1400. Indeed, we would expect such a contact effect to date to the 10th century or the late 9th,, the time of the mixing of the Scandinavian and Anglo-Saxon populations. Unfortunately, there are no Old English texts from Northumbria, the area of contact at the appropriate time, except for two glosses of the Latin Vulgate Bible. These texts, the Lindisfarne and Rushworth glosses, do, however, turn out to be informative. They consist of interlinear Old English glosses added above a previously written Latin text. The Lindisfarne gloss is in Northumbrian dialect spelling and was added to the Latin manuscript around 950 by the priest Aldred, probably in Durham. The Rushworth gloss is in two (contemporary) hands. All of Matthew and up to Mark 2:16, as well as John 18:1–3, are written by a priest named Farman in a spelling which differs little from the West Saxon standard and is probably Mercian, while the rest is written by Owun in the Northumbrian dialect. The Rushworth gloss depends on the Lindisfarne to some extent and dates from the latter half of the same century.

The first interesting fact about these glosses is that, as noted above, they exhibit variability in the verbal agreement endings. Alongside the expected Old English endings are found the later Northern Middle English ones (Brunner 1938). In the admittedly fragmentary Northumbrian texts which predate the arrival of the Scandinavians, on the other hand, no such deviations from the expected Old English forms are found (Whitelock 1967).[18] The facts thus do point to the 9th or 10th centuries as the time of origin of the northern Middle English endings and so are consistent with the postulation of Scandinavian contact as a causal factor in their development. As far as we know, there is only one piece of evidence which might conflict with this dating[19] – the appearance of an /s/ ending on a second person plural imperative in the runic inscription on the Urswick Cross from Lancashire. On the basis of the absence of Scandinavian features on the surviving fragment of the cross, it was dated by its first editor as mid to late 9th century; that is, as late as possible consistent with the hypothesis that it is pre-Viking (Collingwood 1911). Monuments and inscriptions are, however, notoriously difficult to date; and in this particular case, continued research has highlighted the uncertainty of the dating and the conflicting character of the evidence (Bailey and Cramp 1988: 148-150). Though there is no positive evidence for dating the cross as late as the Viking period, in the absence of comparable monuments from the area, it is actually not possible to exclude a date as late as the 10th century. Specifically, there is a real possibility that the archaic features of language and art on the cross are deliberately archaizing or provincial (Page

[18] The texts do exhibit phonological differences from West Saxon in their person endings, but no morphological differences.
[19] We thank Cynthia Allen for pointing directing our attention to this evidence.

1959: 402 – 405). In view of the uncertainty in the dating of the cross, therefore, we do not believe that it should count as evidence against the hypothesis of Scandinavian influence in the development of the northern verbal endings. Indeed, this example neatly illustrates the philological dictum that one witness is no witness at all.

As for the dating of the northern V2 syntax itself, the glosses are also helpful. Although we might not expect word-for-word glosses to yield evidence on word order, there was one particular context in which the glossers of the Vulgate had to make word order choices; and in this context we see a pattern that gives evidence for the existence of CP-V2 in the North at an early date. The relevant context is the tensed sentence with a preposed sentence-initial constituent and a pronoun subject. Because Latin is a pro-drop language and Old English is not, the glossers routinely added subject pronouns in the gloss which were absent in the original. While most added pronouns occur in the canonical position before the verb, there are a significant number of cases where the Latin word order places a constituent in sentence initial position, with the verb immediately following, thereby permitting interpretation of the sentence as a Germanic-type topicalization. In such cases, the northern glossers sometimes wrote the subject pronoun after the verb. By contrast, in the Early West Saxon translation of the gospels, the standard Old English pattern with the pronoun in pre-verbal position always obtains. Below are some examples from Skeat (1881–1887) with the relevant verbs indicated in boldface and their pronoun subjects in italics.[20] For comparison we give the corresponding sentences in the Early West Saxon full translation:

(17) LATIN: dominum deum tuum adorabis
LINDISFARNE: drihten god ðin **worða** *ðu*
RUSHWORTH: drihten god ðinne **wearða** *ðu*
WEST SAXON: drihten þinne god *ðu* **geead-metst**.
'You will worship the Lord your God.' (Luke 4.8)

(18) a. LATIN: oculos habentes non uidetis
LINDISFARNE: ego **habbað** *gie* ... hæbbende ne geseað gie
RUSHWORTH: ego **habbas** *ge* ne gi-seas ge
WEST SAXON: Eagan *ge* **habbað** & ne ge-seoð.
'Having eyes, do you not see?' (Mark 8.18)

b. LATIN: et aures habentes non auditis nec recordamini
LINDISFARNE: & earo *gie* **habbað** ne geherað gie ne eft **ðohto** *gie*
RUSHWORTH: earu **habbas** *ge* ne gi-heras ne eft **ðohtun** *ge*
WEST SAXON: & earan. & ne gehyrað. ne ge ne þencaþ
'and having ears, do you not hear? And do you not remember?' (Mark 8.18)

The following table summarizes our findings on the inversion of pronouns in the Lindisfarne and Rushworth glosses and compares them to the Early West Saxon translation:

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[20] Note that the negated verbs in examples (18a) and (18b) are not relevant, as they would have moved to C^0 even in the southern dialect. The inversion of the third verb in (18b) is, however, relevant. In this clause all three Old English versions translate the Latin 'nec' as 'ne', with the meaning of modern English "nor". In this use, 'ne' is a conjunction and has no effect on verb placement. This can be seen from the word order in the West Saxon version and from the presence of a topicalized adverb between 'ne' and the tensed verb in the Lindisfarne and Rushworth versions. Hence, these clauses in Lindisfarne and Rushworth are instances of subject-verb inversion of the sort that we are interested in. The example from Luke is equivocal because the verb may be interpretable as an imperative, though the Latin original has 2nd person future and the West Saxon version also has a tensed form.

	Topic appears in both West Saxon and Northumbrian texts	Topic appears only in Northumbrian texts
Inversions in Northumbrian	5 out of 58	14 out of 82
Inversions in West Saxon	0 out of 58	—

Table 6: Pronoun subject inversions in the Northumbrian glosses and West Saxon gospels.

We see from the table that in 10–20% of the cases where the Latin text can be interpreted as having a preposed topic, the pronoun subject inverts with the verb in the Northumbrian glosses. In contrast, the West Saxon text follows the standard Old English pattern, and so inversion of pronouns subjects never occurs following a topic. As the glosses date from late in the period of Scandinavian settlement, it appears that the CP-V2 grammar of the North is old enough to have arisen out of contact with Norse. Of course, such an early date for the North's CP-V2 grammar does not guarantee that contact brought it into being. It might, for one thing, actually antedate the arrival of the Scandinavians. Unfortunately, the fragmentary remains of pre-contact Northumbrian (less than 50 lines of poetry, reprinted in Whitelock 1967) contain no contexts relevant to the CP/IP-V2 contrast, so this possibility cannot be directly ruled out. Thus, in its present state, the syntactic evidence as to dating by itself supports the possibility that contact with Norse was responsible for the northern CP-V2 grammar but is consistent with an earlier date as well. This latter possibility is, however, contrary to the weight of the evidence from the verbal endings as outlined above. We feel confident, therefore, in maintaining our claim, on grounds of dating as well as of linguistic analysis, that the the V2 syntax of northern Middle English arose out of contact with Norse and that the specific trigger for the change was the reduction of the relatively rich Old English agreement system to one with almost no person distinctions, due to imperfect learning of Old English by the large number of arriving Scandinavian invaders and immigrants of the 9th century and later.

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