### ROUTLEDGE REVIVALS

# Phrase Structures in Competition

Variation and Change in Old English Word Order

Susan Pintzuk



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## PHRASE STRUCTURES IN COMPETITION

VARIATION AND CHANGE IN OLD ENGLISH WORD ORDER

SUSAN PINTZUK



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### **Preface**

This book is a slightly revised version of my 1991 doctoral dissertation. Since that dissertation was written, syntactic theory has advanced by leaps and bounds, with the wide acceptance of both the Minimalist Program (Chomsky 1993, 1995) and Antisymmetry Theory (Kayne 1994). And our knowledge of the syntax of Old English has also advanced; see, in particular, Hulk and van Kemenade 1997, Kiparsky 1997, and Roberts 1997. Although it would be a worthwhile endeavor to translate the analyses presented here to a more current framework, in some respects it is almost unnecessary. The primary result reported in this work is valid within any syntactic framework: Old English exhibits synchronic grammatical competition, which can be interpreted as variation in phrase structure, in the headedness of maximal projections, or in the setting of a directionality parameter.

I have therefore not attempted to update the analysis. The only changes I have made to the original dissertation are the following: I have revised the discussion of those references that were in manuscript form in 1991 but have since been published, and I have corrected errors of fact and interpretation that were pointed out to me by colleagues. In particular, Cindy Allen, Ans van Kemenade, and Willem Koopman made helpful and detailed comments on the original dissertation, some of which have been incorporated in this version. I would like to thank those that I thanked back in 1991: Cathy Ball, Dominique Estival, Tony Kroch, Ellen Prince, Don Ringe, Beatrice Santorini, Ann Taylor; my parents, Al and Frances Pintzuk, and my sister, Phyllis Seidman; Richard, Vicky, and Victor; and most of all Jeremy Connolly.



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# Phrase Structures in Competition



#### CHAPTER 1

### Introduction

In this introductory chapter, I will describe and contrast two different approaches to diachronic syntax that have emerged in recent years. Using as an example the change from object-verb (OV) to verb-object (VO) base word order in the history of English, I demonstrate in Section 1.1 how the two approaches differ in their explanation of word order variation and the gradualness of syntactic change. In Section 1.2 I briefly present the basic theoretical background; and in Section 1.3 I discuss the goals, assumptions, and organization of this book. In Section 1.4 I specify the terminological conventions used.

#### 1.1. THEORIES OF SYNTACTIC CHANGE

Recent work in diachronic syntax has led to two different approaches to theories of syntactic change. Under the first approach, syntactic change involves abrupt grammatical reanalysis by a new generation of language learners. Under the second approach, change may progress gradually by means of synchronic variation within the grammars of individual speakers. Santorini 1989 characterizes these two approaches as the structuralist approach and the variationist approach. They have several features in common: They both assume a rich, highly structured Universal Grammar, consisting of principles and parameters that are set by triggers in the language learner's linguistic environment. And they share the view that language change and language acquisition are intimately connected. But, as I will show below, the two approaches differ radically in the way that they explain both the gradualness of

3

language change and the variation exhibited by speakers during a period of change.

### 1.1.1. Grammatical reanalysis

The first approach, articulated most explicitly by Lightfoot (e.g. 1979, 1981, 1988, 1989, 1991), claims that syntactic change progresses by means of sudden grammatical reanalysis: A language learner, on the basis of primary linguistic data, abduces a grammar that differs in one or more respects from that of the previous generation. The difference between the old and the new grammars is often attributed to a change in the setting of a parameter in Universal Grammar. This view has been accepted implicitly by most generative grammarians investigating syntactic change. For example, two recent studies of Old English syntax—van Kemenade 1987 and Lightfoot 1991—propose a change in base word order from OV in Old English to VO in Middle English. Van Kemenade analyzes this change as a resetting of the parameter specifying the direction of theta-role assignment, from leftward to rightward.

These two studies agree upon the type of change that occurred, but they disagree as to the date of the change: Van Kemenade states that the change was complete by about 1200, while Lightfoot assumes an earlier date of 1100. In addition, they differ with respect to the set of primary linguistic data that constituted the trigger for the change. Van Kemenade 1987 suggests that the trigger was the high frequency of right-branching surface structures in all clause types, presumably due to a gradual increase in the frequency of both postposition and verb raising during the Old English period. Lightfoot 1991, in support of his hypothesis of degree-0 learnability, claims that the trigger was the high frequency of post-verbal objects in main clauses. As evidence for this claim, he cites the difference in word order between main and subordinate clauses observed in many earlier studies (e.g. Bean 1983, Gorrell 1895, Kellner 1892, Kohonen 1978): In main clauses, the frequency of post-verbal objects increased quite gradually during the Old English period, to a high of perhaps 80% during the eleventh century. This gradual increase, according to Lightfoot, did not reflect a change in the underlying grammar, but rather an increase in the frequency of verb seconding in main clauses, which resulted in a corresponding increase in the frequency of post-verbal objects.<sup>3</sup> In subordinate clauses, however, pre-verbal objects were quite common

during the entire Old English period, with verb-object surface word order emerging suddenly at the beginning of the twelfth century. This sudden emergence, Lightfoot states, indicates a change in parameter setting, from OV to VO base word order.

Lightfoot 1991 attributes the apparent gradualness and variation inherent in linguistic change to four factors. First, the use of a particular construction may become more frequent within a linguistic community, perhaps as a result of being associated with a new function, while the grammar itself remains constant. For example, according to Lightfoot's analysis described above, the increase in the frequency of post-verbal objects in main clauses during the Old English period does not mean that the grammar changed during that period; rather, a particular rule, verb seconding, was used with a higher frequency. Second, if the change involves the recategorization of lexical items, this recategorization may progress slowly and affect different words in different orders and with different frequencies, as in Lightfoot's analysis of changes affecting modal verbs. Third, Lightfoot states that the very nature of language acquisition normally ensures that change progresses gradually, at least as far as the surface forms of a language are concerned:

"Normally the output of a parent's grammar is a significant part of the linguistic environment that triggers the emergence of a child's grammar. This militates against major discontinuities in the class of expressions and their associated meanings. However, if such things could be quantified in some appropriate fashion, there would be no one-to-one relation between similarities at that surface level and similarities in the underlying system. Because grammars are abstract objects, grammars with quite different structural properties might generate sets of sentences which were more similar to each other, and grammars differing in just one parametric setting might generate wildly different outputs." (p. 161)

In other words, parents are normally a source of the primary linguistic data triggering language learning; although the grammar abduced by children may differ from that of their parents, the two grammars must nevertheless generate similar outputs so that communication between generations is preserved. For example, while Old English was strictly OV in the base according to Lightfoot, processes of verb seconding and

postposition derived many surface structures with post-verbal objects; thus the outputs of the Old English OV grammar and the Middle English VO grammar were quite similar.

And fourth, a new parameter setting is adopted slowly, individual by individual, within a linguistic community; not all language learners at any given time are affected. This might account for some language learners adducing a VO grammar and others an OV grammar during the transition period between Late Old English and Early Middle English.

However, this framework cannot account for the fact that during a period of syntactic change, variation may exist not only on the level of the language community, but also within the grammars of the individual speakers of that community. For example, evidence for alternating OV and VO base word order within individual texts can be found throughout much of the Old English period, starting as early as the tenth century (see Section 3.2.3). Lightfoot 1991:162 states:

"The spread of a new parameter setting through a speech community is typically manifested by categorically different usage on the part of different authors rather than by variation within the usage of individuals, although the data are sometimes not as clean as that idealization would suggest, because a writer often commands more than one form of a language [emphasis mine - S.P.]."

But he does not expand on this statement, which acknowledges that synchronic alternation between grammatical subsystems may indeed exist, at least in the language of some mature speakers. And in the case of the underlying order of verbs and their complements, this alternation existed more than 100 years before the time that Lightfoot assigns to the change.

In addition, Lightfoot's analysis leaves unexplained the fact that clauses with pre-verbal objects were used productively until at least 1400 (Allen 1990). If, as Lightfoot suggests, most language learners after 1100 abduced underlying VO word order, it is puzzling that object-verb surface word order could be both generated and understood, even at a relatively low frequency, for at least an additional 300 years. The statistics in Hiltunen 1983 demonstrate that particles (e.g. up 'up', ut 'out', aweg 'away') occurred pre-verbally, although with decreasing frequency, in both main and subordinate clauses

throughout the Middle English period. And Stockwell and Minkova 1991 cite the statistics of Morohovskiy 1980 for fourteenth to sixteenth century London texts, which show a frequency of 7.6% for the "verb brace" construction (auxiliary verb + object + untensed main verb). Although the pre-verbal constituents in these clauses would seem to be a clear indication of OV base word order, Stockwell and Minkova dismiss the idea of two alternate sets of base rules, and suggest instead the use of so-called "adaptive rules" (Adams 1987, Andersen 1973) during the Middle English period. In this case, language learners after 1100 who abduce a VO grammar would have to derive pre-verbal objects either by moving the object leftward over the verb or by moving the verb rightward over the object. I argue against such adaptive rules in Section 3.1.2.2, demonstrating that they violate otherwise valid descriptive generalizations and generate surface word orders that can be derived by independently motivated phrase structure rules.

Once the device of adaptive rules is rejected, it is clear that the hypothesis of an abrupt reanalysis of underlying word order from strictly OV in the Old English period to strictly VO in the Middle English period cannot explain the variation found in the historical data, even when the gradual spread of a new parameter setting within the community is taken into account.

### 1.1.2. Synchronic grammatical competition

The second approach to syntactic change, proposed by Kroch 1989a, 1989b, asserts that at least some instances of change involve synchronic grammatical competition between syntactic alternates over time. According to this hypothesis, ... speakers learning a language in the course of a gradual change learn two sets of well-formedness principles for certain grammatical subsystems ... over historic time pressures associated with usage (presumably processing or discourse function based) drive out one of the alternatives" (Kroch 1989a:349). Kroch 1989b demonstrates that the alternation involves more than just free variation in surface forms: In his study of the rise of periphrastic do in Late Middle and Early Modern English, he shows that the frequency of the use of do vs. the simple verb form increased over time at the same rate in five different syntactic contexts. In addition, he shows that a change in the placement of the adverb never occurred at the same rate during the period. Although these two changes seem at

first to be unrelated, both have been analyzed as reflexes of the loss of verb movement to INFL (Roberts 1985). The fact that these two changes advanced at the same rate, and the fact that the various syntactic contexts all exhibited the same rate of change, indicate that the variation in surface forms and word order reflects a single underlying alternation in the grammar.

Under this approach, the gradualness of change and the variation exhibited by individual speakers are not superficial effects or problems to be explained away. Rather, they form an integral part of the theory of syntactic change.

Consider once again the change from OV to VO base word order in the history of English. If this change involves synchronic competition between underlying structures, then the course of the change in base word order during the Old English and Middle English periods must be strikingly different from that proposed by van Kemenade 1987 and Lightfoot 1991. Let us assume that the earliest stage of Old English had uniformly OV phrase structure. At some point during the Old English period, VO phrase structure became an option and was used initially at a low frequency. The two base word orders were in competition during the Late Old English period and much of the Middle English period, with VO increasing in frequency at the expense of OV, until the change reached completion towards the end of the Middle English period.

It might be argued that this view does not address the "sudden emergence" of the new surface word order in subordinate clauses that constituted crucial evidence for Lightfoot's proposal of abrupt grammatical reanalysis in the beginning of the Middle English period. I suggest, however, that this sudden emergence is not due to a discontinuity in grammatical options, but is rather an effect of a high rate of increase in the frequency of both INFL-medial and VO phrase structure in subordinate clauses during the Late Old English and Early Middle English periods. While a thorough investigation and quantitative analysis of this change is beyond the scope of this book, I show in Section 3.2 that the hypothesis of synchronic competition between OV and VO phrase structure provides an explanation of some of the word order patterns found in Old English, and I outline in Chapter 6 a proposal for gathering quantitative evidence from Old English and Middle English texts in support of this hypothesis. Three

possible objections to the proposal of synchronic alternation in base word order are discussed in Santorini 1992:619–621.

"Objections to the double base hypothesis [i.e. synchronic alternation in base word order] appear to be rooted in three methodological concerns: (1) that it is incompatible with rigorous structural analysis, (2) that it illegitimately complicates the analysis of linguistic phenomena, and (3) that it contradicts the spirit of generative inquiry. None of these objections can be maintained, however. (1) In the case at hand, it is precisely the reliance on statements of distribution of the sort that are standardly used in the literature as diagnostics of syntactic structure that leads us to entertain the double base hypothesis. (2) In linguistics, as in any other domain of empirical inquiry, what is illegitimate is to assume that the relationship between particular phenomena and the theoretical principles governing them is necessarily simple . . . [J]oint considerations of empirical adequacy and theoretical consistency may lead us to propose analyses of complex linguistic phenomena in terms of the interaction of more than one grammatical system ... (3) That linguistic variation might arise from the interaction of more than one grammatical system is expected given the distinction between E(xternalized)-language and I(nternalized)-language that is at the heart of the generative paradigm (Chomsky 1986a); ... The changing patterns of linguistic variation that we observe in the historical data . . . are phenomena of E-language. From a perspective that focuses on I-language, we study these patterns in order to deduce the principles of I-language governing them. Conversely, when respect for established generalizations concerning I-language (like the statements of linguistic distribution that I have relied upon above) yields empirically adequate, theoretically simple analyses of pretheoretically complex phenomena ..., then these phenomena themselves can be taken to provide empirical support for the theoretical distinction between E-language and I-language."

One further question might be raised here: Is it possible for language learners to abduce and then use two alternate sets of well-formedness principles? The answer, clearly, is yes, as evidenced not only by the existence of bilingual children but also by the use of intrasentential code-switching by some bilingual speakers.

#### 1.2. BASIC THEORETICAL BACKGROUND

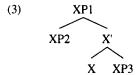
The analysis of Old English presented in this book uses the Government and Binding framework of Chomsky 1981, 1982, 1986 and related work. In this section I briefly present those aspects of the framework that are crucial for an understanding of the analysis—in particular, the generation of d-structure and the mapping of d-structure to s-structure. Rule systems of the grammar produce a series of representations according to the scheme shown in (1) below. Rule systems are shown in capital letters, representations in small letters:

Rules of the lexicon and the categorical component generate dstructures by inserting lexical material into phrase structure generated in accordance with X-bar theory. Rules of the transformational component map d-structures into s-structures. S-structures are mapped into phonological and logical forms by the PF-component and the LFcomponent. I will be most concerned in this book with the generation of d-structure and the syntactic rules mapping d-structure into sstructure.

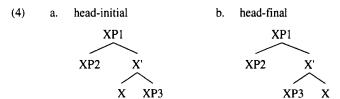
Under current versions of X-bar theory, all zero-level phrase structure categories, both lexical (noun, verb, adjective, and preposition) and non-lexical (INFL and COMP), project according to the scheme shown in (2) below, where X is a zero-level category, X' is an intermediate projection of X, and XP is the maximal projection of X. X is the head of XP. Linear order in (2) is not significant.

(2) a. 
$$XP \rightarrow XP X'$$
  
b.  $X' \rightarrow X XP$ 

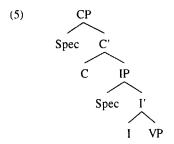
Thus all phrase structure has the shape, but not necessarily the linear order, shown in (3) below. XP2 is the specifier of XP1, Spec(XP1), and XP3 is the complement of X. The presence or absence of specifiers and complements for any particular grammatical category is determined by independent principles of the grammar, e.g. thetatheory, case theory, and the Extended Projection Principle.



The order of constituents within a maximal projection is a language-specific parameter, fixed by children on the basis of positive evidence in their linguistic environment. A maximal projection is called head-initial if the head precedes its complement, as shown in (4a), and head-final if the head follows its complement, as shown in (4b):



INFL (= I) contains tense, agreement, and modality features. Its maximal projection is IP, and it takes VP as its complement. COMP (= C) dominates base-generated complementizers like 'that' and 'whether'. Its maximal projection is CP, and it takes IP as its complement. The structures of CP and IP are thus as shown below in (5):



There are two types of syntactic movement: substitution and adjunction. Substitution moves maximal projections to specifier positions and zero-level categories to head positions; examples of structures after substitution are shown in (6), where  $t_i$  is the trace left by the movement:

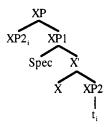
(6) a. 
$$[_{IP} NP_{i} [_{I} I [_{VP} [_{V} V t_{i}]]]]$$
  
b.  $[_{IP} [_{I} [_{I} V_{i}] [_{VP} [_{V} [_{I} NP]]]]]$ 

Adjunction affects only maximal projections, attaching them to the left or right periphery of higher maximal projections and creating an additional level of hierarchical structure, as shown in (7):

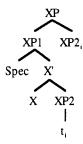
### (7) a. before adjunction



b. after adjunction of XP2 to the left periphery of XP1



c. after adjunction of XP2 to the right periphery of XP1



### 1.3. GOALS, ASSUMPTIONS, AND ORGANIZATION

The initial goal of this research was the description and analysis of variation in the position of the finite verb in Old English clauses. After preliminary investigation of Old English data, it became clear that this variation could not be described simply as the alternation between OV and VO base word orders. Rather, the surface position of the finite verb is primarily a reflex of synchronic competition over time between INFL-final and INFL-medial phrase structure. This competition had begun by the time of the earliest attested Old English texts, and continued into at least the early stages of Middle English. It is this variation in the underlying position of INFL that is the focus of the analysis presented in Chapters 3 and 5.

There are at least five problems inherent in the analysis of dead languages such as Old English.<sup>6</sup> First, the surviving texts may be limited in two important respects, by date of composition and by style, and thus may not be truly representative of the language over the entire period to be studied. Ideally, researchers in diachronic syntax should have available a large number of texts written in different styles and by

different authors throughout all stages of the language being investigated. Unfortunately, unless the language is a fairly modern one, such diversity is rarely found in the surviving texts. Certainly the number of extant Old English texts is comparatively small, although a broad range of styles and subject matter written primarily in two dialects, West Saxon and Mercian, is represented: both poetry, including heroic, religious, and elegiac; and prose, including chronicles, translations from Latin texts, homilies, religious prose, short works of fiction, and laws, charters, and wills. These texts are scattered by probable date of composition throughout the period, with, however, some intervals of time not represented. The texts included in the qualitative and quantitative databases for Chapters 3 through 5 are described in Appendix B.

Second, we cannot estimate with any certainty the differences between the spoken and written versions of the Old English language, nor can we determine how changes in the Old English vernacular affected the written language. Even though some of the extant texts were intended for oral recitation (e.g. Beowulf and the sermons of Ælfric and Wulfstan), we do not know how closely the language of these and other texts approached the vernacular of the period. It should be noted, therefore, that at least some of the variation in Old English word order presented and analyzed here may be attributable to the gradual emergence of the vernacular in the written language.

Third, the exact dates of composition of many Old English texts are unknown, particularly those that have survived only in the form of copies made by scribes; these copies have been shown to contain both errors and modifications. Although dating tests have been developed that use phonological, metrical, lexical, syntactic, and stylistic criteria (e.g. Foster 1892, Funke 1956, Girvan 1971, Lichtenheld 1873, Sisam 1946), each of these tests when applied individually has proved to be inadequate in accurately dating the language of a text (Amos 1980, Klaeber 1950). I discuss in Section 5.1 the criteria I used to assign specific dates to the texts in the database.

Fourth, the researcher is limited to the data found in the surviving texts and thus does not have access to speakers' intuitions of grammaticality and acceptability. The surviving texts may be deficient, lacking the crucial examples that support one analysis over another. The researcher must therefore be prepared to characterize some unattested sentences as grammatical, i.e. generated by the grammar but