

Word Order and Structure of Old English: with
special reference to Ælfric's *Catholic Homilies*

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Declaration

I hereby declare that this thesis is of my own composition that it contains no material previously submitted for the award of any other degree. The work presented in this thesis has been made by myself, except where due acknowledgement is made in the text.

Hee-Cheol Yoon

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Abstract

The aim of the study is to analyze word order of Old English in terms of the minimalist framework suggested in Chomsky (1995,2000). Old English data for the analysis are mainly drawn from Ælfric's *Catholic Homilies*, which is most likely to represent the language spoken in Anglo-Saxon England around the end of the 10th century. Following Kayne's (1994) version of universal base hypothesis, the analysis assumes that Old English has head-initial structure for every projection. It is therefore presupposed that linear order in Old English is closely related to structural hierarchy determined at syntax.

The study suggests that Old English ordering patterns other than the base one result from uninterpretable feature-driven operations. However, economy considerations under the minimalist framework require an additional uninterpretable feature to force a costly operation of movement. Those optional features indispensable for movement are generalized in the study depending on the type of movement: the [+Affix] feature for head movement and the EPP features for XP movement.

The postulation of the [+Affix] feature forcing affixation provides a unified account for various head movement-type operations in Old English. The optional nature of the feature in a derivation accords with optionality in head movement in Old English, which denies the traditional head-final hypothesis presuming a fixed position for finite verbs both in main and subordinate clauses. It is therefore no longer necessary to introduce empirically and conceptually unmotivated assumptions including string-vacuous verb movement, various types of extraposition, and the clitic analysis of personal pronouns based on head movement. The head movement analysis suggested in the study accounts for various positions of finite verbs in main and subordinate clauses, the distribution of verb-particle constructions, and all the ordering patterns in verbal complexes.

The EPP features of a functional head force pied-piping of an XP element. Along with economy considerations in computation, they illuminate some controversial constructions in Old English related to XP movement. Concerning the derivation of DP, it is suggested that the functional head D in Old English can carry the uninterpretable [+R] feature associated with the EPP features. Thus, an XP expression with referring nature should appear in a specifier of DP for deletion of those features as well as its own genitive Case feature. Chomsky's (2000) quirky analysis is adopted for quirky subject constructions in Old English with the additional assumption that PPs as well as oblique DPs can have an abstract Case feature. Subordinate V-2 is also analyzed as quirky subject constructions with oblique DP/PP in a specifier of TP rather than as topicalization into a specifier of CP. The quirky analysis is applied to short-distance scrambling in Old English. It is suggested that the functional head *v* can have default or defective agreement features. Any internal argument including oblique/nominative DPs and PPs undergoes short-distance scrambling as long as it is merged with an uninterpretable Case feature and the operation is forced by the EPP features of the functional head *v*.

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Chapter 1. Introduction

This study aims to explain ordering patterns of Old English through the minimalist framework outlined by Chomsky (1995,2000). Following Kayne's (1994) version of universal base hypothesis, the study is based on the assumption that Old English is uniformly head-initial for every projection including VP and IP. The assumption predicts a close correspondence between linear ordering and structural hierarchy determined at syntax, even if the influence of some discourse or stylistic factors cannot be completely excluded. At the same time, the head-initial hypothesis under the minimalist framework renders epi-phenomenal the apparent mixed headedness of Old English and interprets a superficially head-final structure as nothing but a reflex of leftward movement operations.

Syntactic operations introduced in this study are motivated by the minimalist assumption that they meet the requirements to delete uninterpretable features whose presence makes a derivation including them violate legibility conditions at the interfaces (Chomsky, 2000:94-8). In applying the minimalist assumptions to the analysis of Old English, two types of economy considerations deserve special attention. First, the analysis should be founded on as few assumptions as possible, which Hornstein (2000:5) calls methodological economy. Second, a derivation should be as simple as possible. The issue is involved with least effort conditions prohibiting unnecessary elements and operations (Chomsky, 2000:99). Therefore, proliferation of functional categories and introduction of abstract elements are avoided in this study unless they have sufficient conceptual or empirical motivations to meet a condition of full interpretation at the interface. Likewise, any operation can be legitimate only if has visible effects at the interface. The idea of simplicity is also related to the requirements of minimizing computational complexity (Chomsky, 2000:99-102). A simple operation of merge or Agree always preempts a complex operation of movement unless the latter is independently forced. On the other hand, the space of an operation should be minimally stretched. Thus, shortest move or the locality constraint makes illegitimate any operation that skips a potential target or a possible intervenient.

1.1. Why Ælfric's *Catholic Homilies*

Most data in this work come from Ælfric's *Catholic Homilies I, II* written around the end of the 10th century even if some are drawn from other texts when necessary. Anglo-Saxon England in the last half of the 10th century witnessed many dramatic changes.¹ Politically, Wessex completed unification of England by merge of the last part of Danelaw (954) but soon afterwards suffered a second wave of Viking invasion during the reign of Æthelred. The period also represents a golden era of late Anglo-Saxon culture. In particular, Benedictine revival led by Dunstan, Æthelwold, and Oswald contributed to the renaissance of English culture after the age of Alfred.

Ælfric, who was a pupil of Æthelwold, is generally regarded as the most prolific and accomplished writer in the vernacular in the Anglo-Saxon period. His writings include summons (*Catholic Homilies I, II, Lives of Saints*), translations of Old Testament and St. Basil's works (*Heptateuch, Hexameron, Admonito*), textbooks for teaching Latin (*Grammar, Glossary, Colloquy*), and a book on cosmography (*De Temporibus Anni*).² As a cleric preaching monasticism, Ælfric sticks to the doctrine of orthodox Christianity and leaves no room for originality in his thinking (Wrenn, 1967:224). In contrast, as a translator, he shows much more freedom and flexibility, surpassing the concept of 'hwilcum word be worde, hwilcum andgit be andgiete (sometimes word for word, sometimes sense from sense)' in Alfredian translations.³ In addition, he even pays much attention to the word order differences between Old English and Latin in his translations as cited below (Wrenn, 1967:229).

...æfre se ðe awent oððe se ðe tæcð of Ledene on Englisc, æfre he sceal gefadian hit swa ðæt ðæt Englisc hæbbe his agene wisan, elles hit bið swyðe gedwolsum to rædenne ðam ðe ðæs Ledenes wise ne can. (*Ælfric's Preface to Genesis:98-101*)
(one who translates or teaches from Latin to English, he must always arrange it (=English) so that English (may) preserve its own ways, otherwise it is most misleading to read for one who does not know the way of Latin.)

¹ See the first chapter of Hunt (1972) for a detailed historical, social, and intellectual background of the last half of the 10th century.

² For the complete list and chronology of Ælfric's works, see Cleomes (1959).

³ The italicized phrase is from King Alfred's translation of *Cura Pastoralis* (CP, preface:71-2)

As far as syntactic analysis is concerned, *Catholic Homilies I, II* are, among his works, the best candidate to testify the structure of Old English in late Anglo-Saxon period for the following reasons. First, they exhibit much less Latin influence than many other extant texts. It is undeniable that Ælfric consulted various Latin sources written by prominent figures including Gregory the Great, Bede, and Augustine. However, he freely rearranged and modified the sources for his *Catholic Homilies I, II* to serve his doctrine of orthodox Christianity (Bately, 1986:79). Second, he anticipated both listeners and readers among the laity as the following passage from the preface of *Catholic Homilies I* indicates.

...þ ic ðas boc of ledenum gereorde to engliscre spæce awende na þurh gebylde miclere lare ac for ðan ðe ic geseah 7 gehyrde mycel gedwyld on menegum engliscum bocum ðe ungelærede menn ðurh heora bilewitnysse to micclum wisdome tealdon... (CH I, praefatio:49-52)

(that I translate those books from Latin to English not because of the arrogance of much learning but because I saw and heard much heresy in many English books which ignorant men through their ignorance held to be great wisdom)

It is therefore plausible that the language used in Ælfric's *Catholic Homilies* can be close to the one spoken in his time.

Third, stylistic devices have no significant effects on ordering patterns of *Catholic Homilies*, which makes them eligible for a proper syntactic analysis.⁴ They represent Ælfric's ordinary prose style characterized by simplicity and clarity and well suited for oral delivery. Distortion of syntactic patterns is limited except for the use of ellipsis and coordination to get balance and parallelism. Alliteration is also restricted within a single phrase. Ælfric later developed rhythmical prose style, which heavily destroys original ordering by arranging two-stress phrases in pairs and linking them through alliteration.

1.2. The interpretation of Old English data under the minimalist framework

⁴ See Pope (1967:105-136) for a general introduction of Ælfric's prose styles. Following his argument that eleven (10, 11, 12, 14, 18, 19, 20, 21, 27, 35, 39) out of forty homilies in *Catholic Homilies II* show the signs of Ælfric's early experiment of rhythmical style, those eleven homilies are excluded from the corpus of this work.

The fundamental question still remains how the study based on Old English data from written texts can be conducted under the parameters-and-principles approach whose object of study lies in I-language, that is, the mental representation of a language.⁵ It is conceivable that Old English data reflects E-language at least in some extent, in a sense that they are affected by a mechanism irrelevant to I-language. The study also suffers the absence of native informants to provide grammaticality judgement as well as negative evidence, both of which are crucial for access to I-language under the parameters-and-principles approach.

The above-mentioned difficulties can be relieved even if it is impossible to overcome them completely.⁶ First, textual studies on Latin-influence, an individual text, and an author makes it possible to isolate from Old English data some typical aspects of E-language such as nonproductive foreign influence, stylistic apparatus, and sporadic oddities. Second, the study can be complemented by comparative study between Old English and other Medieval and Modern languages. Besides Dutch and German, the Scandinavian and Romance languages provide valuable insights for Old English constructions including V-2, personal pronouns, and post-verbal elements. Third, the study can get some help from electric corpora especially when it requires rare but crucial evidence for the analysis of Old English.

It should be noticed that the principles-and-parameters approach adopted for this study pay no special attention to the relative frequency of a specific syntactic pattern. Under the principles-and-parameters approach whose aim is to illuminate I-language, frequency is not associated with grammaticality at all (Fischer, van Kemenade, Koopman and Wurff, 2000:33). The assumption is also ruled out that the relative infrequency or the rarity of a syntactic pattern implies ungrammaticality or marginality, unless undeniable evidence is found to confirm that its occurrences result from extra-grammatical factors.⁷ This work therefore supposes that, irrespective of their relative frequency, the co-existence of more than one construction (e.g. OV/VO and topic-finite

⁵ See Chomsky (1995:15-19) for the distinction between I-language and E-language under the principles-and-parameters approach.

⁶ See also van Kemenade (1987:2-5) and Fischer, van Kemenade, Koopman and Wurff (2000:26-32) for the general discussion of how Old English data are handled and complemented in a generative perspective.

⁷ As far as the interpretation of frequency is concerned, the corpus-based approach sharply contrasts with principles-and-parameters approach. Pintzuk (1999), for instance, judges a syntactic pattern with the frequency of one percent or less as ungrammatical.

verb–subject/topic–subject–finite verb) is analyzed as the optional presence of a feature responsible for some syntactic operation.

1.3. Organization of the work

This work is organized as follows. Chapter 2 reviews previous analyses of ordering patterns of Old English and clarifies theoretical issues crucial to the study of word order. It is suggested that many attempts have been unsuccessful due to their presumption that a grammar of Old English is subsumed into a predetermined typologist model of language change. Alternatively, the head-final analysis of Old English is summarized with its postulated syntactic operations. Yet the plausibility of the head-final analysis is questioned by Kayne's (1994) version of universal base hypothesis and the minimalist framework, both of which deny head-parameters and rightward operations. The final part of the chapter is devoted to how Kayne's ideas of linear ordering are reconciled with the minimalist framework.

The minimalist analysis of Old English begins from chapter 3. The minimalist assumptions are applied to the analysis of DPs in Old English, which, together with CPs, are unanimously assumed to have head-initial structure. The analysis is made to conform to economy considerations under the minimalist framework. It minimizes the introduction of abstract entities including functional projections and lexically empty elements. It is instead suggested that uninterpretable feature-driven operations and economy considerations in computation should determine the derivation of Old English noun phrases and illuminate the arrangements between demonstratives, possessives, nominal genitives, attributive adjectives, and head nouns.

Chapter 4 concentrates on the clitic analysis of Old English personal pronouns, which constitutes a major argument for the V-2 and head-final hypothesis of Old English. It is argued that both conceptual and empirical evidence denies the assumption that cliticization as a subtype of head movement is responsible for the distribution of Old English personal pronouns. Most positions, which are claimed to be canonical for personal pronouns, turn out to be available for full noun phrases as well. Crosslinguistic examination indicates that personal pronouns in Old English should enjoy the status of XP rather than X^0 . The only operation exclusively affecting personal pronouns is

understood as a subtype of middle-distance scrambling. The argument made in the chapter suggests that the clitic analysis of personal pronouns cannot be motivated to support the fixed distribution of finite verbs in Old English.

In chapter 5, extensive arguments are made against the traditional CP-V2 hypothesis of Old English, under which finite verbs first move into a clause-final T and undergo further movement into C in main clauses. Diverse post-verbal elements in Old English subordinate clauses, however, raise doubts about obligatory verb movement into T under the head-final hypothesis. V-to-T movement itself has no conceptual motivations to be applied obligatorily in Old English. Crosslinguistic evidence reveals that morphological richness in verbal morphology cannot guarantee verb movement. In addition, V-to-T movement in Old English is always string-vacuous under the head-final hypothesis to violate the principle of economy. The assumption of obligatory V-to-C movement also experiences both empirical and conceptual problems. It not only fails to establish a proper trigger for the operation but also needs the stipulation that expletive as well as sentence-initial subjects are subject to string-vacuous topicalization. Moreover, the distribution of finite verbs in main clauses shows that they can occupy various positions other than the second one.

Chapter 6 proposes the minimalist account of verb movement in Old English. In analogy with V-to-*v* movement, verb movement to T is proposed as an operation forced by the [+Affix] feature in T. The non-intrinsic nature of the [+Affix] feature contributes to optionality of V-to-T movement in Old English, which is confirmed by the relative order between adverbs and finite verbs. It is argued that the analysis based on the [+Affix] feature can be successfully extended to explicate verb-particle constructions and verbal complexes in Old English. The minimalist analysis of head movement is also claimed to hold for verb movement to C in Old English. Finite verbs move into C as long as C is merged with the [+Affix] feature. Otherwise, they remain in a position lower than C, which denies a syntactic constraint of V-2 in Old English. On the other hand, subordinate V-2 in Old English is attributed to the quirky subject analysis and computational economy considerations under the minimalist framework.

Chapter 7 is dedicated to the minimalist analysis of scrambling in Old English. The head-initial hypothesis of Old English presupposes that short-distance scrambling is fundamentally equated with object shift, in a sense that both represent a feature-driven

syntactic operation to extract internal arguments out of VP. The earlier minimalist analyses of scrambling and object shift define them as a Case-driven operation but cannot expect diverse aspects of scrambling in Old English such as optionality, multiple scrambling, and oblique DP/PP/long-distance extraction. As an alternative, the quirky subject analysis is suggested. A core idea lies in the assumption that the functional head v in Old English can have uninterpretable default agreement features and, consequently, become blind to the value of Case features. The assumption paves the way for any internal argument including nominative/oblique DPs and PPs to undergo scrambling as long as it has an abstract Case feature. Optionality of scrambling in Old English is ascribed to the optional nature of the EPP features of the functional head v . Finally, long-distance scrambling, which displaces a complement out of a clause, is analyzed as an operation still forced by the EPP features in a higher v but irrelevant to Case/agreement relations. Chapter 8 provides the conclusion of this study.

Chapter 2. Theoretical Backgrounds

2.1. Introduction

This chapter aims to address three major issues related to the study of word order in Old English. First, it stresses the significance of a synchronic approach to the understanding of Old English ordering patterns. In particular, a careful examination of earlier studies reveals that too much emphasis on a diachronic change into a predetermined direction can bring about a biased interpretation of a synchronic grammar of Old English. Second, the chapter provides a general discussion of the contrast between the head-initial vs. head-final analysis of Old English. A base position of a head produces substantial implications both empirically and theory-internally, given that the principles-and-parameters approach attributes diverse ordering patterns in Old English to derivational differences. Third, the relation between linear order and structural hierarchy is clarified under the minimalist framework. Kayne's (1994) version of universal base hypothesis has some conceptual advantages, since it assumes a correspondence between a linear order and an asymmetric c-command relation and, consequently, no longer needs the head-parameter language-internally and cross-linguistically. Yet, the minimalist framework whose syntactic operations are motivated by uninterpretable features raises some doubts for Kayne's idea that the requirements on the antisymmetry of linear order force syntactic operation, not vice versa.

The chapter is composed as follows. In 2.2, some earlier studies of Old English word order are critically reviewed. Many of them attempt to explain ordering patterns of Old English in terms of a model of diachronic change. It is however argued that they fail to provide a principled account due to their predetermined direction of typological change. In 2.3, the head-final analysis of Old English is summarized along with major syntactic operations it postulates. It is shown that the analysis draws a main argument form verb-particle constructions and inevitably introduces some rightward operations to maintain the head-final structure of VP/IP. In 2.4, as an alternative, the head-initial hypothesis is suggested for the analysis of Old English. The hypothesis is based on Kayne's (1994) assumption that a universal order of specifier/adjunct-head-

complement is derived by the antisymmetric requirements on phrase structure. Even if the minimalist framework dismisses his idea that a linear order ultimately determines structural hierarchy, it also predicts a correspondence between them except for the cases where an asymmetric c-command relation cannot be established at syntax. In 2.5, a conclusion is made for the chapter.

2.2. Language typology and Old English word order

2.2.1. Early studies on Old English word order

Diverse ordering patterns between syntactic elements in Old English have aroused a special interest to many scholars since the 19th century. Among them, Smith (1893) makes one of the first systematic attempts to illuminate Old English word order. Based on the analysis of ordering patterns in Alfred's *Orosius* and Ælfric's *Homilies*, he classifies them into three major patterns in terms of relative orders between subjects and verbs as the following.

- (1) a. 'normal' order: S(subject)–V(erb)
- b. 'inverted' order : V(erb)–S(subject)
- c. 'transposed' order: S(subject)–X–V(erb)

He takes the order of S–V to be normal and unmarked in Old English. The other orders in (1) are supposed to represent marked alternatives with a limited distribution. Inverted order is adopted after some specific sentence-initial elements or for the signal of clause types such as condition, concession, interrogation, and command. Transposed order also has its distribution confined mainly to subordinate clauses.

Smith insists that transposed order was be in a constant process of decline even in subordinate clauses during the period of Old English and change into the normal order of S–V through analogy.¹ He stresses that more occurrences of postverbal pronouns in

¹ According to Smith's statistics, the order of SXV_{fin} accounts for 43 percent of subordinate clauses in *Orosius* but its figure in *Homilies* is just 17 percent. However, McKnight (1897) whose Old English data come from the Laws of Alfred and of Cnut shows that the percentage of SXV in subordinate clauses is

Homilies than in *Orosius* testify not only the weakened status of transposed order but also the convergence of ordering patterns towards S-V in Old English. His accounts hint at the dominant idea of historical linguistics in those times that a language in its earlier stages reflects a premature state and is bound to develop in a fixed way. Preoccupation with that idea has been frequently expressed in the assumption that the coexistence of S-V-X and S-X-V in Old English indicates its indeterminate status between analytic and synthetic languages (Barrett, 1953:118).² Consequently, the asymmetry of ordering patterns between main and subordinate clauses signifies a transitory state to be overcome during the diachronic change of English.

2.1.2. Language typology and diachronic change in Old English

More theory-oriented studies on Old English word order have begun to flourish after Greenberg's work (1963) on universals of word order. From the sample of thirty languages, Greenberg introduces 'basic order typology' involving three criteria: (1) preposition vs. postposition, (2) relative order between subjects, objects, and verbs (VSO, SVO, and SOV), and (3) the relative position of qualifying adjectives to nouns (prenominal vs. postnominal).³ He demonstrates that out of twelve possible arrangements between those three sets only seven combinations are attested in his sample languages as shown in the table below (Greenberg, 1963:77).⁴

(2)	I (VSO)	II (SVO)	III (SOV)
Po(stposition)-A(djective-noun)	0	1	6
Po(stposition)-N(oun-adjective)	0	2	5
Pr(osition)-A(djective-noun)	0	4	0

almost the same in both texts in spite of a considerable time span.

² Vallins (1956:45 fn.2) defines analytic and synthetic languages as the following. An analytic language is one in which word relationships are indicated not by inflection but by analysis, that is, 'breaking down' a word form into a phrase; a synthetic language is one in which they are indicated by inflection.

³ Greenberg excludes genitive position from a set of criterion. He assumes that it is correlated to the preposition/postposition distinction. Genitives always follow their governing nouns in languages with prepositions but invariably precede them in languages with postpositions (Greenberg, 1963:78).

⁴ Greenberg argues that the orders in which objects precede subjects (VOS, OSV, and OVS) do not occur at all or are excessively rare.

Greenberg suggests that dominant orders and harmonic relationships between different orders can be deduced from the table in (2) together with some additional universals. Moreover, the table makes it clear that harmonic relationships are not necessarily associated with the VO/OV contrast. Both Po-A and Po-N, for instance, are harmonious with OV as well as VO languages.

Lehmann (1972a,b) and Vennemann (1974) propose a more simplified version of language typology in which the relative order between verbs and objects analogically determines all other ordering relationships. Vennemann argues that the proposal can be diachronically verified by typology change from (S)XV into (S)VX via the stage of T(topic)VX. Let us now consider how he explains word order change in English. He presupposes that English has been a VX language in its whole period. In other words, Old English was already a VX language in contrast with its XV ancestor.⁵ He relates the change from XV to VX to the leveling of subject and object Case distinctions in Old English.⁶ In particular, insufficient Case distinctions can cause ambiguity to XV languages when topicalization places an object before a subject to produce the order of OSV. He stipulates that to avoid ambiguity verb movement is implemented to the position between an object and a subject. The position of verbs may be fixed later, yielding the verb-second constraint in TVX languages. Finally, TVX reaches the stage of SVX in English by specializing T to the primary topic case S.⁷

A model of diachronic change for Old English becomes more intricate in Stockwell's (1977) suggestion in which the change from SOV to SVO involves a sequence of articulated stages rather than a single intermediate stage of TVX. Stockwell

⁵ See Lehmann (1974) for the SOV hypothesis of Proto-Germanic. Lass (1994:218-221) also suggests that SOV should be the basic order of the earliest attested ancestor of Old English reconstructed from the runic corpus. Nevertheless, their assumptions leave much room for controversy since syntax cannot be reconstructed by the same comparative method used for the reconstruction of phonology and morphology.

⁶ Safir (1921:ch.7) attributes the replacement English *whom* by *who* to three long-term tendencies ('drifts'): (1) the leveling of Case distinctions between subjects and objects, (2) the fixing of element order in a sentence, and (3) the use of invariable words. He presumes that those drifts are interrelated and cumulative in some direction. He, however, denies any cause and effect relationship between them, which contrasts with Vennemann's (1975) effort to regard phonological/morphological change as a trigger for syntactic change.

⁷ Following Vennemann's explanation, the change into VX was delayed in subordinate clauses since they had less chance to be affected by topicalization than main clauses.

(1977:296) summarizes those stages of changes from Proto-Germanic to Modern English as in (3) even if he presumes that the final stage was never fully implemented in Old English.⁸

- (3) a. SO(V)v → vSO(V) by Comment Focusing
b. vSO(V) → XvSO(V) by Linkage or Topicalization
c. TvX(V) → SvX(V) by Subject = Topic
d. SvX(V) → Sv(V)X by Exbraciation
e. Subordinate Order → Main Order by Generalization
(or, at least, elimination of whatever differences existed)
where v = modal, *have*, *be/become*, finite verbs
V = optional non-finite verbs

It should be noticed that under Stockwell's hypothesis the change from SOV to TVX is not attributed to the weakening of Case distinctions and the resultant requirements for disambiguation. It is rather assumed that the change arises from two connected operations.⁹ First, Comment Focusing places finite verbs in a clause-initial (V-1) position to meet the needs to express some semantic contents such as vividness of action. Second, Linkage positions explicit linking words (*þa*, *þær*, etc.) before a focused verb to make contextualized the heightened vividness of V-1 clauses. Furthermore, Linkage can be generalized into Topicalization by which NPs as well as linking adverbs are placed in a clause-initial position.

Stockwell pays much attention to the role of Exbraciation for the development from TVX to SVO. Exbraciation is applied to the sentence brace in complex verb constructions formed by the movement of a finite verb as shown below.¹⁰

⁸ Stockwell modifies his hypothesis in Stockwell and Minkova (1991), where the V-3 order of Modern English is claimed to originate from subordinate clauses in Middle English due to the disappearance of distributional distinction between full NPs and pronouns.

⁹ Alternatively, Lass (1994:226-228) proposes that V-2 and the sentence brace should originate from Wackernagel's Law in early Indo-European, that is, the tendency for clitic elements to converge on the second position in a main clause. It is however arguable how the clitic-second tendency can be developed into the V-2 constraint by which any kind of verb can be influenced. If van Kemenade's (1987) hypothesis is correct that Old English pronouns are clitics, clitic-second and V-2 can lead to conflict in explaining ordering patterns. More detailed discussion will be made in chapter 4.

¹⁰ Stockwell presumes that in case of simple verb constructions the rule in (3c) is enough to establish

(4) S O V v → S v O V (v.....V: the sentence brace)

If the sentence brace undergoes Exbraciation, its internal elements are extracted out of the brace. Consequently, the operation destroys the sentence brace and produces the adjacency of verbs as the following.

(5) S v O V → S v V O

Bean (1983), however, denies the postulation of intermediate stages in Old English. She argues that the analysis of ordering patterns in *Anglo-Saxon Chronicle* provides no persuasive evidence for TVX as an established pattern developed from XV in Proto-Germanic period.¹¹ She furthermore suggests that V-3 (XSV and SXV) rather than V-2 (XVS and SVX) should be the normal word order of Old English as a spoken language and characterize the ordering pattern of every clausal type throughout the period.¹² The V-3 pattern is established first in non-main clauses, where topicalization is less likely to distort a normal order than in main clauses, and adopted later in main clauses. Following her argument, the emergence of non-V3 patterns in Old English has no substantial ramification for its typology. For instance, the conspicuous increase of the TVX pattern in some specific periods is presumed to reflect the influence of narrative style rather than the development of a new ordering pattern in Old English. The intermittent decline of V-3 in non-main clauses is also attributed to analogy to distorted ordering patterns in main clauses.

If Bean's hypothesis is accepted, no major change has happened to ordering patterns in the history of English. Old English already shared the V-3 pattern with its modern counterpart from the earliest stage. Her hypothesis is however undermined by several problems. First, major presuppositions in her study raise some doubt. In particular, it is open to debate whether the chronological order of *Anglo-Saxon Chronicle* corresponds

SVO.

¹¹ Bean assumes that *Anglo-Saxon Chronicle* is representative of various stages of Old English since it was written not by a single individual but by a group of authors each of whom belonged to a different period.

¹² According to Bean's statistics, V-3 predominantly accounts for the main clauses of pre-755 material in *Anglo-Saxon Chronicle*, where stylistic distortion is assumed to have less influence than in non-main clauses or in post-755 material.

to that of recording or whether pre-755 material represents spoken Old English. Second, her statistics disregards the distinction between finite and non-finite verb forms and between pronouns and full noun phrases. Third, except for stylistic distortion no proper explanation is offered to non V-3 patterns or considerable ordering differences between main and other types of clauses.

2.2.3. Problems in the typologist model of language change

Whether Bean's hypothesis is correct or not, diachronic explanations based on universal language typology face both empirical and conceptual difficulties. First, crosslinguistic evidence does not support their model of language change in which the direction of change is predicted or predetermined in a unique way. If the typologist assumption is to have any universal implication that English has developed consistently into SVX through the intermediate stage of TVX, a similar course of change should be attested in other Germanic languages. Contrary to its prediction, all the Germanic languages except for Modern English retain TVX and the V-2 constraint irrespective of the extent of erosion in Case distinctions.¹³ In Icelandic and Yiddish, they constitute a predominant pattern in both main and subordinate clauses. In Mainland Scandinavian languages, they are generally restricted to main clauses. The V-2 constraint is also preponderant in main clauses in German and Dutch, where SXV is still characteristic of word order in subordinate clauses. The assumption, therefore, cannot work even among Germanic languages that language change proceeds in a predetermined way.

Second, the diachronic rules or stages mentioned in 2.2.2 amount to synchronic rules in Old English. Admitting that the coexistence of different rules or stages can give evidence to the gradual spread of change, the fact requires a synchronic explanation that all those rules or stages manifest themselves simultaneously in almost any Old English text. The order of (S)XV, which, most typologists assume, stands for the basic order of pre-Old English, comprises not a overwhelming but still a substantial part of ordering patterns of subordinate clauses in late Old English texts.¹⁴ On the other hand, Old

¹³ Modern English exhibits the V-2 pattern in a small set of constructions including *wh*-questions in main clauses and negative inversion, which Rizzi (1996) calls residual V-2.

¹⁴ According to Davis' (1997:276), V-final constitutes 55 percent of dependent clauses in his sample from *Afric's Homilies* and 48 percent from *Alfric's Supplementary Homilies*.

English permits some alternative patterns that deviate from the predetermined direction of change. Following Venemann (1974) and Stockwell (1977), it seems reasonable that TVX should appear obligatorily in a topic-initial clause in consideration of its indispensable role for the typological change from SXV to SVX. Topic-initial clauses, however, allows the order of non V-2 as the following.

- (6) a. þa unspecendan cild hi *fullodon* ðurh geleafan þæs fæder (CH II, 3:252-3)
the speechless child they baptized by belief of the father
b. Æfter godes gesetnysse ealle cristen men *sceoldon* beon swa geþwære
(CH I, 19:219-20)
after God's arrangement all christen men should be so united

If TVX is so crucial for a diachronic change to SVX, fluctuation between TVX and TXV cannot be expected for topic-initial clauses in Old English.

Third, the typologist model of language change conflicts with the theory of language acquisition based on Universal Grammar. If the assumption is correct that directionality is predetermined in language change, it should belong to the language faculty or Universal Grammar of a language learner. Otherwise, a grammar acquired by a language learner is unlikely to converge on it generation after generation. The empirical fact, however, indicates that as in the case of Germanic languages direction of language change is not uniform even among neighboring languages within the same language group.¹⁵ Lightfoot (1999:205-212) suggests that directionality should be epiphenomenal and represent some general trend at best. He criticizes any attempt to associate it with the change of language faculty or Universal Grammar as the Lamarckian interpretation of language change.

Following the traditional typologist hypothesis, language change depends on the change of the grammar of a language learner motivated by extragrammatical factors. Those factors include logical processes (e.g. analogy, generalization and specialization),

¹⁵ Kiparsky (1996) suggests that verb-fronting in embedded clauses should be closely associated with the change from OV to VO order among Germanic languages. The languages with the operation such as Yiddish, Icelandic, older Mainland Scandinavian, and Old English have experienced the change while the others without it have retained the OV order. His argument can provide some generalization but it remains unanswered how verb-fronting in embedded clauses can trigger the change to VO in those languages.

psychological motivations (e.g. afterthought in Hyman (1974)), and performance limitations (e.g. errors in Stockwell (1977:299)). If they are relevant to adult grammar, they should introduce an innovation or produce a change in the grammar that has been already acquired in early childhood (Stockwell, 1977). Lehmann (1972), on the other hand, suggests the influence of those factors on early grammar, which enables a child to develop a grammar different from the one that could be acquired through primary linguistic data from parents. However, recent studies on language acquisition generally dismiss the role of extragrammatical factors in both early and adult grammar.¹⁶

The above argument does not deny the possibility that the grammar of individuals can change from one generation to the next generation. Suppose that some innovation is introduced to the grammar of an individual. Even if it cannot change his/her grammar itself, it can at least influence primary linguistic data for a language learner in the next generation. Once individuals start to develop the grammar distinct from that of the previous generation, the change can spread to a whole language community. It is however controversial whether language change implies the change of an individual grammar (Joseph, 1992), the propagation of change (Milroy, 1992), or the integration of both (Croft, 2000). Although the detailed discussion of recent research on language change goes beyond the scope of this dissertation, a proper understanding of synchronic syntax should be prerequisite for any account. Recall that typologist accounts of Old English word order are constructed on the unjustified presupposition that main declarative clauses determine its basic word order. Therefore, a synchronic explanation of diverse ordering patterns in Old English can provide a better insight than the stipulation of diachronic stages to illuminate the nature of change in English. In what follows, a critical review will be made on the previous synchronic approaches to Old English word order under generative grammar.¹⁷

2.3. The head-final hypothesis and Old English word order

¹⁶ See Hyam (1986) for a comprehensive theory of language acquisition based on Universal Grammar. See also Hyam and Wexler (1993) and Rizzi (2000), which argue against the extragrammatical accounts of early subjectless construction. Hawkins (2001) shows that the same strategy should be adopted for second language acquisition.

¹⁷ See Strang (1970:312-4), Kohonen (1978), and David (1997) for a functionalist approach to Old English word order.

2.3.1. Generative Grammar and the SOV analysis of Old English

Generative approaches before the principles-and-parameters model presuppose that in spite of surface differences ordering patterns in main and subordinate clauses are syntactically related to the same underlying source. The discrepancy in linear ordering between those two clause types are supposed to arise from derivational differences, that is, a different set of transformational rules relevant to their derivation. Therefore, it has become the primary issue to settle which of the two clausal types should be the base of the other. The argument on Modern Dutch is covered here first since it has been frequently adopted as a benchmark for the head-final analysis of Old English since van Kemenade (1987).

Koster (1975) argues that verb-particle constructions support the SOV analysis of Dutch according to which head-final order characteristic of subordinate clauses is assumed as underlying structure. He indicates that the distribution of verb-particle constructions in Dutch cannot be readily accommodated by the optional rule of particle movement in Modern English. Particle movement in Dutch has to apply obligatorily in main clauses as in (7a) while it never applies in subordinate clauses as in (7b).

- (7) a. Jan belde Marie op (*Jan belde op Marie)
 Jan phoned Marie up
 b. dat Jan Marie opbelde (*dat Jan Marie belde op)
 that Jan Marie up-phoned

Suppose that Dutch has the underlying structure of SVO and an optional rule of rightward particle movement. The surface order of (7a) is derived by particle movement across the object. On the other hand, the surface order of (7b) should be involved with two separate rules: rightward verb movement and particle movement over the object.

Once it is assumed that Dutch has SOV as underlying structure and dispenses with particle movement, derivational processes of both sentences in (7) look much simpler. Koster's argument against particle movement in Dutch is based on the assumption that under the SOV analysis the position of stranded particles in main clauses represents the base position of verbs. He suggests that the evidence for his argument should come

from the fact that stranded particles in main clauses and finite verbs in subordinate clauses are both followed only by clausal/heavy nominal complements and some restricted adverbials. Without particle movement, the SOV analysis requires leftward verb movement across the object in (7a) and needs no movement at all for the derivation of (7b). Koster's proposal meets the principle of economy in early generative grammar that a grammar with fewer rules should be selected among the possible candidates meeting descriptive adequacy. As far as the number of rules is concerned, SOV should be underlying structure for both sentences in (7) and, more generally, for Dutch.¹⁸

Van Kemenade (1987) assumes that the argument for the SOV analysis of Dutch holds for the analysis of Old English as well. Let us consider verb-particle constructions in Old English as shown in (8).

- (8) a. þa *astah* se Hælend *up* on ane dune (AHTh, I, 182)
 then rose the Lord up into a mountain
- b. þæt he ðone cwelmbæran hlaf *aweg bære* (AHTh, II, 162)
 that he the poisonous loaf away carry
 (from Kemenade (1987:30,31))

Following Koster's analysis, van Kemenade argues that the SOV analysis offers a simpler account for ordering patterns in (8) than the SVO analysis. Particles in (8) keep their base position. Positions of verbs, on the other hand, depend on the type of a clause: they move to a second position in main clauses as in (8a) but remain in a clause-final position in subordinate clauses as in (8b).

Van Kemenade however concedes that verb-particle constructions in Old English exhibit more complicate patterns than Dutch counterparts as exemplified below.

- (9) a. Stephanus *upastah* þurh his blod gewuldorbeagod (AHTh, I, 56)
 Stephan up-rose through his blood crowned with glory

¹⁸ Kemenade (1987:29) argues that language acquisition also supports verb movement under the SOV hypothesis. A language learner easily acquires verb movement through the deduction of the original position of a verb from that of a particle. Yet, Zwart (1993) suggests that economy based on the number of rule application cannot be maintained within the universal context of word order and feature checking.

- b. þeah ðu sie *up* ofer þine mæd *ahæfen* (CP, 467, 3)
though you are up over your condition raised
(from van Kemenade (1987:30,31))

In contrast with Dutch, Old English allows the string of particle-verb to move together within a main clause as in (9a) and to occupy a postverbal position within a subordinate clause as in (9b). Without modifying Koster's (1975) major assumptions, she ascribes the above peculiarities of Old English verb-particle constructions to language-specific operations: an optional separation of particle-verb string for (9a) and optional (rightward) particle movement for (9b).¹⁹ She therefore concludes that in spite of some irregularities verb-particle constructions in Old English support the hypothesis that Old English share the underlying structure of SOV with Dutch.

2.3.2. Syntactic operations under the SOV analysis for Old English

In accordance with the SOV analysis of Old English, van Kemenade (1987) introduces various operations to explain ordering patterns other than SOV. First, she assumes that INFL in COMP (= C in her later works) must be lexicalized by a finite verb in a main clause (verb movement) or by a base-generated complementizer in a subordinate clause. The lexical requirement on INFL is associated with the licensing condition for nominative subjects, according to which nominative subjects should be licensed by lexical INFL to satisfy Case requirement. In main clauses, verb movement is triggered to meet the requirements to lexicalize INFL and license nominative subjects, which results in the V-2 constraint. In subordinate clauses, base-generated complementizers can satisfy both requirements without resort to verb movement.

Second, van Kemenade suggests clitic movement for personal pronouns in Old English. The operation is justified by the asymmetry of syntactic distribution between full noun phrases and personal pronouns as shown in the following examples beginning with a topic ((10b)=(6a)).

¹⁹ Considering that the absence of particle movement is one of Koster's basic presuppositions, its reintroduction can undermine the SOV analysis of Old English.

- (10) a. *Micel wæs cristes eadmodnys ða ða he com sylf to ðam fulluhtere* (CH II, 3:98-9)
 Much was Christ's humbleness when he came himself to that baptist
- b. *þa unspendan cild hi fullodon ðurh geleafan þæs fæder* (CH II, 3:252-3)
 the speechless child they baptized by belief of the father

The order of (10a) represents the V-2 pattern in main clauses in Old English. The full noun phrase subject occupies the specifier of S (= IP), that is, a normal position for nominative subjects. In contrast, the order of V-3 in (10b) is assumed to result from clitic movement by which the pronoun is attached to the left of the finite verb.

Third, extraposition accounts for rightward movement of objects or adverbials over a VP-final verb under the SOV analysis of Old English. Extraposition should be applied more extensively in Old English in term of the fact that, unlike Modern Dutch and German, Old English permits post-verbal DPs or adverbs within subordinate clauses as shown below.

- (11) *þ hi bodedon freolice godes naman reðum cynegum 7 wælræwum*
 (CH I, 16:71-2)
 that they proclaimed freely God's name (to) savage and cruel kings

Fourth, van Kemenade supposes that Verb Raising is responsible for the distribution of non-finite verbs within Old English subordinate clauses. The operation is assumed to induce the clause union by which the clause of a nonfinite verb loses its clausal status and becomes a part of a higher verb projection. Under the SOV hypothesis Verb Raising is divided into two types depending on the direction of raising: rightward Verb Raising as in (12a) from Dutch and leftward Verb Raising as in (12b) from German.

- (12) a. *dat Jan het boekje wilde hebben* (Dutch)
 that Jan the book wanted have
- b. *dass der Johann das Büchlein haben wollte* (German)
 that John the book have wanted

In some Germanic languages such as West Flemish and Zurich German, Verb Raising can raise a whole VP rather than a single verb as the following example from Zurich German exhibits.

- (13) ...das er t_i törf [_{VP} hunden is Huus bringe]_i
 that he may the-dog into the-house bring

Interestingly, all the above-mentioned types of Verb Raising are attested in Old English as exemplified in (14).²⁰

- (14) a. hwæþer we on reste oððe on wite þone gemenelican dom andbidan sceolon
 (CH I, 40:185-6)
 whether we in rest or in punishment the common judgement expect should
 b. gif we us selfe nellað fordon mid unþeawum (CH I, 19:181)
 if we ourselves not-wanted destroy with vices
 c. þæt he wolde manna bearn on þissere tide geneosian (CH I, 22:197-8)
 that he wanted man's offspring in this time visit

Kemenade regards the examples in (14) as evidence for the assumption that Old English should have all those operations: leftward Verb Raising for (14a), rightward Verb Raising for (14b), and VP Raising for (14c).

2.4. The head-initial analysis of Old English and the minimalist framework

2.4.1. Arguments against the SOV analysis of Old English

The SOV analysis has made a substantial contribution to the understanding of Old

²⁰ The SOV analysis predicts that *mid unþeawum* in (14b) undergoes extraposition after Verb Raising. Pintzuk (1993) suggests that Verb Projection Raising in Old English should be different from Verb Projection Raising in Zurich German. Only Old English allows Verb Projection Raising to carry a pronominal object as exemplified below.

- (i) a. ?* das er törf [_{VP} en is Huus bringe] (Zurich German)
 that he may him in the-house bring
 b. þæt heo wolde [_{VP} hine læran] (Old English)
 that she wanted him teach

English syntax. It proves that superficial differences of ordering patterns can be derived by syntactically motivated operations, denying the assumption that Old English is a nonconfigurational language with a flat constituent structure. Nevertheless, it is still open to discussion whether the SOV analysis should be the only option for the syntax of Old English. Its major conceptual argument, that is, the principle of economy in terms of the number of rules cannot be upheld any longer. Generative grammar has developed into the principles-and-parameters approach in which no syntactic rules specific to a particular language or construction can exist. They can be only justified by an independent principle in Universal Grammar.

The principles-and-parameters approach before the minimalist framework associates the SVO vs. SOV contrast with the head parameter in the universal X' theory, which determines whether a phrase has a head-initial or a head-final structure. The underlying structure of SOV implies that the head parameter of VP is fixed as head-final rather than head-initial. From the nineties, however, the X' theory itself has become susceptible to doubt. Kayne (1994) argues that the X' theory is not a primitive component of Universal Grammar but a reflection of a more fundamental principle by which hierarchical structure uniquely determines linear ordering. Chomsky (1995:241-249) also denies the presence of the X' theory in Universal Grammar and suggests that the structures stipulated in the X' theory should be reduced to nothing but lexical features. Before a detailed discussion of both Kayne and Chomsky, let us first examine some immediate issues that can be raised against the SOV analysis of Dutch and Old English.

Zwart (1994) points out several empirical problems resisting the SOV analysis of Dutch as the following. First, in embedded clauses where the SOV analysis expects no rightward verb movement, some element can intervene between an object and a verb in a clause-final position as exemplified in (15).

- (15) ...dat Jan rijm rijbewij *nooit* haalt
that Jan his driver's license never gets

Zwart argues that the SOV analysis cannot explain the Case-marking of the object in (15). The intervening sentence adverb prevents the object from receiving Case from the in-situ verb, which causes the violation of the adjacency condition for structural Case

marking.²¹ Old English also permits the split of an object and a clause-final verb as shown below.

- (16) þ he sceal þa flæslican lustas gewyldan 7 his lichaman to godes þeowdome
that he must those fleshly desires conquer and his body to god's service
symle gebigean (CH I, 12:110-1)
always turn

Following Koopman (1984), van Kemenade (1987:89-94) hypothesizes an abstract Case marker in the left periphery of VP, which makes it possible for the object *his lichaman* in (16) to receive Case without adjacency to the verb *gebigean*. Her proposal, however, raises the question on Case- and theta-marking under the SOV analysis. An object receives its theta-role from a verb in its right, but it should get Case from an abstract marker in its left. The issue is directly involved with the structural position of verbs and Case-marking of objects, which will be covered extensively in Chapter 6 and 7.

Second, rightward operations under the SOV analysis suffer the lack of syntactic motivation. Consider how the SOV analysis explains the fact that clausal complements always follow verbs within subordinate clauses in Dutch and Old English as shown below.

- (17) a. ...dat Jan wil [dat hij zijn rijbewijs haalt]
that Jan wants that he his driver's license gets
b.*...dat Jan [dat hij zijn rijbewijs haalt] wil
c. ðonne hi gelyfað þæt we godas sind 7 us offriað (CH I, 31:142-3)
when they believe that we gods are and us offer

The SOV hypothesis needs the stipulation that clausal complements, in contrast with DP complements, should obligatorily undergo extraposition and cannot remain in a preverbal base position as in (17b). Yet, the stipulation conflicts with the general assumption that the internal argument of a verb, whether it is DP or CP, is merged into a

²¹ Zwart does not consider the possibility of rightward verb movement to a clause-final I under the SOV analysis. A detailed discussion will be made in Chapter 5 and 6.

complement position within VP.

Zwart moreover indicates that complement clauses in Dutch are not islands preventing the extraction of internal elements. If a clausal complement underwent extraposition and consequently occupied an adjoined position, it would be an island blocking the extraction of its internal elements due to the lack of L-marking.²² However, a *wh*-phrase can move out of the clausal complement as exemplified below.

- (18) Wat_i denk je dat Jan mij vertelde [dat hij t_i gehaald had]
What think you that Jan me told that he got had

Extraction from a clausal complement is also permitted in Old English as shown below.

- (19) *þæra_i he sæde þæt he syxa sum ofsloge syxtig t_i on twam dagum*
(Orosius, 15/5-6)
of-them he said that he with five others killed sixty in two days
'he said that he killed sixty of them with five others in two days'

The evidence from (18) and (19) implies that clausal complements occupy an L-marked position, which can hardly be expected by the assumption that they are extraposed from a preverbal base position.

A syntactic status of extraposition becomes more dubious under the minimalist framework in which every syntactic operation should be driven by morphological feature checking. Likewise, Verb Raising lacks syntactic justification unless a morphological feature is confirmed to trigger the operation. Moreover, the SOV analysis cannot explain why Verb Raising should have three alternatives (rightward Verb Raising, leftward Verb Raising, Verb Projection Raising) and how Old English can permit all of them. Without a principle governing the direction and scope of its application, Verb Raising becomes a language- and construction-specific operation irrelevant to Universal Grammar. In sum, conceptual considerations raise doubts about both extraposition and

²² The original definition of L-marking is as the following (Chomsky, 1986:15).

(i) A L-marks B iff A is a lexical category that theta-governs B.

A verb theta-governs a maximal projection if no B(locking) C(ategory) intervenes between them. If a clausal complement is adjoined to IP, VP becomes a BC to prevent its theta-marking by a verb within VP.

Verb Raising constituting major rightward operations of the SOV analysis.

Third, Zwart (1993) maintains that the ordering pattern of every projection in Dutch is supportive of the head-initial analysis. DP and CP, which constitute the highest nominal and verbal projection respectively, have the unambiguous structure of head-initial. The other categories such as VP(IP), AP, and PP can claim either head-initial or head-final structure from their surface order.²³ Nevertheless, Zwart points out that an intervening element can appear between a head and its complement only when those categories have the surface order of head-final. He interprets the split of head-complement as evidence to support the head-initial hypothesis according to which a pre-head complement arises from leftward movement from its post-head base position. It is therefore proposed that Dutch should be a uniform head-initial language rather than a mixed branching one. His argument here is, of course, based on Kayne's (1994) universal base hypothesis, which aims to derive the order of specifier-head-complement from an independent principle of Universal Grammar.

2.4.2. Kayne (1994): the Linear Correspond Axiom and Universal Base Order

Kayne (1994) proposes a direct correspondence between linear ordering and hierarchical structure. He first defines a linear ordering between terminal nodes as a relation with the following properties (Kayne 1994:4).

- (20)
- a. transitive; that is, $xLy \ \& \ yLz \rightarrow xLz$
 - b. total: that is, it must cover all the members of the set: for all distinct x, y , either xLy or yLx .
 - c. antisymmetrical; that is, $\text{not}(xLy \ \& \ yLx)$

Notice that the dominance relation between nonterminal nodes cannot have all the properties of a linear ordering even if it is restricted to asymmetric c-command as

²³ If head-final structure is postulated for those categories, Dutch and Old English should exhibit mixed-headedness of head-initial and head-final. Given the minimalist framework dismisses the head-parameter from Universal Grammar, the question remains unanswered how the direction of head can be determined in those languages.

defined below.

- (21) X asymmetrically c-commands Y iff X c-commands Y and Y does not c-commands X. (Kayne, 1994:4)

The asymmetric c-command relation defined in (21) is transitive and antisymmetric, but it is not total since in a given phrase marker there can be a pair of nonterminal nodes neither of which asymmetrically c-commands the other. Kayne, therefore, suggests that, for a locally total relation between nonterminal nodes, any phrase marker should be binary-branching.²⁴ Following Kayne (1994:4-5), the relation between nonterminal nodes is formally expressed as the following.

- (22) In a binary branching tree, if Y asymmetrically c-commands X and Z (distinct from Y) also asymmetrically c-commands X, then it must be the case that either Y asymmetrically c-commands Z or Z asymmetrically c-commands Y.

In case a set of nonterminal elements satisfy (22), an asymmetric c-command relation between them becomes a locally linear ordering which meets the three properties mentioned in (20).

The remaining task is to match a linear ordering between terminal elements with a locally linear ordering between nonterminal nodes. Kayne (1994:5) supposes that this matching can be mediated by a dominance relation d between nonterminals and terminals as defined below.

- (23) For a given nonterminal X, $d(X)$ is the set of terminals that X dominates.

The definition (23) expresses a dominance relation from the set of nonterminals to the set of terminals. Kayne furthermore extends it to include a dominance relation from the set of ordered pairs of nonterminals (the Cartesian product of nonterminals) to the set of ordered pairs of terminals (the Cartesian product of terminals) based on the following

²⁴ The term 'locally total' implies that the dominance relation becomes total when restricted to the set of nodes dominating a given node, even if the dominance relation itself is not total (Kayne, 1994:4).

definition.

- (24) For a given pair of nonterminals $\langle X, Y \rangle$, $d(\langle X, Y \rangle)$ is the set of ordered pairs $\{ \langle a, b \rangle \}$ such that a is a member of $d(X)$ and b is a member of $d(Y)$.

Now the intuition can be formally expressed that an asymmetric c-command relation between nonterminals is closely matched to the linear ordering of terminal elements. Suppose the set A of ordered pairs $\langle X, Y \rangle$ in a given phrase marker such that X asymmetrically c-commands Y but Y does not asymmetrically c-command X . If A represents the maximal set including all pairs of nonterminals, the relation between asymmetric c-command and linear ordering can be simply stated as the following (Kayne, 1994:6).

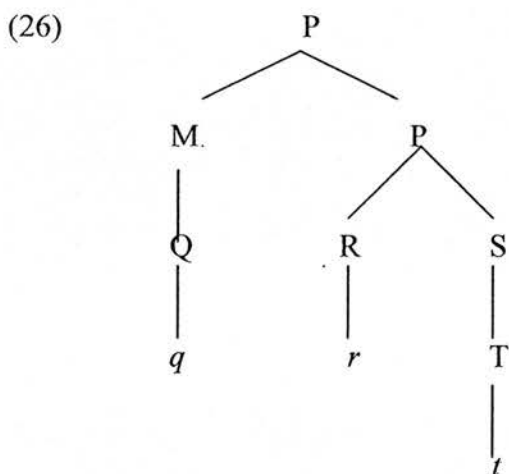
- (25) Linear Correspondence Axiom (LCA)
 $d(A)$ is a linear ordering of T (the set of terminals).

According to the LCA, the locally linear ordering of nonterminals and a linear ordering of terminals are interlocked in a unique way. Nevertheless, there can be two possibilities to map the antisymmetric relation between nonterminals onto a linear ordering: precedence and subsequence. Let us now consider how the LCA works for a simple phrase marker L as represented in (26) in the following page.²⁵ In (26), M asymmetrically c-commands R . Following the definition of (24), A contains $\langle M, R \rangle$ and $d(A)$ contains $\langle q, r \rangle$. R , in turn, asymmetrically c-commands T , which implies that A contains $\langle R, T \rangle$ and $d(A)$ contains $\langle r, t \rangle$. Consequently, q and t should be on the opposite sides of r even if it is not determined whether a linear ordering between them should be precedence or subsequence.

If a phrase marker in (26) is VP, the LCA permits SVO and OVS out of six possible arrangements between subject (= specifier), verb (= head), and object (= complement). The LCA cannot expect the order of SOV, which makes inconsistent the mapping of hierarchical structure onto linear order. An antisymmetric relation between a specifier

²⁵ Capital and small letters represent nonterminal and terminal elements respectively.

and a head is mapped onto a linear ordering of precedence, but the same relation between a head and a complement is mapped onto a linear ordering of subsequence.



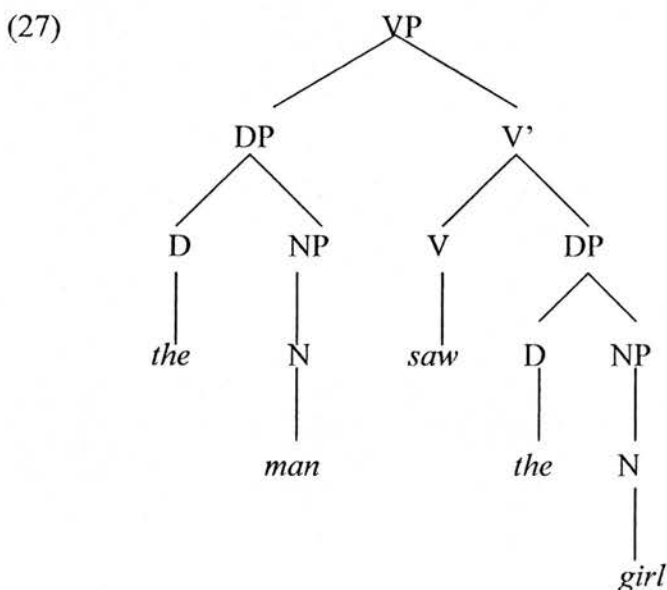
Kayne (1994:35-38) argues that empirical evidence across languages favors precedence (SVO) over subsequence (OVS) to represent a linear ordering of terminal elements. Compared with SVO languages, OVS languages are quite rare as Greenberg (1963) excludes them from basic order typology. The relative surface order of a specifier and a head in CP/IP is also overwhelmingly specifier–head across languages. If precedence is representative of a linear ordering, the order of specifier–head –complement is the only option made available by the LCA. Kayne hypothesizes that the LCA should be a part of Universal Grammar to impose the order of specifier–head–complement on every phrase marker across languages. With no head or directionality parameter in Universal Grammar, word order other than the universal order is attributed to leftward movement to an asymmetrically c-commanding position satisfying the requirements of the LCA.

2.4.3. Implications of the LCA and Chomsky (1995)'s bare phrase theory

Chomsky (1995:335) states that Kayne's (1994) idea of universal order is fundamentally compatible with the spirit of the minimalist framework. Chomsky, however, argues that the conceptual grounds on which the LCA is based cannot be justified in his bare phrase theory. As seen in the previous section, Kayne's hypothesis

depends on the major properties of phrase structure under the standard X' theory even if the X' theory itself is claimed to derive from the LCA in Universal Grammar. Unlike Kayne, Chomsky abandons X-bar theory, which is mainly represented by a generalized X' schema. He instead proposes that a context-free X' schema should be replaced with relational properties of categories and the simple process of Merge in which the label (= categorial type) of a newly formed object is derivationally determined in a unique way (Chomsky, 1995:241-249).

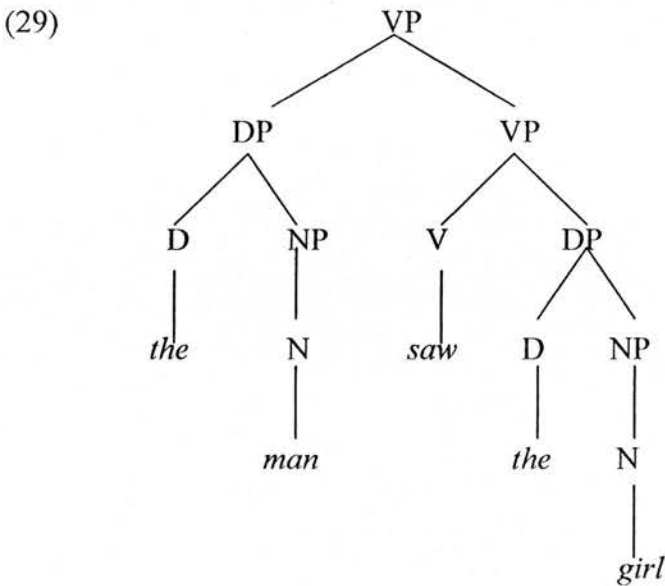
Their disagreement on the X-bar theory is vividly demonstrated in the treatment of specifiers. Let us suppose a phrase marker VP under the X' theory whose specifier is the sister of V' as schematized below.



Following Kayne's hypothesis, VP in (27) cannot satisfy the LCA. The specifier DP asymmetrically c-commands V. The LCA requires the terminal element *man* dominated by the specifier DP to precede the verb *saw* dominated by V. However, V' also asymmetrically c-commands NP within the specifier DP, which can produce the precedence of *saw* over *man* by the LCA. To resolve the conflict of the LCA in (27), Kayne assumes that specifiers are actually adjuncts and that segments should be distinguished from categories with regard to the definition of c-command as follows (Kayne, 1994:16).

- (28) X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y.

The definition (28) implies that a segment cannot enter into a c-command relation. In accordance with (28), (27) should be substituted by the following structure where the specifier is an adjunct to VP.

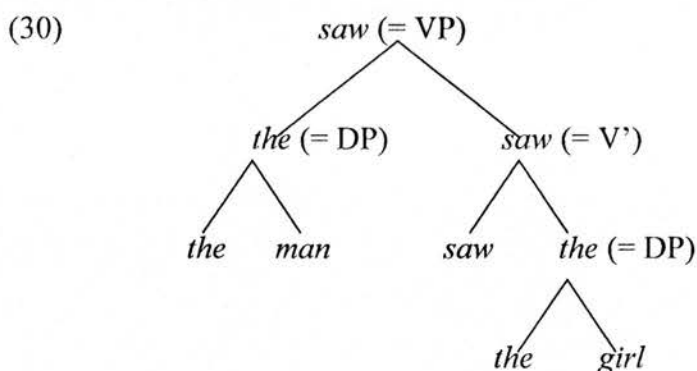


In (29), $d(A)$ contains $\langle man, saw \rangle$, but not $\langle saw, man \rangle$. The lower VP, which is a segment, fails to enter into a c-command relation. The LCA, therefore, correctly rules out the precedence of *saw* over *man* under the assumption that a specifier is an adjunct to a maximal projection.

Chomsky (1995:241-249) suggests that the LCA can be satisfied between specifiers and heads without the stipulation that specifiers are adjuncts. The suggestion follows from his bare phrase structure theory under which the distinction between minimal and maximal projections is not inherent but derives from the relational nature of categories. Categories are supposed to consist of nothing but properties of lexical items to satisfy the inclusiveness condition at the interface. The condition of inclusiveness forces any structure formed by the computation to contain only the elements already present in the lexical items selected from the numeration (Chomsky, 1995:225). Therefore, a derivation cannot introduce such elements as bar levels and categorial heads projected

from a generalized X' schema. Under the bare phrase theory, a maximal projection simply refers to a category that does not project any more. A minimal projection is not a projection at all. Any projection other than maximal one is regarded as X', which is invisible to the computation of a derivation.

If the above assumptions of the bare phrase theory are accepted, the structure of VP in (29) should be as the following.



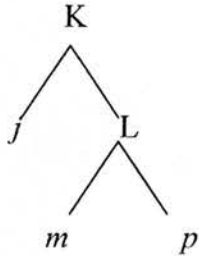
In (30), the specifier DP is the sister of V' rather than VP. Notice that an asymmetric c-command relation holds between the specifier and the head but not vice versa.²⁶ V', which is neither maximal nor minimal, cannot enter into an asymmetric relation. Chomsky therefore concludes that the LCA can be met in (30) without resort to the category/segment distinction.

The LCA, however, cannot be entirely accommodated within Chomsky's bare phrase theory. First, it fails to determine a linear ordering between head and complement in case the latter consists of a single terminal element (Chomsky, 1995:336). Let us consider the structure (31) in the following page, where a complement as well as a specifier is not branched. In (31), L projects into a separate category K, so that *j* becomes a specifier. The specifier *j* asymmetrically c-commands both *m* (= a head) and *p* (= a complement), which yields the precedence of *j* over *m* and *p* by the LCA. However, the LCA cannot determine a linear ordering between *m* and *p*, since no asymmetric c-command relation holds between them. The head *m* can claim

²⁶ The bare phrase theory defines heads as terminal elements drawn from the lexicon (Chomsky, 1995:245). The relation of XP (maximal projection) to Y (head) is defined in term of locality. The most local relation of XP to Y represents head-complement relation. All other relations within YP are head-specifier.

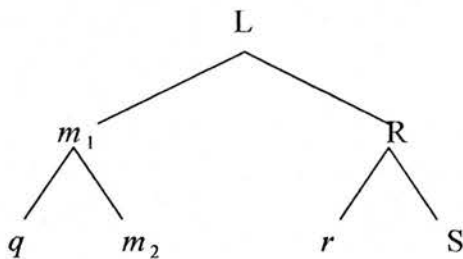
precedence over the complement p only if the complement is has a complex structure to form an asymmetric c-command relation to the head.

(31)



Second, Chomsky (1995:338-340) argues that the distinction should be maintained between specifiers and adjuncts in contrast with Kayne's assumption that specifiers amount to adjuncts. Chomsky indicates that the LCA is inoperative to adjunction structures without introducing a stipulation to the notion of c-command. Suppose that the following structure (32) represents a derivation in which adjunction is made to a nonmaximal head.

(32)



In (32), S is the complement of the head r . Thus, R projected from r becomes the complement of the head m . The head q is adjoined to the head m , which produces the two-segment category $[m_1 m_2]$. In terms of Kayne's definition of c-command in (28) based on exclusion and category/segment distinction, q asymmetrically c-commands and therefore precedes $[m_1 m_2]$: q c-commands $[m_1 m_2]$, but not vice versa, since $[m_1 m_2]$ includes q . $[m_1 m_2]$ then c-commands and precedes m_2 due to the assumption that the segment m_1 cannot enter into a c-command relation. Consequently, q asymmetrically c-commands and precedes m_2 .

Chomsky (1995:339), however, questions Kayne's version of c-command and proposes that the core notion of c-command should be intuitively expressed as the

following.

- (33) X c-commands Y if (a) every Z that dominates X dominates Y and (b) X and Y are disconnected.

He points out that exclusion in Kayne's definition cannot be the sole interpretation of disconnection in (33). Suppose that disconnection is understood as the requirement that *neither X nor Y is a segment of a category that contains the other*. Then, no c-command relation can be established in (32) between q , $[m_1 m_2]$, and m_1 since $[m_1 m_2]$ contains q . The argument indicates that the LCA cannot decide a linear ordering in adjunction structures if disconnection implies prohibitions against containment.²⁷ Chomsky (1995:340) therefore argues that there exists no principled reason to favor Kayne's definition of c-command but to justify the LCA.

The above-mentioned divergences between Kayne and Chomsky are associated the conceptual issue where to apply the LCA in a grammar. Kayne (1994:48-49) suggests that the LCA should hold in all syntactic representations including D-Structure and LF which have been traditionally assumed to be irrelevant to linear order. In contrast, Chomsky (1995:340) keeps a traditional point of view on a linear ordering, insisting that the LCA should be a principle of the phonological component applying to the output of Morphology after Spell-Out. Although the plausibility of Kayne's suggestion largely depends on empirical investigation, his suggestion can be in conflict with economy considerations under the minimalist framework.

The LCA makes inevitable the proliferation of functional heads to host a moved element. It permits at most one adjunct per projection since no asymmetric c-command relation can hold between multiple adjuncts within a same projection (Kayne, 1994:22). Hence, at least every complement and adverbial before a head should appear in a separate projection whose head is often lexically empty. Let us consider how the LCA explains the pre-verbal elements in the second conjunct of the following example ((34)=(16)).

²⁷ Chomsky (1995:324-6) denies adjunction of YP to XP based on the assumption that checking domain of a head X cannot include a maximal projection (= YP) adjoined to its specifier (= XP).

- (34) þ he sceal þa flæslican lustas gewyldan 7 his lichaman to godes þeowdome
 that he must those fleshly desires conquer and his body to god's service
symle gebigean (CH I, 12:110-1)
 always turn

If the assumption is accepted that there can at most be one adjunct per projection to meet the LCA, the second conjunct in (34) should have the structure as schematized below.

- (35) [_{AgrOP} his lichaman_j [_{AgrOP} AgrO [_{AgrOP} to godes þeowdome_k [_{AgrOP} AgrO
 [_{AdvP} *symle* [_{AdvP} Adv [_{VP} t_{subj} gebigean_i [_{VP} t_k t_i [_{V'} t_j]...]]]]]]

In (35), three different functional categories are projected to host pre-verbal elements in their adjunct position: two for objects and one for adverbs. They are however all subject to doubt under the minimalist framework. AgrOs have neither phonological nor semantic contents. They are introduced into a derivation by purely theory-internal arguments. They are responsible for the Case and agreement checking of objects, but should be deleted as soon as checking is done. Otherwise, they make a derivation crash at the interface, since they consist of uninterpretable formal features only (Chomsky, 1995:349). AdvPs have no association with morphological feature checking at all. Their motivation is limited to providing a locus for an adverb to meet the requirement by the LCA. Therefore, those functional categories in (35) not only make the derivation unnecessarily complicates but also lack motivations both empirically and conceptually.

It is probable that without compelling evidence the LCA belongs to phonological operations. Nevertheless, the effects of the LCA can be mostly obtained from syntax with no further phonological operations. Recall that the bare phrase theory can predict a linear ordering between a specifier and a head through an asymmetric c-command relation. The prediction can also be made between a head and a complement in case the latter has a complex structure. It should be noticed that an asymmetric c-command relation holds derivationally between a head and non-branching complement if vP-shell

is assumed above VP.²⁸ Then, verbs should move at least onto a light verb *v*, that is, the head of *v*P-shell. Even if a complement remains in its base position within VP, it is asymmetrically c-commanded by a verb within *v*P or a higher functional projection. Moreover, an asymmetric c-command relation can be established for adjunction structures under Kayne's definition of c-command.

Following the above assumptions, the application of the LCA to form an asymmetric c-command relation between syntactic objects is restricted to the following cases under the minimalist framework. First, multiple specifiers within the same functional category asymmetrically c-command its head. However, they fail to satisfy the c-command requirements between each other and become subject to a post-syntax operation imposed by the LCA. Second, an asymmetric c-command relation cannot hold between multiple heads adjoined to a single head.²⁹ Under Kayne's definition of c-command based on exclusion and category/segment distinction, they asymmetrically c-command a target head but still cannot c-command each other. Therefore, the LCA should be involved after syntax to decide a linear ordering between them through an asymmetric c-command relation.

The major arguments made in this section are mainly drawn from Chomsky's bare phrase theory and the traditional presupposition that principles canonically responsible for ordering should be applied after syntax. They accommodate Kayne's universal order of specifier-head-complement. Nevertheless, they deny the assumption that the LCA should be a universal principle at syntax. The assumption relies on a generalized X' schema in the X' theory, which is abandoned under the bare phrase theory on conceptual grounds. It also requires the stipulation that specifiers should be adjuncts to get an asymmetric c-command relation between a specifier and a head. To pursue the assumption makes a grammar unnecessarily complicated by postulating unmotivated functional categories and subsequent operations at syntax. In spite of the above-mentioned problems, the role of phonological operations to meet the LCA is of limited significance for a linear ordering of a derivation. An asymmetric c-command relation already holds between most lexical elements as a result of theta structure or independent syntactic operations for morphological feature checking when a derivation reaches the

²⁸ See Chomsky (1995:329-334) for empirical and conceptual evidence for the introduction of *v*p-shell.

²⁹ For the argument against adjunction other than head-to-head, see Chomsky (1995:317-326)

interface level. In particular, adjunction structures under Kayne's definition form an asymmetric c-command relation, which contrasts with Chomsky's argument that they cannot enter into a c-command relation. The discrepancy concerning adjunction structures is related to the fundamental issue whether head movement should be understood as a syntactic operation. The occurrences where an asymmetric c-command relation fails to hold at syntax are restricted to multiple specifier and multiple adjunction constructions, both of which can be therefore subject to phonological operations to satisfy the LCA.

2.5. Conclusion

Earlier studies of Old English word order, especially diachronic explanations based on the typologist model of language change not only reveal some serious problems but also highlight the importance of a synchronic approach for the analysis of Old English. Their problems mainly come from the assumption that a language is predetermined to change in a unique way. Conceptual and crosslinguistic empirical evidence, however, indicates that the assumption cannot be justified at all. Moreover, the assumption unconvincingly interprets synchronically coexisting ordering patterns of Old English as diachronically intermediate stages. If language change is assumed to include the change of an individual grammar attained from Universal Grammar, a synchronic explanation of Old English ordering patterns should be a prerequisite for the illumination of its diachronic change.

Generative grammar before the minimalist framework supposes that the head-final structure of some projections such as VP and IP is responsible for ordering patterns of Old English. Thus, the head-final hypothesis of Old English introduces syntactic operations producing a linear order other than complement-head in head-final projections. The head-final hypothesis has made a substantial contribution to the understanding of Old English syntax, in that it attributes superficial differences of ordering patterns to syntactically motivated operations. Yet, it is arguable whether the head-final hypothesis should be an appropriate answer for the analysis of Old English. First, its major argument, that is, economy in terms of the number of individual rules cannot be maintained under the principles-and-parameters approach, in which economy

had more general connotations and excludes syntactic operations specific to a particular language or construction. Second, the head-final hypothesis resorts to some rightward operations whose motivations are not syntactically convincing. Third, it presupposes the mixed headedness of Old English, which invariably makes a grammar complicated by depending on the head-parameter in the X' theory.

Alternatively, it is suggested that Old English should be uniformly head-initial. The head-initial hypothesis of Old English represents the idea that the head-parameter as well as X' theory cannot constitute a principle of Universal Grammar. Kayne (1994) argues that every language should have a universal order of specifier/adjunct–head–complement derived from an independent principle associating linear order with structural hierarchy. His argument therefore predicts that linear order other than the universal ordering reflects not a head-final phrase structure but an effect of leftward syntactic operations to form an asymmetric c-command relation. Kayne's assumptions have some conceptual advantages. First, they provide a unified account of phrase structure without the head-parameter. Second, they remove ambiguity between structural hierarchy and linear order, since it is assumed that a linear ordering is exclusively and completely associated with an asymmetric c-command relation.

Chomsky (1995:241-249) also denies the presence of the X' theory in Universal Grammar and suggests that the structures stipulated in the X' theory should be reduced to nothing but lexical features. However, Chomsky's minimalist framework is incompatible with the aforementioned Kayne's ideas in some points. They disagree about technical details such as X' schema, a notion of c-command, and the distinction between specifiers and adjuncts. Their discrepancy largely results from Kayne's reliance on an asymmetric c-command relation in phrase structure to decide linear order. More importantly, Chomsky (1995:340) rejects Kayne's Linear Correspondence Axiom according to which linear order ultimately determines structural hierarchy. He instead sticks to the traditional assumption that operations relevant to linear order should be applied after syntax. Nevertheless, Kayne's assumption that a linear ordering corresponds to structural hierarchy can be largely integrated into the minimalist framework. Except for multiple-specifier and multiple adjunction structures, operations including merge by theta structure requirements and movement for feature matching establish an asymmetric c-command relation between syntactic elements at syntax.

Chapter 3. The Structure of Old English Noun Phrases

3.1. Introduction

It has been frequently suggested that nominal structures are parallel to clausal structures in many, if not all, respects (Cinque (1999), Haegemann & Guéron (1999:406-88), Giusti (1997), *inter alia*). Their resemblance is easily detected in de-verbal and de-adjectival noun phrases whose argument structure is shared with corresponding verbal and adjectival phrases as the following example from Old English testifies.

- (1) 7 he is ealra wytegena *witegung*. for ðan þe ealle witegan be him *witegode*
(CHI, 12:133-4)
and he is all prophets' prophecy because all prophets about him prophesied

In (1), the de-verbal noun *witegung* holds the same thematic relation with regard to the Saxon genitive *ealra wytegena* as its original verb *witegode* has with regard to the nominative subject *ealle witegan*.

Parallelism between nominal and clausal structures is also supported by the assumption that a syntactic operation analogous to NP-movement can be motivated within a noun phrase as shown in (2a).¹

- (2) a. *ure sawla* Alysend (CHII, 1:58)
our soul's savior
b. þu alydest *þine sawla* mid þære mynegunge (CHI, praefatio:115-6)

¹ Haegeman & Guéron (1999:415-6) indicate that referential relations such as binding and control prove parallelism between DP and CP as exemplified in (i) and (ii).

- (i) a. John_i /He_i severely criticizes himself_{i,j} /him_{i,j}
b. John's_i /His_i severe criticism of himself_{i,j} /him_{i,j}
(ii) a. John_i attempted [PRO_i to leave]
b. John's_i attempt [PRO_i to leave]

Her argument, however, cannot work in Old English. First, nouns in Old English cannot permit *to*-infinitive as their complement. Second, no independent reflexive pronouns exist in Ingvaenic languages including Old English (Campbell, 1959:289). Note that a pronoun can be used as an anaphor within the binding domain as in (iii).

- (iii) to þy þæt we_i us_i to him gebiddan (CHI, 5:13)
in order that we ourselves to him pray

you save your soul with that admonition

It is plausible that the Saxon genitive (*ure sawla*) in (2a) represents a derived subject of the head noun *Alysend* rather than a base-generated argument in a pre-nominal position. An argument for the above analysis comes from the fact that (2a) can be a nominal passive counterpart to an active clause of (2b) in terms of theta structure. Yet, in spite of the same thematic role of Theme, *ure sawla* in (2a) and *þine sawla* in (2b) occupy different surface positions relative to a head. The former appears in a pre-head (nominal) position while the latter in a post-head (verbal) position. Following Baker's (1998) uniform theta assignment hypothesis proposing a universal mapping between thematic structure and syntactic structure, the distributional contrast in (2) proves the existence of some passivization-like operation within a noun phrase.

In this chapter, we will examine to what extent such parallelism contributes to the minimalist analysis of non-derived as well as derived noun phrases in Old English. The analysis presupposes that any attempt to rely on parallelism between clausal and nominal structure should satisfy economy considerations under the minimalist framework. The chapter is organized as follows. The second section is devoted to crosslinguistic evidence for the presence of functional categories and subsequent syntactic movement within a noun phrase. The third section covers the analysis of adnominal demonstratives in Old English. It is argued that they are distinguished from definite articles and enjoy a status of maximal projection. The fourth section concentrates on the distribution of possessive pronouns within a noun phrase including their relative positions to adnominal demonstratives. It is suggested that their distribution cannot be accommodated by an Agr-based analysis either empirically or conceptually. The fifth section focuses on how economy considerations explain the structure of noun phrases in Old English. It is hypothesized that in Old English the functional head D of a referring noun phrase takes the [+R] feature associated with the EPP features. Those uninterpretable features should be deleted by merge of a demonstrative or by possessive/genitive movement to satisfy the legibility condition at the interfaces.

3.2. Parallelism between DP and CP: crosslinguistic evidence

3.2.1. DP analysis and functional categories

Parallel analyses for noun phrases and clauses have been extended and generalized within the DP hypothesis of generative grammar. Abney (1987) and Grimshaw (1991) assume that a projection of DP whose head is filled by a determiner, usually, an article, is the extended projection of the lexical category N just as CP or IP/AgrSP represents the extended projection of the lexical category V. Giusti (1997) furthermore suggests that DP as well as CP can have both inflection-based (AgrP-type) and complementizer-based (CP-type) functional projections.

Hungarian is frequently quoted as a testimony for the existence of both types of functional categories within DP (Szabolcsi, 1994). The argument for DP-internal AgrPs is based on the fact that a possessive argument triggers person agreement with a head noun as we see in (3).

- (3) a. *az en kalap-om*
the I-Nom hat-1st.sg (my hat)
- b. *a te kalap-od*
the you-Nom hat-2nd.sg (your hat)
- c. *a Peter kalap-ja*
the Peter-Nom hat-3rd.sg (Peter's hat)

Szabolcsi suggests that some Agr-type functional category should be responsible for agreement feature checking in (3) in the same way as AgrSP is related to subject-verb agreement checking within a clause. In both cases, a functional head is assumed to trigger movement of a nominative argument for relevant Case and agreement feature checking.

When possessive arguments take dative Case marking, they occupy a different structural position from nominative counterparts. Only dative possessive arguments can appear before the definite article as shown in (4).

- (4) *Mari-nak (*Mari) a kalap-ja*
Mari-Dat (*Mari-Nom) the hat-3rd.sg (Mary's hat)

Following Szabolcsi's analysis, the above contrast proves that the possessive argument *Mari-nak* cannot have its dative Case checked by the same functional head that is associated with the Case checking of nominative possessive arguments. Accordingly, it should move into a specifier of a higher functional projection, that is, DP for its dative Case checking by D, which makes it precede the definite article *a* in (4).

Szabolcsi hypothesizes that DP should be a CP-type functional category in consideration of the fact that dative possessive arguments can only undergo A'-movement as the following examples of topicalization show.

- (5) a. *Mari-nak*_i Peter latta [t'_i a t_i kalap-ja-t] (topicalization)
 Mary-Dat Peter-Nom saw [the hat-3rd.sg-Acc]
- b. **Mari*_i Peter latta [a t_i kalap-ja-t]
 Mary-Nom Peter-Nom saw [the hat-3rd.sg-Acc]

The contrast in (5) indicates that a specifier of DP hosting dative possessive arguments should be an A'-position legitimate for further A'-movement such as topicalization. Nominative possessive arguments, on the other hand, remain within an AgrP-type functional category whose specifier is regarded as an A-position. Unlike dative counterparts, they fail to move into a specifier of DP since their movement causes the mismatch of Case against the functional head D. Otherwise, they should move across DP on their way to an A'-position as in (5b), which leads to the violation of the locality constraint.

3.2.2. N-to-Agr and N-to-D movement

Once functional categories are introduced for a nominal structure, it seems reasonable that movement of N to D or (nominal) Agr can be expected on a par with V-to-Agr or V-to-C movement within a clause. Cinque (1994, 1999) proposes partial N-movement moving a head noun into an intermediate Agr-type head in an attempt to explain some post-nominal adjectives in the Romance languages. He furthermore suggests that each adjective should be a specifier of its own Agr-type functional category rather than an adjunct to NP. His proposal predicts that N-movement to the head of some adjectival

functional projection produces the distributional asymmetry between adjectives as shown below.²

- (6) a. La prima *invasione* italiana dell'Albania
the first invasion Italian of Albania
(the first Italian invasion of Albania)
- b. La grande *aggressione* brutale all'Albania
the big aggression brutal against Albania
(the big brutal aggression against Albania)

Under Cinque's analysis, the head noun *invasione* in (6a) moves into the head of a functional category whose specifier is *prima* across the thematic adjective *italiana*. Likewise, the noun *aggressione* in (6b) undergoes movement into the head of the functional projection of *grande* and, consequently, precedes the manner adjective *brutale*.

Cinque assumes that in contrast with Modern English counterparts Romance nouns move into an Agr-type functional category for agreement feature checking. His assumption is based on the observation that adjectives in Romance have inflectional endings for number and gender agreeing with nouns while Modern English adjectives have no agreement endings at all. He argues that in terms of the minimalist framework rich inflectional morphology in Romance adjectives enables a functional head to force overt N-movement for agreement feature checking between adjectives and nouns through Spec-Head relation.³

Cross-linguistic investigation confirms the existence of a second type of N movement: N-movement to the topmost head D. Mainland Scandinavian (Taraldsen,

² In fact, Cinque supposes that N-movement permits head nouns to move across only functional categories projected from thematic/manner adjectives, which conflicts with the general assumption that thematic adjectives are merged as a specifier of NP (Giusti (1997), Haegeman (1999)). According to his supposition, all the remaining types of attributive adjectives are predicted to appear in a pre-nominal position irrespective of N-movement. Yet, it is questionable how partial N-movement can be syntactically constrained if each adjective has its own functional projection beyond NP.

³ Richness in inflectional morphology cannot be a convincing motivation for overt N-movement in the Romance languages. In spite of full inflectional paradigms for adjectives, Old English and German have no regular overt N-movement. The same objection can be raised against the accounts of overt V-movement based on rich verbal morphology.

1990) and Rumanian (Grosu, 1988), for example, are claimed to have N-to-D movement triggered by the morphological property of a definite article as shown in (7) and (8) respectively.⁴

- (7) a. en bil/ et hus (Danish)
 a car (*the car)/ a house (*the house)
 b. bilen/ huset
 the car (*a car)/ the house (*a house)
- (8) a. un frumos baitat (*baitat-un frumos) (Rumanian)
 a nice boy
 b. bait-ul frumos (*ul frumos bait)
 boy-the nice

Neither language permits N-to-D movement when DP is headed by an indefinite article as shown (7a) and (8a). However, once a definite article appears as in (7b) and (8b), it necessarily triggers N-movement possibly due to its enclitic property.

3.2.3. Empty D and N-to-D movement

Besides N-movement to an overt D, i.e., N-adjunction to a lexically filled D, Longobardi (1994, 1996) suggests N-movement to an empty D in the Romance languages. Longobardi (1994) assumes that D has the feature [+/-R(eferential)] with regard to the interpretation of a noun phrase. If [+R] is assigned to D, it should be checked by an object-referring noun such as pronouns or proper names rather than by a kind-referring noun typically represented by common nouns. He furthermore distinguishes object-referring nouns in terms of their base positions within DP. Pronouns are directly merged into D to check the feature [+R] in D without any

⁴ Giusti (1995), however, argues against N-to-D movement in Mainland Scandinavian. The argument comes from the absence of a post-nominal adjective as in (i), which contradicts the prediction of the N-to-D movement hypothesis.

(i) det store hus (*huset store) (Danish)

She supposes that the definite article in Danish can appear either as an article or as a bound morpheme depending on the presence of an adjective. When it co-occurs with an attributive adjective, it becomes a definite article as in (i). Otherwise, it functions as a bound morpheme attached to N as in (7b).

movement. Proper names, on the other hand, have N as their base position and move into D for the checking of [+R]. As shown in the contrast between *Gianni mio* vs. *my Gianni*, their movement can be either overt (as in Romance) or covert (as in Germanic) depending on the strength of the feature [+R] in D.⁵

Longobardi (1996) develops the notion of an empty D based on operatorhood to explain the asymmetry between Romance N-to-D movement of common nouns and Semitic N-to-D movement in construct state as in (9).⁶

- (9) a. Casa(*Citta) mia/*Case nostre (Italian)
 home(city) my/homes our
 b. Beyt(Sefer) ha-iS /Batetey ha-mora (Hebrew)
 home(book) the man's/houses the teacher's

Longobardi first notices that the Romance languages limit N-to-D raising to singular occurrences of a small group of common nouns, namely, *casa* and some kinship terms as in (9a). In contrast, the Semitic languages have no such restrictions at all as in (9b). In addition, he supposes that Romance N-to-D movement produces a special semantic entailment, which is not available in Semitic construct state.

- (10) a. L'ufficiale sperava che gli fosse assegnata *casa sua* (Italian)
 The officer hoped that he could be assigned home his
 b. Dan roce le hakim'et *yaldey ha-Sxenim* (Hebrew)
 Dan wants to meet children the neighbors's

Although both italicized DPs in (10) exhibit N-movement, there appears some divergence of interpretation between each other. *Casa sua* in (10a) has only the scope-insensitive *de re* reading ('the home that had already been his') dispensing with *de dicto*

⁵ He suggests that the article *il* in (i) should be an expletive D whose [+R] feature is satisfied by an in-situ proper name through CHAIN relation, which is reminiscent of the account of *there*-construction by Chomsky (1986).

(i) Il mio Gianni/ Gianni mio/ *mio Gianni

⁶ Adnominal genitives in the Semitic languages are expressed by absolute state or by construct state. The former has the same pattern with the Romance genitive construction of *de/di* (D+N(+AP)+prep+DP) whereas the latter takes the pattern of N+DP(+AP).

reading ('a home specifically designed for him'). On the other hand, both readings are available for the construct state genitive *yaldey ha-Sxenim* in (10b).

Longobardi attributes the above contrast to the differences in the status of the empty D. He hypothesizes that Romance N-to-D movement is confined to a non-operator D with the feature [+R]. Therefore, only singular forms of *casa* and some kinship terms, which are approximate to proper names in terms of familiarity and uniqueness of designation, can undergo movement to check the [+R] feature in D and have *de re* reading. He assumes that Semitic N-to-D movement in construct state represents the same operation as Rumanian N-to-D movement: both have no specific restriction on their application and interpretation. The assumption implies that an empty D in Semitic construct state has operatorhood and therefore constitutes a non-lexical counterpart to the definite article in Rumanian. Both form an operator-kind (article-common noun) formula for individual denotation rather than an individual referent. Overt movement of head nouns in the Semitic construct state is explained by the postulation of the uninterpretable feature [+article] in D to trigger N-to-D movement.⁷

3.2.4. Theoretical implications

Crosslinguistic examination made so far indicates that nominal phrases as well as clauses have functional projections and relevant movement operations. Moreover, all the above accounts presuppose a uniform order of Spec–Head–Complement for every nominal phrase to comply with the universal base hypothesis of Kayne (1994). Ordering patterns deviating from the universal base order are attributed to leftward movement triggered by morphological requirements for feature checking rather than to rightward adjunction. If a similar explanation is applicable to nominal structures in Old English, it amounts to the evidence in favor of the SVO hypothesis for Old English in terms of the uniformity of phrase structure.

It is however controversial to decide to what extent parallelism between DP and CP can be validated. Some have even suggested a more transparent correspondence

⁷ Longobardi (1996) proposes that Germanic construct state, that is, Saxon genitive construction should have an empty operator D just as Semitic construct state. The former, however, is assumed to lack the [+article] feature in an empty D, which is responsible for the absence of overt N-to-D movement.

between word order in DP and clausal word order, not to mention functional categories and relevant syntactic operations. Ritter (1991), for instance, relates the NSO order of Semitic construct states to the VSO clausal order of the Semitic languages.⁸ Cinque (1999) also suggests a close relationship between partial N-movement across adjectives and V-movement across adverbial modifiers in the Romance languages, assuming that each adverb as well as each adjective occupies a specifier of its own functional projection. Further evidence for ordering parallelism between DP and CP can be corroborated in Modern English, which lacks both N- and V-movement at syntax. Nevertheless, their argument cannot predict the asymmetry between N- and V-movement in the Germanic languages other than Modern English. Those languages have V-to-C movement at least in main clauses even if except for the Scandinavian languages they lack N-to-D movement.

It should be noticed that the attempt needs some caution to associate the structure of DP with that of CP. As in case of parallelism between N- and V-movement, it sometimes leads to overgeneralization incompatible with empirical facts. In addition, a recent development of the minimalist framework by Chomsky (1995, 2000) has changed the concept of functional categories and feature checking which the previous accounts of DP structure employed. Therefore, the analysis of Old English DP structure should take advantage of parallelism between DP and CP as long as it is justified both empirically and conceptually.

3.3. Demonstratives in Old English

3.3.1. Arguments against the presence of articles in Old English

Before we begin investigating the extensive structure of DP, let us first consider whether Old English has articles that are supposed to occupy the functional head D under the DP hypothesis. The issue should be a point of departure for the analysis of DP structure, since DP is assumed to project above NP on semantic grounds of the definiteness vs. indefiniteness distinction as well as on syntactic distribution. It has been generally

⁸ Ritter, in fact, regards the ordering requirement as a trigger for N-movement to an empty D.

assumed that Old English has no categories comparable to articles in Modern English (Quirk & Wrenn, 1955: 69-72, Mitchell & Robinson, 1964:106-107, Traugott, 1972:85-87, inter alia). Although demonstrative pronouns and the numeral *an* are historical sources from which Modern English articles have developed, no firm syntactic and semantic evidence can be found to define them as articles.

Quirk & Wrenn (1955) suggest that demonstrative pronouns in Old English should be characterized by a deictic or a specifying function when used adnominally. A deictic use of adnominal demonstrative pronouns is exemplified below.

- (11) Witodlice on *þysum* dæge þu wunast on sibbe; ac *seo* towearde wracu
truly in this this day you remain in peace; but that approaching punishment
is nu bediglod fram þinum eagum (CHI, 28:8-9)
is now concealed out-of your eyes

In (11), *þysum* and *seo* are used to produce the effect of contrast based on the proximity of time (present vs. future). In contrast, the definite article of Modern English is hardly used for a deictic function.

It is less clear whether a specific use of adnominal demonstratives represents any interpretation other than specificity, but a substantial part of its occurrences are associated with anaphoric relations as exemplified in (12).⁹

- (12) On sumere tide wæs se hælend farende to hierusalem; þa ða he genealæhte
in some time was the Savior going to Jerusalem; when he approached
þære ceastre... (CHI, 28:4-5)
that town

The adnominal demonstrative *þære* enables the noun *ceastre* to be anaphorically linked to *hierusalem* in the preceding clause. Following Philippi's (1997:83-85) argument,

⁹ Giusti (1997) suggests that a definite article cannot be a necessary condition for a specific interpretation of DP. For example, non-specific interpretation is possible even with a definite article (e.g. generic expressions with *the* in Modern English), and, conversely, specific interpretation is allowed without it (e.g. *at home* or *at school*). Therefore, the definite article is regarded as only one of the possible options to represent specificity of DP.

anaphoric relations should be unique to demonstratives, making noun phrases referring expressions on a par with proper names and pronouns. Definite articles, on the other hand, are assumed to introduce a strong NP in terms of Milsark's (1974) classification based on presuppositionality, which behaves as a strongly quantified expression (Diesing, 1992:59-65).¹⁰

Adnominal demonstratives sometimes add emphasis to a noun phrase as shown below.

- (13) swa þæt hi wæron gesamnode binnon þære byrig hierusalem (CHI, 28:39-40)
so that they were assembled within that town Jerusalem

Recall that in (12) *Jerusalem* was first introduced in the discourse and repeated by *þære cesterre* (not by *hit*) in the following clause. After a couple of paragraphs, the same referent is expressed by *þære byrig hierusalem* in (13) with some emphasis to stress the doomed destruction of the city.

The appearance of demonstratives is consistent before *hælend* in Ælfric's *Catholic Homilies* as shown in (12), but it cannot prove the status of a demonstrative as a definite article. Demonstratives are frequently omitted in other Old English texts or replaced with another type of determiner for a discrete interpretation as shown in (14).¹¹

- (14) swa is crist god 7 man an hælend (CHI, 30:272)
so is crist god and man one Savior

¹⁰ Philippi (1997:83-4) argues that the contrast between definite articles and demonstratives can be confirmed in the following pair of sentences.

- (i) a. The president of the United States will always be white
b. This president of the United States will always be white.

In (ia), both interpretations are available such as 'for the (present) president of the United States it will always be the case that he is white' and 'it will always be the case that the president of the United States is white'. In contrast, (ib) permits only the former interpretation, since the demonstrative *this* makes the noun phrase a referring expression with wide scope over all other quantifiers.

¹¹ Following Philippi's analysis, *se* before *hælend* is understood as an indirect anaphoric expression bound within a discourse context. Unlike Ælfric's *Catholic Homilies*, some earlier texts including *Lindisfarne Gospels* and *Rushworth Gospels* show more variation in translating the Latin term of *Jesus* into Old English. Out of eight occurrences of *Jesus* in 'Mattew. Cap. VIII', the pattern of demonstrative+ *hælend* is employed four times (line 8, 13, 14, 18) while *hælend* is used without a demonstrative in the remaining cases (line 3, 7, 20, 34).

Notice that there exist still more discrepancies between adnominal demonstratives in Old English and the definite article in Modern English. Old English demonstratives can appear before proper names as in (15a). On the other hand, demonstratives are not used before superlative adjectives as in (15b), where Modern English would normally put the definite article before *wacost*. In addition, no generic interpretation is available from noun phrases in Old English consisting of a demonstrative and a count noun.

- (15) a. *þone adam* (CHI, 1:88) (cf. *adam* (CHI, 1:85))
 that Adam
 b. *wacost burga* (CHI, 5:18)
 (of) weakest fortresses

Mitchell's (1985:134) assertion that the adnominal use of demonstratives exhibits numerous inconsistencies, therefore, implies that some semantic contribution such as anaphoric, deictic, or emphatic meaning should be made whenever they are employed for a noun phrase.¹²

Finally, demonstratives in Old English differ from the definite article in Modern English in terms of the fact that only the former function as an independent pronominal element either with a modifying clause as the italicized *ða* in (16a) or without it as *þam* in (16b).¹³

- (16) a. *Eaðelicor we forberað þa frecednyssa ðe we witon on ær þonne ða ðe*
 more-easily we endure those dangers that we know in early than those that

¹² Mitchell (1985:132) discusses the issue of stress in adnominal demonstratives in Old English. Whatever conclusion the discussion may draw, it cannot influence the status of demonstratives argued here. The stress they are assumed to carry signifies not absolute but relative prominence, which still highlights the fact that the definite article in Modern English generally bears no stress.

¹³ A demonstrative can be separated from a modifying clause with or without reduplication as in (i) or used as a resumptive pronoun bound by a clausal subject as in (ii).

- (i) a. *Þa sind unstarange þe slawe beoð to godum weorcum* (CHII, 24:184)
 those are weak who lazy are to good work
 b. *humeta mæg ðonne se beon cristen geteald se ðe nele be his andgites mæðe*
 how may then one be Christian considered one who not-wanted by his of-intelligence ability
 þa boclican gewritu aspyrian (CHII, 16: 60-61)
 that biblical writings investigate
 (ii) *se þe þurhwunað oð ende on geleafan se bið gehealden* (CHII, 37: 109-110)
 one who remains until end in belief he is saved

us færllice becumað (CHII, 37: 24-25)

us suddenly come to

b. He is se willa 7 seo soðe lufu þæs fæder 7 þæs sunu...

it (Holy Spirit) is that mind and that true love of that father and of that son...

be þam is þus cweden (CHI, 20:76-77)

about that (Holy Spirit) is thus said

Let us now examine whether Old English has an indefinite article analogous to *a(n)* in Modern English. In spite of morphological correspondence, no firm grounds can be established to treat *an* in Old English as an indefinite article. It is regularly interpreted as having a numeral meaning ‘one’ as in *an hælend* in (14). Even when its numeral meaning is shaded, it shows more strong indefiniteness (‘a certain’) than the indefinite article of Modern English as shown in (17) (Quirk & Wrenn, 1955:71).

(17) on ðysum easterlicum dæge eodon twegen drihtnes leorningcnihtas to *anre*

in this paschal day went two Christ’s disciples to a certain

byrig. seo wæs fif mila fram hierusalem (CHII, 16: 4-5)

town. that was five miles out of Jerusalem

The assumption that *an* in Old English cannot be equated with the indefinite article of Modern English is further confirmed by the fact that it appears randomly at best with common nouns (Mitchell, 1985:98). Modern English, for instance, would obligatorily place the indefinite article before common nouns such as *fiscere* and *tollere* in (18).

(18) peterus wæs *fiscere* ær his gecyrrednysse and matheus wæs *tollere*

(CHII, 16:131-2)

Peter was (a) fisherman before his conversion and Matthew was (a) tax-collector

3.3.2. N-movement in Old English

If the above hypothesis is correct that demonstratives and *an* cannot function as an article in Old English, the next step is to decide their structural positions within DP. Let

us first start with Carlton's (1970:177) table representing the order of pre-nominal modifiers in Old English drawn from Old English charters.

(19) Order of pre-nominal modifiers in Old English

6 th	5 th	4 th	3 rd	2 nd	1 st	Head N
Quantifiers	Pronouns	Numerals	oþer	Adjectives & Participles	Genitive Nouns	
	þære			geættredan	deofles	lare
		ænne		blacne		stedan
		an	oþer	healf		gear
	þæm	þriim				dælum
	þa		oðoro			lond
mænig			oþer	god		man
allum	þæm					halgum
eallum	his			leofan		halgan
sum	þæt					lond
ealle	mine					freondum

The table (19) shows that demonstratives and numerals precede all other pre-nominal modifiers except for quantifiers. However, it cannot reveal whether they are heads or specifiers with the absence of articles in Old English. The best test to determine their status is N-movement, given the locality requirement on head movement. If they are heads, they either block movement of head nouns across them or become a locus for N-adjunction.

Old English permits several types of noun phrases in which a post-nominal element seems to arise from overt N-movement. First, proper names optionally occupy the initial position of a noun phrase when used with an expression of rank as exemplified in (20).

- (20) *Paulus se apostol* (CHII, 24:172)
cf. se apostol Paulus (CHII, 24:124)

They can move further as we see in the following example (21), where the proper noun *Iohannes* is separated from *þæs godspelleres* by the intervening noun *broðor*.

- (21) *Iacobum. Iohannes broðor þæs godspelleres* (CHII, 24: 4)
Jacob, John's brother that evangelist's (Jacob, brother of John the evangelist)

Following Longobardi's (1994) proposal mentioned in 3.2.3, it can be assumed that both *Paulus* in (20) and *Iohannes* in (21) undergo N-to-D movement triggered by the [+R] feature in D. At the same time, the assumption denies the head status of adnominal demonstratives. Otherwise, the demonstrative *þæs* in (21) should block movement of *Iohannes* due to the locality requirement on head movement.

The above analysis, however, poses some problems. First, it is doubtful whether a string of proper name and rank expression forms a single noun phrase. If a rank expression is merged as an argument to a proper name, it should take the genitive Case marking just as other DP-internal arguments.¹⁴ Second, the ordering patterns exemplified in (20) and (21) may reflect Latin or stylistic influence as Traugott (1972:106) suggests that rank expressions after proper names should have their origin in Latin biblical phrases.¹⁵ She argues that Germanic-origin constructions allow only the arrangement where a proper name precedes a rank title without accompanying a demonstrative as in *Ælfred cyning*. The other arrangements are either Latin-influenced (*Ælfred se cyning/se cyning Ælfred*) or non-attested (**cyning Ælfred*) (Mitchell, 1985:610-12). The effect of a stylistic consideration is confirmed in (21), in which *Iohannes* comes to alliterate with *Iacobum* because of displacement.

Evidence for N-movement seems more convincing in the following examples where possessives or adjectives appear in a post-nominal position.

- (22) a. *fæder min* (CHII, 37:143)

¹⁴ Semantic relations are of no significance here. As we will see later in this chapter, appositive or predicate DP-internal arguments also have the genitive Case marking. Consequently, the possibility is denied that rank expressions can be exempt from the genitive Case marking due to their appositive relation to proper names.

¹⁵ She mentions the example *Dominus Christ* as the evidence for the precedence of proper names over rank titles. Nevertheless, Latin can reverse the order between them as in the case of *per Esaiam prophetam*.

father my

b. god ælmihti (CHI, 12:56)

God almighty

c. ealle gastas swiðe strange 7 mihtige 7 wlitige (CHI, 1: 25)

all spirits very strong and mighty and beautiful

Following the earlier assumption that possessives and adjectives within a noun phrase are maximal projections, it seems reasonable that their post-nominal positions in (22) should result from overt N-movement in Old English.

However, the head movement analysis of (22) faces similar objections made against the attempt to derive a string of proper noun and rank expression from N-to-D movement. First, it is arguable whether the pattern of (22a) and (22b) is indigenous and productive in Old English. The noun phrase *fæder min* in (22a) represents a literal translation from the Latin phrase *pater meus* and its use is restricted to refer to God.¹⁶ It is true that *god ælmihti* in (22b) appears consistently in Ælfric's *Catholic Homilies* when used without an accompanying adnominal element.¹⁷ Nevertheless, the order is reversed in case it occurs in the Saxon genitive or follows demonstratives/numerals as exemplified below.

(23) a. se Ælmihtiga godes sunu (CHII, 1: 35)

that almighty God's son

b. an Ælmihtig god (CHII, 20: 45)

one almighty God

In consideration of isolated distribution, *god ælmihti* in (22b) whose origin comes from

¹⁶ Along with *fæder min*, the reverse order of *min fæder* is attested as the following.

(i) Se ðe me lufað he hylt min bebod 7 min fæder hine lufað (CH I, 25:203-4)

One who me loves he keeps my command and my father him loves

In other nominal expressions referring to biblical figures, possessives overwhelmingly precede common nouns. For example, *Maria* is expressed as *min modor* in Ælfric's *Catholic Homilies* without any occurrence of *modor min*.

¹⁷ The phrase can take the reverse order when it is used as a predicate of the verb *beon* as shown below.

(i) se ana is Ælmihtig god (CHI, 20:25)

that only is almighty God

The above example undermines Crisma's (1996) argument that *god* in *god ælmiht* undergoes N-to-D movement unless the functional head is occupied by a demonstrative or a numeral *an*.

the Latin phrase *deus omnipotens* is probably another example of Latin influence at best. Second, coordinated adjectives in a post-nominal position as in (22c) are often analyzed as predicative rather than attributive ones. The analysis receives support from the fact that post-nominal adjectives can be declined strong in spite of the presence of adnominal demonstratives as in the following example.

- (24) 7 (he) geseah þone rican *halne 7 deorwurðlice geglencgne* brucan his estmettas
and he saw the rich (man) healthy and dearly ornamented enjoy luxury
(CH I, 23:53- 4)

Considering that predicative adjectives take strong inflectional endings, we can conclude that post-nominal adjectives in (24) are in their base position and consequently do not provide evidence for N-movement.

In spite of the absence of convincing evidence in Old English, crosslinguistic investigation of overt N-movement sheds light on the universal status of demonstratives. Let us examine the following examples from Rumanian, where both demonstrative and definite article can appear with the same noun phrase (Giusti, 1997:107-8).

- (25) a. *acest/accel frumos baiat*
this/that nice boy
b. **acest-ul baiat/ *acest baiat-ul*
this-the boy/ this boy-the
c. *baiat-ul acesta/acela frumos*
d. *frumos-ul (*acesta) baiat / frumos-ul baiat (*acesta)*

The contrast between (25b) and (25c) indicates that demonstratives can appear with the definite article *ul* when they have an inflectional ending such as *-a* in (25c). It also shows that they should occupy a lower position than the definite article to which the noun *baiat* is adjoined as a result of N-to-D movement.¹⁸ Aside from nouns, adjectives

¹⁸ Notice that in spite of their co-occurrence within a noun phrase, demonstratives and the definite article in Rumanian cannot occupy the functional category DP simultaneously. Even when demonstratives are inflected, they fail to appear before the definite article as in **acesta-ul/*acela-ul frumos baiat*. On the other hand, they can occupy the initial position of a noun phrase lacking the definite article as in (25a).

can move into a specifier of DP in Rumanian as in (25d) except when inflected demonstratives intervene.¹⁹ Following Cinque's (1994) assumption that each adjective is a specifier of its own functional projection, movement of adjectives implies Spec-to-Spec movement. Evidence from Rumanian, therefore, supports the hypothesis that demonstratives should occupy a structural position for maximal projections. If they were claimed to be heads, the syntactic distribution of noun phrases in (25) could not receive a proper explanation. Demonstratives should permit adjective movement before the definite article, but prevent nouns from moving across them due to the locality constraint on head movement. Only the assumption that demonstratives are maximal projections can allow noun movement (head movement) and block adjective movement (maximal projection movement) at the same time.

3.3.3. Structural position for demonstratives in Old English

Even if the status of demonstratives can be universal, the functional category they occupy varies either within a language or across languages.²⁰ Rumanian, as we have seen, have demonstratives in a specifier of DP or a functional category immediately below it depending on the presence of an inflectional marking and the definite article. Modern English, on the other hand, is assumed to have demonstratives uniformly in a specifier of DP since they lack inflectional markings and show complementary distribution to the definite article (Abney, 1987).

Following the earlier assumption that Old English dispenses with articles, it can be hypothesized that, just like their Modern English counterparts, Old English

Giusti (1997) attributes their complementary distribution within DP to the constraint analogous to the doubly-filled COMP filter in CP, which prohibits the co-occurrence of a demonstrative and a definite article within DP.

¹⁹ I will leave aside the issue concerning a trigger for adjective movement in Rumanian. If the operation is ascribed to the enclitic property of the definite article as Giusti assumes, an additional speculation is required that both head (noun) and maximal projection (adjectives) can move to satisfy its enclitic property.

²⁰ It is controversial where demonstratives are base-generated. For example, Korean and Japanese can have them as a pre-nominal modifier nearest to a head noun, which implies that demonstratives are base-generated as a specifier of the lowest functional projection within DP. However, demonstratives in those languages cannot be used as an independent pronoun in contrast with Old and Modern English counterparts. Spanish and Latin, both of which have inflectional endings for demonstratives, permit an independent use as well as a nearest pre-nominal position for demonstratives. At any rate, lack of thematic relation to a head noun makes it difficult to decide their universal base position within DP.

demonstratives occupy the specifier of DP to contribute to the definite or referential interpretation of nominal expressions. In addition, the hypothesis should consider at least two empirical facts about agreement relations. First, demonstratives take a distinctive form rather than an inflectional ending to agree with the Case, number, and gender of a head noun. Second, they decide agreement endings of attributive adjectives as shown below.

- (26) a. *lease gewitan* (CHI 3: 20)
 false witnesses
 b. *þa leasan gewitan* (CHI 3: 23)
 those false witnesses

The head noun *gewita* takes the same neutral accusative plural ending *-an* in (26a) and (26b). In contrast, the adjective *leas* has different agreement endings in (26). It declines strong (*-e*) without a preceding demonstrative as in (26a), but declines weak (*-an*) when it follows a demonstrative as in (26b).

Under Chomsky's (1995,2000) minimalist framework where uninterpretable formal features such as Case and agreement ones should be deleted at syntax, demonstratives and adjectives in a specifier position can delete their uninterpretable features through checking or matching against relevant features of a functional head. Overt movement must be the last option for deletion of those features since it involves a costly and complex operation in terms of the principle of economy. So far, the assumption that adnominal demonstratives in Old English occupy a specifier of DP is unlikely to reveal any serious drawbacks both empirically and conceptually.

More support for the above assumption comes from compound relatives, i.e., combinations of a demonstrative and the indeclinable particle *þe* in Old English, which Mitchell (1985:117) classifies into three patterns in terms of the Case marking of demonstratives as shown below.²¹

- (27) a. *'seþe*: the *se* element in the Case of the adjective clause

²¹ The examples are restricted here to the cases where a visible antecedent can be found for a compound relative.

Se þe wyrcoð mines fæder willan *se þe* is on heafonum he bið min broþor 7 min
One who works (to) my father's will who is in heaven he is my bother and my
modor 7 min sweoster (CHI, 19:38-40)

mother and my sister

b. *se þe*: the *se* element in the Case of the principal clause

Sy ...on eorðan sib mannum *þam ðe* beoð godes willan (CHI, 2:30-31)

Be...in earthly peace (to) men whom are (to) god's will

c. *seþe*: the *se* element in the Case appropriate to both clauses

he hæfð urne lichman *þone ðe* he of þam mædene marian genam (CHI, 9:28-
29)

he has our body which he from that maiden Maria took

The compound relative in (27a) has the genitive singular (*mines*) *fæder* as its antecedent, but the demonstrative within it takes the nominative form *se* rather than the genitive *þæs*.²² The demonstrative in (27b), on the other hand, takes the dative plural form of *þam* agreeing with the antecedent *mannum* rather than the nominative plural *þa* expected by the relative clause.²³ The Case marking of demonstratives in compound relatives, however, can be ambiguous due to the coincidence of the Case requirements. In (27c), the accusative singular form *þone* can meet the Case requirement by the antecedent *lichman* and by the verb *genam* in the relative clause simultaneously.²⁴

Suppose that the indeclinable relative particle *þe* is a complementizer and merged into the functional head C just as the Modern English counterpart *that* (van Kemenade,

²² The Case marking in (27a) provides evidence for genitive movement within DP in Old English if the derivation is assumed to arise from the structure [*willan* [*mines fæder*, [_{CP} *se, þe t*, *is on heafonum*]]]. The genitive *mines fæder* furthermore moves into a position preceding *willan*, leaving the relative clause behind. However, an alternative analysis under which *mines fæder* is base-generated before *willan* is also acceptable since the demonstrative *se* can be anaphorically related to *mines fæder* without adjacency possibly due to its independent nature.

²³ This type of Case checking is elusive if a demonstrative is claimed to remain within a relative clause. Empirically speaking, it is very rare in prose, especially, in Ælfric's *Catholic Homilies*. Mitchell (1985, 122) himself reports that only five unambiguous examples are found from 144 compound relatives in Ælfric's twenty homilies. Moreover, a demonstrative in compound relatives sometimes takes a different Case form depending on texts. For example, *qui in apud patrem vestrum qui in caelis est* (Matthew. Cap. VI) is translated into *se ðe* in *Lindsfarne Gospels* or into *þæne* (Mercian variant of *þone*) *þe* in *Ruthworth Gospels*. Unless *se þe* type is regarded as a poetic apparatus for stress or a scribal mistake, a demonstrative within it is better understood as a resumptive element outside CP bound by the antecedent.

²⁴ Notice that Case syncretism in demonstratives often makes it difficult to determine whether ambiguity results from conflicting Case requirements.

1987:150-1). Then, a structural position for demonstratives in compound relatives should be a specifier of CP, which hosts a *wh*-word or an empty operator in Modern English relative clauses. The analysis is confirmed by the fact that in addition to compound relatives Old English permits *þe* relative constructions where the relative particle *þe* introduces a relative clause without a preceding demonstrative pronoun.

The optional appearance of demonstratives in Old English relative clauses can be related to the interpretation demonstratives convey. In contrast with a lexically empty operator in *þe* relatives, a demonstrative keeps its anaphoric function and often contributes to the appositive interpretation of compound relatives. In the light of parallelism between DP and CP, the above analysis of compound relatives verifies the assumption that demonstratives occupy a specifier position of DP. Besides a common structural position, they share wide scope effects in both functional categories. Demonstratives in compound relatives have a domain ranging over a whole clause while adnominal demonstratives make an entire noun phrase a referential expression.

3.4. Possessives in Old English²⁵

3.4.1. Distribution of possessives

There exist some similarities in syntactic distributions between Old English possessives and adnominal demonstratives. As seen in the table (19), they regularly occupy the initial position of DP except when quantifiers appear. Possessives are therefore distinguished from other types of genitives which can appear in a post-nominal position as shown below.

- (28) ða mærlīcan wundra þæs eadigan cyðeres stephanes
 those famous wonders (of) that blessed martyr Stephan

²⁵ Like demonstratives, possessive pronouns can be used independently as in (i).

(i) gif þæt land þin is, se ren is min (CHII, 7:85)
 if that land yours is, that rain is mine

Therefore, ‘pronominal genitives in adnominal use’ can be a correct term for the discussion in this chapter, and the term ‘possessives’ is employed here just for convenience.

Inflectional endings of adjectives provide further evidence for the correspondence between possessives and adnominal demonstratives. Adjectives take weak inflectional markings when they follow possessives as well as demonstratives as exemplified below.

- (29) Uton gemunan ure *ærran* synna (CHII, 5:222)
let us think about our early sins

The post-possessive adjective *ær* in (29) takes the weak feminine accusative plural ending *-an* instead of the strong ending *-a* to agree with the feminine accusative plural noun *synna*.

The semantic property of possessives also corroborates their close relationship to demonstratives. Both of them represent anaphoric relations and share the definiteness effect in existential *there*-constructions as in (30).²⁶

- (30) a. There is *some student's* bike in the playground.
b. *There is *every student's/that/his* bike in the playground.

Following Keenan's (1987) suggestion that a pre-nominal determiner should decide the existential value of a following noun phrase, existential *there*-constructions cannot allow the noun phrases whose determiners are non-existential such as the universal quantifier *every*, the demonstrative *that*, and the possessive *his* in (30b).

It should be noticed that contrary to the prediction of the table (19) possessives sometimes co-occur with demonstratives as in (31).

- (31) *urne þone* ecan deað (CHI, 11: 32)
our that eternal death

The possessive *urne* in (31) has the inflectional ending *-ne*, indicating that possessives, in contrast with demonstratives, can be inflected in the same way as adjectives in strong declension. Inflectional endings are also found in second person possessives as

²⁶ (30b) is grammatical if it is interpreted as presentational *there*-construction.

exemplified below.

- (32) a. (hi)... wuldrión *eowerne* fæder þe on heofenum is (CHI, 36:62)
they glorified your father that in heaven is
b. þæt he eaðe mæg us ahreddan of *ðinum* byrnendum ofne (CHI, 1:236-7)
that he easily may us rescue out-of your burning furnace

In (32), both *eower* and *ðin* take the strong adjectival inflectional ending *-ne* and *-um* to agree with *fæder* (masculine accusative singular) and *ofne* (masculine dative singular) respectively.

Unlike first and second person possessives, third person possessives show no inflectional marking at all as in (33), where *his* takes no visible ending in spite of its agreement with the feminine dative singular *mihte*.

- (33) Se ælmihtiga scyppend gesceop englas þurh *his* godcundan mihte (CHI, 7:140)
the almighty Creator created angels through his divine might

3.4.2. Arguments against an inflection-based approach to possessives

The co-occurrence of demonstratives and possessives is, in fact, more intricate than mentioned earlier. Along with a string of possessive–demonstrative as in (31), the opposite order of demonstrative–possessive is attested in some Alfredian texts as shown below (Mitchell, 1985:51-2).

- (34) *þis user* circlice stær (Bede, 282:23)
this our ecclesiastical history

Haegeman and Guéron (1999:450-2) and Crisma (1996) argue that an inflection-based explanation illuminates the distribution of Old English possessives. Inflected possessives including *user* in (34) appear in a specifier of AgrP below DP for the checking of their agreement features. In contrast, uninflected possessives should move

into a specifier of DP due to lack of inflection.²⁷

Nevertheless, there remain some problems undermining their analysis. First, the presence of inflectional markings cannot always decide a structural position of possessives. Against their prediction, inflected possessives can precede demonstratives as in (31) and uninflected ones can follow them as shown below.

- (35) *seo his gemæne spræce* (GD(H), 150:32 from Mitchell (1985:52))
that his common speaking

Moreover, a criterion for inflected possessives can be misleading. If it implies possessives with a visible ending, it excludes not only third person but also many instances of first and second person possessives. For instance, the first person singular possessive *min* has no ending at all when it agrees with masculine singular nominative, neutral singular/plural nominative/accusative, and feminine singular nominative nouns. Alternatively, Haegeman and Guéron's inflection-based account can claim that all possessives in Old English have an inflectional ending either overt or covert. However, it still fails to explain the fact that possessives can precede demonstratives. Second, the order of demonstrative–possessive is much less productive compared with that of possessive–demonstrative, which is confirmed by the absence of the former type in Ælfric's writings (Mitchell, 1985:53). If Haegeman and Guéron's assumption is correct, a substantial discrepancy of distribution can hardly be expected between those two ordering patterns.

Mitchell cites relatively more examples of the demonstrative–possessive order without accompanying attributive adjectives as in (36) even if he offers no examples from Ælfric's texts.

- (36) *þas mine word* (Matt, Cap7:24)
these my words

²⁷ Haegeman and Guéron undermine their argument by misquoting an example from Mitchell (1985:52). They list the phrase *þæt mine murnede mod* 'that my sad spirit' (Bo, 8:16) as an instance for inflected possessives after demonstratives. However, *mine* must be a misspelling for *min*, since *min* should have no

However, judging from the fact that most texts from which he draws examples are literal translations from Latin sources, the demonstrative–possessive pattern as in (36) is unlikely to represent an indigenous one.²⁸ Traugott (1992) also suggests that it should be analyzed as a complex of an independent demonstrative and an appositive noun phrase rather than as a single noun phrase.

The arguments made in this section indicate that an inflection-based analysis cannot provide a proper account for the co-occurrence of adnominal demonstratives and possessives in Old English. Contrary to its prediction, demonstratives regularly follow possessives within DP. The reverse order whose occurrences are not only rare but also restricted to some Old English texts represents either a Latin-influence or a string of independent syntactic elements. Therefore, the correspondence between the order of demonstrative-possessive in Old English and the Italian counterpart (e.g. *questo mio libro* ‘this my book’) reflects nothing but a limited Latin-influence on the DP structure of Old English.²⁹

3.4.3. Empty D and referentiality

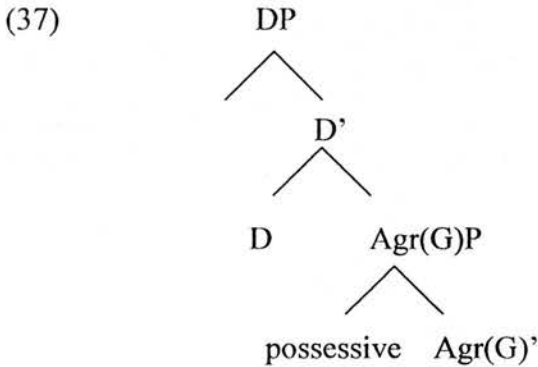
In addition to the above-mentioned empirical issues, an inflection-based analysis faces some theoretical problems about feature checking of Old English possessives. Following Longobardi (1996), Haegeman & Guéron (1999) and Crisma (1996), (inflected) possessives in Old English undergo movement in the same way as nominative subjects are attracted by the functional head Agr(S). They are supposed to occupy a specifier of Agr(G)P below DP for their Case and agreement feature checking as schematized in (37) in the following page. The postulation of Agr(G)P in Old English is justified to check the genitive Case and agreement markings of possessives. It is furthermore assumed that the strong N-feature of the functional head Agr(G) is responsible for overt movement of possessives from within NP to a specifier of

ending at all to agree with the neutral nominative singular *mod*.

²⁸ Latin demonstratives, in fact, appear in a pre-possessive as well as a post-possessive position.

²⁹ Just as Old English, Latin lacks a definite article and adopts adnominal demonstratives such as *ille* and *hic*. However, demonstratives are more frequently used in Old English, which is confirmed by the fact that a demonstrative is often added to original Latin proper names in Old English texts.

Agr(G)P.³⁰ The analysis predicts that inflected possessives remain in a specifier of Agr(G)P below a lexically empty D when they appear in a nominal expression such as *dinum byrnendum ofne* in (32b).



Under the minimalist framework, a functional category of DP is motivated by the assumption that it contains information indispensable to the interpretation of a nominal expression at the interface (Chomsky, 1995:240). The distinction between definiteness and indefiniteness, which Chomsky refers to as referentiality, represents the core property of D and contributes to the definiteness effect at syntax. Therefore, it seems natural that an operation, whether overt or covert, should be implemented crosslinguistically to indicate the contrast. As mentioned in 3.2.3, Longobardi's (1994,1996) claims that a functional head D with the [+R] feature should be checked in Italian by merge of pronouns or by N-to-D movement of proper names and a small group of common nouns. Old English, which lacks a definite article and overt N-movement but takes Saxon genitives as a nominal argument, should rely on a different strategy for the representation of definiteness or referentiality. Let us suppose that in Old English the definiteness or referentiality feature of the functional head D is checked by an appropriate XP element in a specifier of DP rather than by head movement to D. The most suitable candidates to check the feature are demonstratives and possessives, both of which introduce a referring expression. Consequently, the final landing site of possessives as well as demonstratives becomes a specifier of DP, which contrasts with Haegeman & Guéron's assumption that inflected possessives remain within Agr(G)P in

³⁰ Notice that the assumption is based on feature strength rather than interpretability.

Old English.

The above hypothesis, however, leaves the question unanswered why Old English adopts a different type of operation from Italian for feature checking within DP. While merge or movement of XP is relevant to the former, merge or movement of X^0 is the solution for the latter. It also raises the issue what triggers possessive movement across demonstratives in the pattern of possessive–demonstrative. The referentiality feature of D can be checked by merge or movement of demonstratives. Possessives, on the other hand, have their Case and agreement features checked within Agr(G)P. Even though they keep their own referentiality feature unchecked at syntax, the interpretive nature of the feature does not prevent a derivation including them from receiving a proper interpretation at the interface. Thus, possessive movement to a specifier of DP is not only unnecessary but also unacceptable in terms of economy considerations under the minimalist framework. In contrast, the reverse pattern of demonstrative–possessive should be an optimal one dispensing with possessive movement into DP, which contradicts the empirical observation made in 3.4.2.³¹ To resolve the conflict, more scrutiny is required about the internal structure of DP in Old English.

3.5. Proposal: the minimalist accounts of DP structure in Old English

3.5.1. Genitives and Agr(G)P

Most arguments in DP are expressed by the genitive Case in Old English. Alternatively, a preposition or a non-genitive Case marking is sometimes employed as shown in (38).

- (38) a. *Æfter cristes upstige to heofenum* (CHII, 24: 2)
after Crist's ascension to heaven
b. *to wrace heora mandædum* (CHII, 37: 44)
for punishment (to) their crimes(Dat)

³¹ Even if it is assumed that a base position of demonstratives is lower than that of possessives, the above hypothesis cannot expect the regular pattern of possessive–demonstrative. Possessives, which move first to a specifier of Agr(G)P, come to be closer to D than demonstratives in checking the referentiality feature in D. However, no explanations can be given to pre-adjectival demonstratives, since they have no reason to move across adjectives and stay below DP.

Nevertheless, they are much less frequent than the genitive Case marking even in derived nominal expressions where original thematic relations are preserved.

Genitive arguments in non-derived DPs are often classified into several semantic types such as possessive, descriptive, and partitive as exemplified in (39) (Mitchell, 1985:539-548).³²

- (39) a. *þæs lifendan godes sunu* (CHI, 12: 142): possessive
 that living god's son
 b. *þa clænan tid lenctenlices fæstenes* (CHII, 7: 2): descriptive
 that clean time (of) Lenten fast
 c. *sume þæra haligra gasta* (CHI, 36: 27): partitive
 some (of) those holy spirits

However, the criteria for their semantic distinction are sometimes too ambiguous to become rigid ones, which Mitchell himself admits their overlapping in many cases. Furthermore, non-derived nouns, in contrast with de-verbal or de-adjectival ones, are assumed to be inherently relational and take a relational argument optionally (Haegeman & Guéron, 1999:411-4). The assumption implies that, irrespective of semantic classification, the genitives in (39) represent a relational argument to a non-derived noun. It also raises the issue of the base position of genitives co-occurring with non-derived nouns. The distinction between external and internal argument, which is crucial to decide the structural position of merge for arguments, is not readily applicable to relational arguments within DP.³³

Following the assumptions made in 3.4.3, genitives are expected to reach a specifier of DP to check the referentiality feature of D in case they represent referentiality in

³² Mitchell includes subjective and objective genitives as subcategories under possessive genitives as exemplified below.

- (i) *7 mid þam wundrum þæs folces geleafan getrymde* (CH I, 10:36-7) : subjective
 and with those miracles that people's belief strenghtened
 (ii) *7 þurh ðæs halgan husles þigene ...* (CH I, 19:117) : objective
 and through the holy Eucharist's partaking ...

However, most occurrences including both (i) and (ii) are associated with a de-verbal head noun.

³³ The fact that nouns frequently have a single argument imposes a serious empirical burden on the universal base hypothesis of Kayne (1994). Since his hypothesis is based on asymmetric relations between adjuncts (specifiers), heads and complements, it is not easy to decide whether a single argument should be a specifier or a complement to a head noun in its base position.

themselves as the Saxon genitive *þæs lifiendan godes* in (39a). When they co-occur with demonstratives as in (40), genitives remain in a specifier of Agr(G)P with demonstratives occupying a specifier of DP.

(40) *se ælmihtiga godes sunu* (CHII, 1: 35)

Genitives representing indefiniteness as in (41) also stay in a specifier of Agr(G)P without further movement into DP. Then, an empty D, which lacks the referentiality feature, is interpreted as indefinite by default at the interface.

(41) *wifa bearnum* (CHI, 36: 54)
women's offsprings

It should be noticed that the evidence against the Agr(G)P analysis of genitives comes from the examples where they co-occur with attributive adjectives. In contrast with possessives, they can follow adjectives regardless of the presence of a demonstrative within DP as in (42).

(42) a. *þa sigefæstan godes frynd* (CHI, 36:80)
those victorious God's friends
b. *fram geswenlicum arleasum deofles leomum* (CHI, 24:78)
out of visible impious devil's rays of light

In (42a), the genitive *godes* follows the adjective *sigefæstan* as well as the demonstrative *þa*. Linear precedence of adjectives over genitives is furthermore confirmed in (42b) in which two continuous adjectives precede the genitive *deofles*. The Agr(G)P analysis, however, fails to account for the distribution of both genitives in (42). Just as possessives, they should move at least into a specifier of Agr(G)P, which wrongly predicts that they always precede adjectives merged into a functional category lower than Agr(G)P. To explain the distributional asymmetry between possessives and genitives, a separate functional category for the genitive Case checking is required below adjectival functional categories. In addition, an operation should be implemented

to move possessives into a specifier of Agr(G)P only for agreement checking if consistency is to be maintained for the Case checking.

3.5.2. The structure of DP in Old English

Empirical problems in the Agr(G)P hypothesis are rooted in the assumption that both possessives and genitives should have their genitive Case overtly checked by the functional head Agr(G) to meet the Extended Projection Principle (Longobardi, 1996). The assumption, however, precludes all post-nominal genitives in Old English from overt Case checking. With the absence of N-movement, they fail to move into a specifier of Agr(G)P and leave their Case unchecked in spite of the fact that pre- and post-nominal arguments are equally marked by the genitive Case in Old English.³⁴ Moreover, if Agr(G) is obligatorily subject to the Extended Projection Principle as Longobardi assumes, an empty pronominal should be introduced for every DP without a pre-nominal genitive. Licensing of such an empty element within DP, however, cannot be easily motivated in Old English, which has neither article nor overt N-to-D movement.

Agr(G)P itself lacks conceptual necessity as well to make a legitimate functional category. Based on parallelism between nominal and clausal structure, its head Agr(G) is supposed to check formal features of Case and agreement of an argument within DP. As far as checking is restricted to visible markings, Agr(G) checks both Case and agreement features in languages with agreement endings for genitives (e.g. Hungarian). On the other hand, it is associated only with Case checking in languages where no agreement endings are attached to genitives (e.g. Modern English, Rumanian, and Semitic). Old English is a hybrid of the above two types since it can have inflectional markings only for possessives. In any event, it is clear that just as its counterparts within a clause structure Agr(G) consists of nothing but formal features irrelevant to the

³⁴ There exist some stylistic or phonological trends to influence a position of nominal arguments. First, heavy genitives tend to appear post-nominally. Second, adjacency of demonstratives is generally avoided except when an initial demonstrative is *se* or *seo*. Nevertheless, it is difficult to deduce a firm principle from those trends. Following Fries (1940), the frequency of post-nominal genitives is roughly the same as that of pre-nominal genitives around the 10th century (47.5% vs. 52%) but gradually decreases after that period until it virtually disappears around the 14th century.

interpretation of a derivation. Its motivation, therefore, is no longer sustainable under a recent version of the minimalist framework (Chomsky, 1995:240), which requires that functional categories should be validated either by output condition (CP, TP, and DP) or by sufficient theory-internal motivation (the light verb *v*).

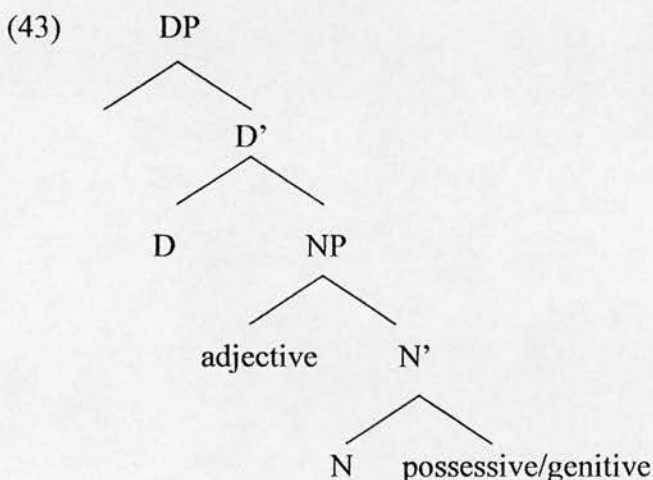
Recall that in the earlier discussion attributive adjectives were also claimed to have their own functional projections above NP grounded on partial N-movement and the universal ordering constraint between adjectives (Cinque, 1994). Neither N-movement nor the ordering constraint is available in Old English. As we have seen in 3.3.2, evidence for partial N-movement in Old English is not so solid as to support the assumption. Likewise, the ordering constraint cannot be confirmed between attributive adjectives in Ælfric's *Catholic Homilies*. The absence of evidence for the constraint is possibly due to the tendency that Old English usually employs the conjunct *and* for multiple adjectives and places them in a post-nominal position. Furthermore, it is arguable whether the constraint can justify the universal postulation of an independent functional projection for each adjective. Duffield (1999:131-3), for instance, suggests that attributive adjectives in Semitic languages should be free from the constraint since their ordering change produces no differences in interpretation and scope relations.

A more plausible argument for adjectival functional categories can be offered by the fact that an adjective in Old English takes an inflectional ending to mark person, number, and gender agreement with a noun. The argument presupposes that a noun undergoes covert head movement to a head of an adjectival functional category to check agreement features of an adjective. However, adjectival functional categories and N-movement are not enough to account for adjective agreement in Old English. Adjectives themselves still need movement since Old English has the dual paradigm of weak and strong adjective agreement depending on the presence of demonstratives and possessives within DP. In sum, the effort to justify adjectival functional categories through adjective agreement makes it inevitable to introduce covert operations such as N- and adjective movement in Old English.

Chomsky (2000:102-3) suggests that in terms of economy an operation of movement should be a complex and costly option to delete uninterpretable features. It represents a combination of at least two primitive operations Agree (between two syntactic items relevant to deletion of an uninterpretable feature) and Merge (of one of

them into a proper local position). Overt movement needs an extra step of generalized pied-piping to determine a phrase susceptible for the operation. His suggestion signifies that Agree or Merge always preempts movement unless the latter is a last resort to make a derivation converge at the interface. As far as adjective agreement in Old English is concerned, economy considerations render it untenable to postulate an adjectival functional category and subsequent movement operations. Rather, a simple operation of Agree or Merge should be a primary choice for deletion of agreement features of an adjective.

If all the above assumptions are correct against Agr(G)P and adjectival functional categories, the structure of DP in Old English will be simplified with no intermediate functional categories between NP and DP as schematized as in (43).



In (43), both adjective and possessive/genitive are merged within a projection of the same head noun.³⁵ Suppose that they have uninterpretable features to be deleted against

³⁵ As mentioned earlier, lack of any thematic relation makes it difficult to decide a base position of possessives/nominal genitives. A simple way to keep Kayne's Universal Hypothesis is to introduce a functional category analogous to ν P-shell above NP. Thus, the alternation between pre- and post-nominal genitive is attributed to optional movement from a complement position into a specifier of the functional category for the genitive Case checking. The assumption, however, cannot predict that possessives and genitives can move further into an initial position of a noun phrase to precede attributive adjectives. They do not have uninterpretable features to be affected by an operation of movement after deletion of the genitive Case feature. Alternatively, non-thematic relation between nominal genitive and head noun can be a trigger for movement to a pre-nominal position in accordance with Moro's (2000) principle of dynamic asymmetry that symmetry of phrase structure forces movement to organize words into a linear order. Supposing that an argument and a noun form a flat structure, i.e., a point of symmetry, it should be removed by an operation of possessive/genitive movement into a pr-nominal position to satisfy the LCA. The operation, however, happens after syntax if we follow the argument made in Chapter 2 that the LCA

relevant features of a functional head: agreement features of the adjective and the genitive Case feature of the possessive/genitive. As mentioned earlier, those features validate neither postulation of a new functional category nor subsequent operations of movement within DP. They can be deleted in-situ through Agree without ad hoc functional categories if the functional head D whose presence has an independent justification is assumed to have appropriate features for their deletion.³⁶ Consequently, a complex operation of movement, which involves pied-piping of adjectives or possessives/genitives in (43), is implemented only if it is forced by some uninterpretable feature in D.³⁷

3.5.3. Economy considerations and the EPP features in D

According to the analysis made in 3.3 and 3.4, a definite DP hosts demonstratives and possessives, both of which always precede weak attributive adjectives and head nouns. Genitives also show a similar syntactic distribution as in (44) where both genitives *Noes* and *Þæs fæder* appear before the adjectives with the weak inflectional ending *-an*.

- (44) a. *Noes yltstan suna* (CHI, 1:223)
 Noah's eldest son
 b. *Þæs fæder dyrstigan aðsware* (CHI, 32:88-9)
 the father's reckless oath

Nevertheless, the ordering pattern of (44), which contrasts with the more persistent order of adjective–genitive as in (19) and (42), is generally restricted to genitives of proper names and kinship terms.

All the above-mentioned elements such as demonstrative, possessive, and genitives

holds at phonological component.

³⁶ The assumption that the functional head D is relevant to checking or deletion of the nominal genitive Case is also made for Semitic construction state by Benmamoun (1999).

³⁷ According to the assumption in 3.5.3, adjectives cannot be subject to movement, which is forced by the uninterpretable [+R] feature associated with EPP features in the functional head D. They lack a matching feature to delete [+R] feature. Even if their agreement features are assumed to be uninterpretable, they can undergo deletion through Agree with D. When inflected strong, they are deleted by the functional head D with the [+R] feature. Weak agreement features of attributive adjectives, on the other hand, are deleted by D without the [+R] feature.

with a proper name property introduce referring expressions, in a sense that an individual or a set of individuals denoted by them is presupposed to exist (Neale, 1990). In other words, those elements are subject to the feature [+R] in D, which Longobardi (1994) proposes as a trigger for movement of an object-referring noun. If the feature is interpreted in terms of Chomsky's (1995, 2000) minimalist framework, it represents an uninterpretable feature to be deleted at syntax. The presence of the [+R] feature, of course, is not a necessary condition to force an operation of merge or movement for its deletion. As seen earlier, Agree should be an optimal option unless it is overridden by other operations based on independent requirements.

Chomsky (2000:102) assumes that a functional category can take an extra specifier other than the one determined by theta structure. He defines the property of allowing an extra specifier as the EPP-features of a functional category and suggests that the EPP features should constitute an uninterpretable feature to be deleted by merge or movement of a syntactic element. Agree cannot be considered for deletion of the EPP features, since it cannot contribute to introducing an extra specifier. Now suppose that in Old English the functional head D with the [+R] feature is associated with the EPP features. It is therefore required that some syntactic element, which has a matching feature against [+R], should appear as a specifier of D to delete the EPP features as well as the [+R] feature.

There can be two possible options to delete both uninterpretable features in the functional head D. First, merge of a demonstrative from the numeration deletes the EPP features in D in accordance with the DP structure of Old English in (43). The operation deletes the [+R] feature in D as well due to the inherent referring nature of demonstratives. Second, possessives and some genitives, both of which are assumed to share a referring property with demonstratives but have a base position below D in (43), are forced to move for deletion of those uninterpretable features. Their movement, however, should meet economy considerations under the minimalist framework. Even if they have a feature to delete uninterpretable features in D, they should also benefit from movement to satisfy the principle of Greed (Chomsky, 1995:201). The principle implies that a moving element should have their own uninterpretable feature to be affected by the operation (Chomsky, 2000:127-8).

Following the assumption made in 3.5.2 that possessive and genitives have an

uninterpretable genitive Case feature, they are subject to a further operation when the functional head D is selected with the [+R] feature associated with the EPP features. Possessives and genitives with a proper name property are forced to move into a specifier of DP to delete not only uninterpretable features in D but also their own genitive Case feature. Their movement, therefore, successfully delete all the uninterpretable features of both moving element and functional head D.

Now consider the case in which both demonstrative and possessive are selected from the numeration as in (45) (=31)).

- (45) *urne þone ecan deað* (CHI, 11: 32)
our that eternal death

In terms of economy considerations that a simple operation of merge or Agree should preempt a complex operation of movement, merge of the demonstrative *þone* has priority over possessive movement to delete the [+R] and the EPP features of D in (45).³⁸ Likewise, merge of a demonstrative should be preferred to movement of a genitive with proper name nature in case both are selected from the numeration as in (46).³⁹

- (46) *of Godes þam halgum* (BIHom, 45:24 from Mitchell (1985:551))
from God's those saints

Nevertheless, the ordering patterns in (45) and (46) indicate that the functional head D triggers possessive and genitive movement as well as merge of a demonstrative. In other words, the functional head D permits so-called double EPP structure just as the functional head T in multiple subject constructions in Icelandic (Chomsky, 1995:372). Chomsky (1995:374-5) attributes double EPP structure to a parameterized option for an individual language but still regards it as unforced violation of economy, i.e. true economy violation in a sense that overt movement overrides a covert operation of

³⁸ If demonstratives are assumed to start from a specifier of NP, the distance from D can explain the priority of demonstrative movement.

³⁹ No examples of the order of genitive–demonstrative are attested in Ælfric's *Catholic Homilies*.

feature movement.

As mentioned earlier, an operation of movement is more complex than a simple operation of Agree or merge under Chomsky's (2000:104-5) revised economy considerations. Feature movement, which represents a covert type of movement, is even dismissed and reduced to Agree due to lack of empirical and conceptual justification. Consequently, any (overt) movement must be forced to satisfy the legibility condition at the interface. Considering that other uninterpretable features in a functional category or a moving element cannot be a necessary condition for movement to preempt Agree, EPP features become a prerequisite for the displacement of a syntactic element from its base position.

Once the EPP features are understood as a locus feature for an extra specifier other than the theta-related one, double EPP features enable a functional head to take more than one specifier for deletion of uninterpretable features.⁴⁰ In case they are associated with the [+R] feature in the functional head D of Old English, double EPP features necessitate movement of a possessive or a genitive as well as merge of a demonstrative for their deletion. Movement, of course, can be implemented as long as a possessive or a genitive has its own uninterpretable feature as well as a matching feature against the [+R] feature in D. Let us now consider how the above assumptions about double EPP structure explain the occurrences of (45) and (46). The functional category D with the [+R] feature first selects and merges a demonstrative from the numeration as in (47).

- (47) a. [þone [D [NP ecan urne deað]]]
b. [þam [D [NP Godes halgum]]]

The computation accords with the general minimalist hypothesis that a simple operation of merge precedes a complex operation of movement within a same functional category.

Next, a possessive or a genitive with a proper name property undergoes movement into a specifier of DP driven by double EPP features associated with the [+R] feature as in (48).

⁴⁰ See Richards (1999) for the argument that a single functional head involves multiple feature deletion in Bulgarian multiple *wh*-movement and Japanese multiple long-distance scrambling.

- (48) a. [_{DP} urne_i [_{D'} þone [D [_{NP} ecan t_i deað]]]]
 b. [_{DP} Godes_i [_{D'} þam [D [_{NP} t_i halgum]]]]

The operation represents forced violation of economy. Without it, the derivations in (48) fail to delete double EPP features whose presence leads to the violation of the legibility condition at the interface.⁴¹

It is evident that the hypothesis suggested here has both empirical and conceptual advantages over the Agr(G)P analysis. First, it provides a more successful explanation of the distribution of possessives and genitives within Old English noun phrases. In particular, it elucidates the order of possessive–demonstrative and the alternation of genitive position. Second, the hypothesis does not rely on the proliferation of functional categories and subsequent movement operations. The functional category DP, whose presence is substantiated by independent grounds, is the only one postulated for the analysis. Third, every operation assumed complies with economy considerations under the minimalist framework. A complex operation of possessive/genitive movement overrides a simple operation of Agree or Merge only if it is forced by the [+R] feature associated the EPP features in the functional head D.

3.6. Conclusion

The minimalist assumptions dismiss the attempt to relate parallelism between DP and CP to technical implementation or epiphenomenal identity. Rather, they suggest that parallelism should arise from economy of derivation, i.e., the principle of economy involved in computation along with the minimalist design of language according to which all features should be interpretable at the appropriate interface. Subsequently, every syntactic operation, whether within DP or within CP, is motivated to delete

⁴¹ The analysis suggested here predicts that the EPP features are responsible for crosslinguistic differences between Old English and Italian DP. In contrast with Old English counterparts, the functional head D with the [+R] feature lacks the EPP features in Italian. In terms of economy considerations, the [+R] feature alone cannot drive possessives into a complex operation of movement even if it is assumed to be uninterpretable. Without the EPP features, Agree should be an optimal solution to delete the [+R] feature. On the other hand, the functional head D with the [+R] feature is supposed to have an affixal requirement in Italian, which forces N-to-D movement or merge of a definite article. A similar account holds for the functional head D with the [-R] feature in Semitic construct state.

uninterpretable features in an optimal way to prevent them from reaching the interfaces.

The analysis in this chapter hypothesizes that the minimalist assumptions illuminate the derivation of Old English noun phrases. In terms of conceptual economy, it minimizes the introduction of abstract entities such as functional heads and empty elements. It denies an Agr-type or an adjectival functional category between DP and NP as well as an empty argument for the Extended Projection Principle. In terms of derivational economy, the analysis depends on economy considerations in computation to determine what type of operation should be implemented. A simple operation of Agree should preempt a complex operation of movement in deleting uninterpretable features including the Case feature of possessives/nominal genitives.

A complex operation of movement is justified only in case a derivation selects a functional head D with the uninterpretable [+R] feature. In Old English, the feature is associated with the uninterpretable EPP features, which implies that a syntactic element with referring nature should appear in a specifier of D for deletion of those features. Therefore, the requirements by the legibility condition at the interface force merge of a demonstrative from the numeration or movement of a possessive/a genitive with a proper-name property. Whenever both operations are available in computation, economy considerations choose a simple operation of merge over movement. Even if movement is forced along with merge due to double EPP features, it is always preceded by merge to produce the ordering pattern of possessive–demonstrative or genitive–demonstrative.

Chapter 4. Structural Positions for Old English Personal Pronouns

4.1. Introduction

Since the comprehensive work of van Kemenade (1987), it has been generally assumed that at least some instances of personal pronouns in Old English should be treated as syntactic clitics. In spite of the absence of phonological or morphological evidence, their idiosyncratic syntactic distributions are claimed to be enough to confirm cliticness (van Kemenade, 1987:140).¹ It is particularly noteworthy that personal pronouns in Old English can occupy the positions that are not allowed at all for their counterparts in other West Germanic languages. The contrast in (1) indicates that Old English, in contrast with Modern German and Modern Dutch, permits the ordering of topic–personal pronoun–finite verb in a main clause to violate the V-2 pattern.²

- (1) a. *þa unspēcendan cild hi fullodon ðurh geleafan þæs fæder* (CH II, 3:252-3)
the speechless child they baptized by belief (of) the father
- b. **Das Brot es hat gegessen* (Modern German)
the bread it has eaten
- c. **Die boeken 'k heb lezen* (Modern Dutch)
those books I have read

Although all the languages in (1) have been traditionally grouped as V-2 languages, the V-2 constraint cannot predict the intervention of the subject pronoun *hi* between the topic *þa unspēcendan cild* and the finite verb *fullodon* in (1a). Therefore, Old English

¹ Koopman (1992:79-83) argues that phonological reduction of *þu* and *hit* testifies the cliticness of personal pronouns in Old English. Following his statistics from the microfiche concordance, just over a hundred cases of *þu* exhibit encliticization to a preceding verb even if *hit* is quite rarely reduced in the same environment. A few occurrences of the reduction of *þu* are also found in Ælfric's *Catholic Homilies* as exemplified below.

(i) *Hu mihtu for sceame æniges þinges æt gode biddan* (CH I, 18:184)
How can-you because-of shame any thing at god ask

However, the question has yet to be answered why a relatively extensive phonological reduction is restricted between the nominative pronoun *þu* and preceding finite verbs with the indicative 2nd person singular ending *-st*.

² *Es* (1a) and *'k* in (1b) represent unstressed or weak subject pronouns.

personal pronouns in the second position are often referred to as Wackernagel or 2P clitics exempt from the V-2 constraint (Fontana, 1997).³

Personal pronouns in Old English, however, occupy a post-verbal position and satisfies the V-2 constraint when a clause begins with *wh*-phrases, *þa*, and *ne* as we see in (2).

- (2)
- a. hwi sceal *ic* ælcunge þrowian for eowerum oferstealle (CH II, 35:240-1)
why have-to I delay suffer because-of your opposition
 - b. þa geseah *he* færllice þone strangan wind (CH II, 24:195)
then saw he suddenly that strong wind
 - c. Ne fintst *þu* na gelice on mannum fæder 7 sunu (CH I, 20:60)
Not find you not-at-all alike in men father and son

The same asymmetry concerning the V-2 constraint is observed in the distribution of object pronouns as well in the following examples.

- (3)
- a. On þære ylcan tide *him* com andswaru (CH I, 9:43)
In the same time him came answer
 - b. Ne onhebbe *hine* nan man on his weorcum (CH II, 5:175)
Not raise-up him(self) no man in his works

The object pronoun *him* precedes the finite verb *com* in a topic-initial clause of (3a). In contrast, the object pronoun *hine* follows the finite verb *onhebbe* in (3b) where the negative element *ne* appears in an initial position. Inconsistency in the position of personal pronouns can be a serious empirical burden on the V-2 analysis of Old English even if personal pronouns are regarded as clitics. It is therefore natural that the asymmetric distribution of personal pronouns should become the center of debates in the research of Old English to decide the landing site of finite verbs and the nature of the V-2 constraint.

In contrast with clitic pronouns in Modern Romance Languages, personal pronouns

³ The idea of 2P clitics is the generalization of Wackernagel's (1892) original observation that enclitics in early Indo-European occupy the second position (Trask, 2000:365).

in Old English are not always adjacent to verbs. Separation from verbs, which should be an instance of interpolation if Old English personal pronouns are clitics, is frequently attested in subordinate clauses where finite verbs tend to gravitate towards a clause-final position as exemplified below.

- (4) a. þæt *ge* þurh ða lare eower mod *awendon* of ðisum wræcfullum life to ðam ecum (CH II, 22:194-6)
that you through the learning your mind turned from this miserable life to the eternal
- b. þæt *us* se deað ne *derige* (CH II, 13:267)
that us the death not hurt

The subject pronoun *ge* in (4a) and the object pronoun *us* in (4b) are both separated from finite verbs by some intervening elements. Interpolation complicates the attempt to relate the distribution of personal pronouns in Old English to cliticization. First, it is evident that an account for clitic pronouns in the Modern Romance languages cannot be readily applicable to the analysis of personal pronouns in Old English. The account has traditionally assumed a close relationship between verbs and clitic pronouns although it is arguable whether a surface position of a clitic pronoun results from movement or base-generation.⁴ Therefore, the analysis of personal pronouns in Old English should take into consideration their relatively independent distribution from finite verbs. Second, the traditional assumption since Kayne (1975) can be challenged, namely, that clitics should be heads or at least adjoined to heads unless they are enclitic rather than proclitic. The head analysis of Old English personal pronouns is to be held only if it can explicate how they appear independently from verbs and in which functional head they are located in a derivation. Otherwise, cliticization in Old English should be addressed on different grounds from Modern Romance cliticization.

This chapter is organized as follows. The second section deals with the positions that are assumed to be canonical for personal pronouns by van Kemenade (1987) and

⁴ See Sportiche (1996) for a comprehensive comparison between movement and base-generation analysis of clitic pronouns in Modern Romance languages. The argument in this chapter will follow the movement analysis of clitic pronouns, which complies with the derivational approach of the minimalist framework (Chomsky, 2000:98-9).

provides some empirical evidence against the cliticness of personal pronouns in Old English. The third section concentrates on the interaction between verb movement and subject pronouns. It is shown that previous analyses fail to elucidate ordering patterns between finite verbs and subject pronouns in a principled way. It is alternatively suggested that variable landing sites of finite verbs in Old English should determine whether subject pronouns are pre-verbal or post-verbal. The fourth section is devoted to the status of cliticization and object pronouns in Old English. It is hypothesized that movement of object pronouns in Old English should be understood as XP rather than X^0 movement. It is furthermore proposed that precedence of non-topic object pronouns over nominative arguments should arise from movement into a specifier of TP for feature deletion such as Case/agreement features in unaccusative constructions and the [+definiteness] features in transitive constructions.

4.2. Empirical review on clitic positions for Old English personal pronouns

4.2.1. Clitic positions for subject personal pronouns

Following Aoun's (1985) assumptions, van Kemenade (1987) postulates that clitic pronouns in Old English should be base-adjoined to a Case-assigning head to satisfy the minimal requirement for clitics, i.e., absorption of a Case-assigning property. She proposes that the head INFL (= C in van Kemenade (1997)) should be a nominative Case-assigning head hosting subject pronouns in V-2 languages including Old English.⁵ Let us first consider the positions available for subject personal pronouns in a main clause of Old English. Subject pronouns appear in a sentence-initial position followed by a finite verb as shown in (5).

- (5) *He weox 7 wæs gestrangod on ðære menniscnyse* (CH I, 9:224-5)
He grew and was strengthened in the humanness

⁵ Van Kemenade (1987) assumes that INFL in Old English should be in the head C to assign the nominative Case to subjects through government either by a finite verb or by a base-generated complementizer.

The position of the subject pronoun *he* in (5) cannot be restricted to pronouns, since a full NP subject also occupies the same position as seen in (6).

- (6) *þises godspelles angin hrepode ures hælendes þrowunge* (CH I, 10:23)
of-this gospel beginning treated our Saviour's suffering

It is therefore suggested that subject pronouns as well as full NP subjects in a sentence-initial position constitute topics and keep the V-2 constraint.⁶

Subject pronouns between topics and finite verbs, in contrast, are claimed to be clitics. The claim is based on the presumption that the distribution of subject pronouns contrasts with that of full NP subjects in a main clause beginning with a topic as exemplified in (7).

- (7) a. *Feawa he awrat be his menniscnyse* (CH I, 4:192)
Few he wrote about his humanity
b. *Micel wæs cristes eadmodnys ða ða he com sylf to ðam fulluhtere* (CH II, 3:98-9)
Much was Christ's humbleness when he came himself to that baptist

It is thus predicted that in a topic-initial main clause a position immediately before finite verbs is unique for pronouns as in (7a) while a subject position after finite verbs should be reserved for full NP subjects as in (7b).

Contrary to the above prediction, a string of topic– full NP subject–finite verb is found in a main clause as shown in (8).

- (8) *Æfter godes gesetnysse ealle cristen men sceoldon beon swa geþwære*
(CH I, 19:219-20)

⁶ It is not always the case that a subject pronoun in a sentence-initial position should be a topic even in V-2 languages. For instance, Modern Dutch permits both weak and strong form of subject pronouns in a sentence-initial position as exemplified in (i).

- (i) a. *Ik zag hem*
b. *'k zag hem*
I saw him

after God's arrangement all christen men should be so united

Just as the pronominal subject *he* in (7a), the full NP subject *ealle cristen men* appears between the topic and the finite verb in (8). On the other hand, the distribution of subject pronouns is not restricted to a position between topics and finite verbs. They can occupy a position after finite verbs to display the ordering of topic–finite verb–subject pronoun as exemplified in (9).

- (9) Micel mæg *heo* æt hire bearne abiddan (CHII, 1:298)
Much can she at her offspring request

No crucial differences in the syntactic environment can be confirmed between (7b) and (9), both of which begin with the same topic *micel*. The personal pronoun *heo* in (9) as well as the full NP *cristes eadmodnys* in (7b) follows a finite verb.⁷ It is true that subject pronouns are more likely to precede finite verbs in a topic-initial main clause, but textual evidence reveals that they cannot be unique occupants of a pre-verbal position.

Interestingly, the putative discrepancy between pronouns and full NPs dissolves when a sentence-initial position is occupied by such elements as *wh*-phrases, *þa*, and *ne*. Full NP subjects normally appear after finite verbs as in (10) just as subject pronouns do in (2).^{8 9}

⁷ Pintzuk (1994:393-4) argues that subject pronouns can occupy a post-verbal position in restricted circumstances where finite verbs move into C such as verb-initial declarative clauses, verb-initial imperative clauses, direct question, clauses with an adverb in an initial position, and clauses with a negative verb. However, the sentence (9) cannot belong to any of the constructions mentioned above.

⁸ Clause-initial adverbs such as *þa* (or *þonne*) and *ne* are not always involved with the inversion of subjects and finite verbs. For example, *ne* cannot trigger inversion when it is separated from finite verbs as seen in (i).

- (i) a. *Ne* he ne dranc mid oferflowednysse (CH I, 11:38)
Not he not drank in abundance
b. *Ne* his eagan ne ferdon woriending geond mislice lustas (CH I, 11:39)
Not his eyes not went wandering beyond various desires

The ordering patterns in (i) provide evidence against the analysis of Van Kemenade (1999) and Fischer, van Kemenade, Koopman and van der Wurff (2000:123-8), according to which a separate functional projection NegP is projected between FP (for personal pronouns) and TP in Old English and its head is occupied by *ne*.

⁹ *Ne* in a sentence-initial position is sometimes amalgamated into a following verb as in (i), which raises the possibility that a sentence beginning with *ne* and a finite verb in fact represents V-1 rather than V-2.

- (i) *Nis* na gitsunge on feo anum (CH I, 11:164)
Not-is no greed in wealth alone

- (10) a. Hwæt doð *ealle þeoda middaneardes* (CH I, 27:168)
 what do all peoples of-world
- b. ða cwæð *seo dohtor* to þam cyninge (CH I, 32: 20-21)
 then said the daughter to the king
- c. Ne mæig *nan eorðlic man* mid gewritum cyþan (CH I, 37: 253)
 Not can no earthly man mid writings reveal

Pronominal and full NP subjects exhibit the same distribution in a subordinate clause as well: they appear immediately to the right of the lexical complementizer as shown in (11a,b).

- (11) a. þæt *hi* maran mede onfon sceoldon (CH II, 5:22)
 that they more reward receive should
- b. oð þæt *se mildheorta god* eft æfter heora gedrefednyssum hi ahredde (CH II, 5: 250-1)
 until that the merciful God again after their tribulation them save

Not only the pronoun *hi* in (11a) but also the full NP *se mildheortan god* in (11b) is adjacent to the lexical complementizer *þæt*.

The argument in this section indicates that there exists no absolute syntactic evidence for the assumption that subject pronouns in Old English should be clitics. The fact is, of course, undeniable that, in topic-initial sentences, subject personal pronouns are more likely to occupy a pre-verbal position while full NP subjects tend to appear in a post-verbal position (Fischer, van Kemenade, Koopman and van der Wurff, 2000:118-123). However, we still find alternative ordering patterns in topic-initial sentences: personal pronouns in a post-verbal position and full NP subjects in a pre-verbal position. As mentioned in 1.2, the minimalist framework cannot dismiss those ordering patterns due to their low frequency.¹⁰ On the contrary, their presence testifies not only the

¹⁰ Koopman (1998) and Fischer, van Kemenade, Koopman and van der Wurff (2000:128-9) argue that the low frequency of those ordering patterns, each of which does not exceed 10 percent in their corpora, supports the clitic analysis of personal pronouns and the V-2 constraint in Old English. However, the possibility cannot be ruled out that the paucity of those patterns results from a stylistic/discourse motivation to place a light element bearing old information (personal pronouns) around a sentence-initial

absence of a canonical position for subject pronouns but also optionality of verb movement to the functional projection whose specifier is occupied by a topic.

4.2.2. Clitic positions for object pronouns

Van Kemenade (1987) supposes that under the SOV analysis Old English has two Case-assigning heads for objects. The first one is a lexical verb to assign an inherent Case to the left. The second one is an abstract Case-assigner in the left-periphery of VP to assign a structural (accusative) Case to NPs on its right.¹¹ It is therefore within a subordinate clause as shown in (12) that Case-assigning positions for objects are well represented without distortion by movement of finite verbs.¹²

- (12) a. þæt hi to ðam mildheortan hælende *hire* geðingodon (CH II, 8:65)
 that they to the merciful Saviour her interceded
 b. þæt hi *me* to life gelæddon (CH I, 26:130)
 that they me to life led

Those positions are not unique to object pronouns since full NP objects can also occupy both positions as seen in (13).

- (13) a. þæt hi syferlice *sinscipes* brucon (CH II, 6:143-4)
 that they chastely marriage-gen spend

position. Another candidate to explain their paucity is the assumption that they emerge as an innovation during Old English period.

¹¹ Bifurcation of a Case-assigning position is inevitable for objects under the SOV framework, since no functional category is introduced between C and head-final VP/TP. Yet, without the introduction of scrambling relevant to Case/agreement relations, many instances of objects remain unexplained in terms of Case marking. First, accusative objects should receive their structural Case by a lexical verb in a string of [_{VP} XP – acc – V] as exemplified in (i), which is incompatible with the presence of an abstract Case-assigner in the left periphery of VP.

- (i) þæt hi on wlacum ele *hine* gebededon (CH I, 5:144)
 that they in lukewarm oil him-acc warmed

Second, oblique objects can receive their inherent Case without adjacency to a lexical verb on the right as seen in (ii).

- (ii) Ac gif we þa mirran *gode* gastlice geoffriað (CH I, 7:244-5)
 but if we the myrrh-acc (to)-god-dat spiritually offer

If a lexical verb is assumed to assign an inherent Case to the left, the intervening adverb *gastlice* can prevent the dative object *gode* from receiving its inherent Case from the lexical verb *geoffriað*.

b. þæt he *deofol* on him hæfde (CH II, 13: 100)

that he devil in him had

Notice that objects can occupy the same positions as subjects do in 4.2.1. First, object pronouns as well as full NP objects can appear in an initial position of a main clause as exemplified in (14).¹³

(14) a. *Us* becom ða deað 7 forwyrd þurh wif (CH I, 13:72)

(to) us-dat befell then death and destruction by woman

b. *Dam ungeleafullum mannum* com crist to hryre (CH I, 9:155)

(to) those unbelieving men-dat came Christ for destruction

Second, in a subordinate clause both pronominal and full NP objects can immediately follow a lexical complementizer, which produces the order of complementizer – object – subject as shown in (15).

(15) a. swa swa *him* crist sylf tæhte (CH I, 12:86)

just as (to) them-dat Christ himself showed

b. Gif *ure ænigum* sum ungelimp became (CH II, 30:234)

if (to) any of us-dat some misfortune befall

Third, object pronouns can occupy a position immediately before finite verbs in a topic-

¹² The string of *hi me* in (12b) can be an example of a clitic cluster if both pronouns are clitics.

¹³ There exist more evidence against the clitic treatment of clause-initial object pronouns. They can be immediately followed by an adverb as in (i), which denies their cliticood.

(i) *Him* þa genealæhton blinde 7 heale 7 he hi gehælde (CH I, 28:96)

Him-dat then approached blind and lame (people) and he them cured

Notice that Modern Dutch allows only strong forms of object pronouns in a sentence-initial position as exemplified in (ii).

(ii) a. Hem zie ik

b. *'m Zie ik

him see I

Weak object pronouns contrast with their subject counterparts, which are permitted in a sentence-initial position as seen in footnote 6. The contrast between subject and object weak pronouns has been an important issue on the landing site of finite verbs as well as the status of weak pronouns under the generative study of Modern Dutch. See Travis (1984), Zwart (1993), and Schwartz & Vikner (1996) for a detailed discussion.

initial clause as shown in (16).

- (16) þurh næddran *us* becom deað (CH II, 13:263)
through snake (to) us-dat befell death

A pre-verbal position for non-topic object pronouns is unique to Old English since neither Modern German nor Modern Dutch exhibits the ordering pattern of topic – object – finite verb in a main clause. In those languages, (weak) object pronouns reach a position either immediately after a finite verb as in (17a) or after a subject as in (17b).¹⁴

- (17) a. Gestern hat *es* die Mutter gelesen (Modern German)
Yesterday has it mother read
b. Gisteren heeft moeder 't gelezen (Modern Dutch)
Yesterday has mother it read

Even Old High German, which shares the pattern of topic – subject pronoun – finite verb with Old English as in (18), shows no occurrences of object pronouns between topics and finite verbs (Tomaselli, 1994).¹⁵

- (18) erino portun *ih* firchnussu (*Isidors Schrift contra Iudaeos* in 8th/9th century)
iron doors I shatter

Like subject pronouns, object pronouns regularly occupy a post-verbal position as shown in (19) when a clause begins with *þa*(*bonne*)/*ne/wh*-phrase.

- (19) a. þa com *him* andwaru fram þam halgan gaste (CH I, 9:25-6)
then came (to) him-dat answer from the holy spirit

¹⁴ Modern German permits both patterns of (17a) and (17b) while Modern Dutch permits only the pattern of (17b). Fontana (1997:214-6), however, argues that Middle Dutch allows both options as exemplified in (i).

(i) nu moetene onse vrouwe bewaren
now must-him our lady save

¹⁵ The example (18) is from Tomaselli (1994: 346). Its original source comes from the Old High German translation of *De fide catholica contra Iudaeos* by Isidorus Hispalensis.

b. Ne onhebbe *hine* nan man on his weorcum (CH II, 5:175)

Not raise-up himself-acc no man in his works

Both *him* in (19a) and *hine* in (19b) follow finite verbs but still precede nominative arguments.

Note that some generalization can be made about precedence of non-topic object pronouns over nominative arguments in Old English. First, oblique object pronouns are permitted to precede nominative arguments in case both are merged within VP as internal arguments of unaccusative predicates such as *cuman* in (19a) and *becuman* in (14a) and (16a). Full NP objects can also appear before nominative arguments in the same environment as seen in (14b) and (15b).¹⁶ Second, object pronouns can occupy a position immediately before nominative subjects when both co-occur with transitive predicates such as *tæcan* in (15a) and *onhebban* in (19b).¹⁷ In contrast with unaccusative predicates, transitive ones do not allow non-topic full NP objects to precede nominative subjects in Old English. Therefore, the ordering pattern of (15a) and (19b) looks similar to that of (17a) from middle-distance scrambling in Modern German, but object pronouns can be replaced with full NP objects only in Modern German as shown below.

¹⁶ In main clauses, full NP objects can occupy a position between finite verbs and nominative arguments as shown below.

(i) Gelome bið þam folce seo lar oftogen (CH II, 36:40)
Frequently is (to) those people-dat the teaching withheld

They are also attested between topics and finite verbs as in (ii).

(ii) for þan ðe þurh þinne clæne cenninge *him eallum* becom halignys (CH I, 36:121)
because through your clean birth (to) them-dat all befell holyness

¹⁷ Van Kemenade (1987:114) argues that an object pronoun can appear between a topic and a transitive finite verb as shown in (i).

(i) Fela spella *him* sædon þa Beormas ægþer ge of hiera agnum lande... (Orosius, 14, 27)
Many stories (to) him-dat told the Permians both of their own country...

As far as Ælfic's *Catholic Homilies* is concerned, only one unambiguous example is attested as the following.

(ii) to ðære *us* gebrincð se hælend gif... (CH I, 14:96)
to that us-dat brings the Saviour if...

All the remaining candidates are associated with stylistic consideration of alliteration as exemplified below.

(iii) a. þæt ece lif *us* forðfō gód (CH II, 31:96)
that eternal life us-dat gives God
b. ac on þære nihte *hine* gélacnode gód... (CH II, 34:218)
but in the night him-acc cured God...

It should be noticed that as seen in (iiib) Ælfic sometimes includes into his alliterative scheme unstressed prefixes including *ge-*, *on-*, *a-*, *ymb-*, *be-*, *for-*, *to-*, and *þurh-* (Pope, 1967:127).

- (20) Gestern hat *das Buch* die Mutter gelesen
 Yesterday has the book the mother read

Syntactic evidence therefore indicates that the only position canonical for object pronouns in Old English is the one immediately preceding nominative subjects in transitive constructions.

4.2.3. Clitic Climbing and resumptive pronouns

According to van Kemenade (1987:135-7), Clitic Climbing and resumptive pronouns provide further syntactic evidence to support the cliticness of personal pronouns in Old English. Let us first consider Clitic Climbing, which occurs with modal and causation/perception verbs in Old English. The clitic analysis of personal pronouns assumes that only object pronouns climb or move to a higher clause out of embedded infinitival complements of those verbs as shown in (21).¹⁸

- (21) þæt *hi* man sceolde mid stanum oftorfian (CH I, 2:190)
 that them man should with stone pelt-to-death

The surface position of the object pronoun *hi* in (21) results from movement out of its base position, that is, an internal argument position of the infinitival verb *oftorfian*. Against the assumption that only personal pronouns are subject to extraction, a full NP object can also be moved out of an infinitival clause as we see in (22).

- (22) *Ealra þæra þinga þe on neorxnawange syndon* þu most brucan (CH I, 1:70-71)
 All those things-gen that in paradise are you are-permitted (to) enjoy

Thematic relations and the genitive Case marking indicate that the full NP *Ealra þæra þinga þe on neorxnawange syndon* in (22) undergoes movement out of its base-

¹⁸ As we have seen in chapter 2, the SOV hypothesis assumes that Verb Raising and Verb Projection Raising, that is, subtypes of rightward extraposition are responsible for the presence of infinitival complements after finite verbs within a subordinate clause.

generated argument position within a projection of the infinitival verb *brucan*.

Clitic Climbing is not obligatory for object pronouns as well as full NP objects in Old English. Both can remain between finite modals and infinitival lexical verbs as shown in (23).¹⁹

- (23) a. *þæt ic mæge me to him gebiddan* (CH I, 7:27)
that I can me to him pray
b. *gif we willað ealla ða wundra and hælða awritan* (CH II, 2:74)
if we want all those wonders and cures (to) write

Object pronouns within an infinitival clause in (23) contrast with the behavior of weak pronouns in the other contemporary West Germanic languages allowing Verb Projection Raising under the SOV analysis (Pintzuk (1993), Robert (1997)). In all those languages, weak pronouns cannot remain within an infinitival clause as exemplified in (24).

- (24) a. ?* *das er törf en is Huus bringe* (Zurich German)
that he may him in the-house bring
b. *das er en törf is Huus bringe*

Considering that Clitic Climbing is neither obligatory nor unique to object pronouns in Old English, the assumption cannot be sustained that it provides evidence for the cliticness of object pronouns in Old English.

In addition to Clitic Climbing, it is argued that the resumptive use of personal pronouns supports their cliticness. Even if both demonstrative and personal pronouns in Old English can be used as resumptive pronouns to repeat clausal DPs, demonstrative and personal pronouns are claimed to be in complementary distribution for resumptive use. The claim is based on the assumption that personal pronouns constitute clitics whereas demonstrative pronouns behave as full NPs. Therefore, only personal pronouns used as resumptive pronouns are expected to occupy a position between topics and

¹⁹ The interpretation of the sentences in (23) depends on the analysis of the underlying structure of Old English. If the SOV hypothesis is adopted, they are understood as examples of Verb Projection Raising without object movement to the matrix clause. On the other hand, the SVO hypothesis predicts that surface positions of objects in (23) arise from leftward movement within an infinitival clause.

finite verbs as in (25).

- (25) *Se ðe is þæra æhta ðeow he ðeowað him swa swa hlaforde* (CH II, 31:32-3)
One who is of-those properties servant he serves them just as lord

If the clause *se ðe is þæra æhta ðeow* is regarded as a topic in (25), the personal pronoun *he* occupies the alleged clitic position between the topic and the finite verb *ðeowað*.²⁰

Notice that demonstrative pronouns used as resumptive pronouns can also appear between left-dislocated clausal DPs and finite verbs as we see in (26).

- (26) *Se ðe gytsunge him hæfð to hlaford se forsihð his scyppend* (CH II, 31:34-5)
One who avarice to-him has to lord he despises his Creator

Evidence from (25) and (26) indicates that not only personal pronouns but also demonstratives are bound by a left-dislocated clausal noun phrase without an intervening finite verb. If the distinction between personal pronouns and demonstratives is to be maintained, the demonstrative pronoun *se* in (26) should be either preceded by the finite verb *forsihð* or replaced by the personal pronoun *he*.

In fact, the distribution of resumptive personal pronouns exhibits fluctuation even in the same environment as exemplified below.

- (27) a. *Ac se man ðe næfð godes gast on him he nis na godes* (CH II, 3:181-2)
but the man who not-has God's spirit in him he not-is not (of) good-gen
b. *Se ðe facn lufað and smeað hu he mage him sylfum gestrynan and na*

²⁰ It is arguable whether a left-dislocated clausal DP can be a syntactic topic. Consider the following sentence in (i).

(i) *Se ðe ne lufað his broþor þone he gesihð hu mæg he lufian god þone ðe he ne gesihð lichamlice* (CH I, 22:225-227)

He who not loves his brother that he sees how may he love God whom he not sees physically
If we accept the general assumption that *wh*-phrases occupy a specifier of CP and usually have the widest scope within a clause, syntactic accounts cannot easily predict the presence of a clausal topic before the *wh*-phrase *hu* in (i). Presumably, the resumptive pronoun *he* and the clausal DP are discourse-related here rather than bound within the same clause. See Cardinaletti (1997) for a similar analysis of left-dislocated subjects in Italian.

One who deceit loves and considers how he can (to) himself-dat gain and not
gode næfð *he* na culfran ðeawas (CH II, 3:182-3)

(to) God-dat not-has he no dove's habits

The resumptive pronoun *he* precedes the contracted negative verb *nis* in (ia) but follows *næfð* in (ib). In sum, resumptive use provides no convincing evidence that personal pronouns, in contrast with demonstrative ones, should be syntactic clitics in Old English.

4.3. Verb movement and clitic positions

Following the clitic analysis of personal pronouns mentioned in 4.2, ordering patterns for clitic and full NP subjects in main clauses are generalized as shown in (28).

- (28) a. Topic – personal pronoun /*full NP – finite verb – *personal pronoun/full NP
b. *wh*-phrase/*pa/ne* – *personal pronoun/*full NP – finite verb –
personal pronoun /full NP

Although the textual evidence drawn from Ælfric's *Catholic Homilies* undermines the generalization represented in (28a), the distributional asymmetry of personal pronouns between (28a) and (28b) has played an important role in the argument concerning the nature of the V-2 constraint in Old English as well as their cliticness. It has been generally claimed that personal pronouns in the second position of topic-initial clauses are exempt from the V-2 constraint due to their cliticness. However, the claim has to answer the question why personal pronouns come to appear in different positions, namely, a pre-verbal one in (28a) and a post-verbal one in (28b). The question is also closely related to the final landing site of finite verbs within Old English main clauses. If finite verbs are assumed to move uniformly into the highest head C, some device is needed to place personal pronouns between topics and finite verbs but prevent them from intervening between *wh*-phrases/*pa/ne* and finite verbs. On the other hand, if finite verbs are claimed to have different landing sites in (28), personal pronouns can appear in different positions depending on a sentence-initial element.

4.3.1. CP-V2 analysis and clitic positions

Van Kemenade (1987,1997) suggests that finite verbs should uniformly occupy the head C in a main clause of Old English.²¹ Her suggestion is often called the uniform CP-V2 analysis since sentence initial elements, whether topics as in (28a) or a *wh*-phrase/*þa*/*ne* as in (28b), have no influence on the position of finite verbs in a main clause. Instead, operatorhood of sentence initial elements is assumed to determine whether pronouns should be proclitic or enclitic and therefore produce the distributional asymmetry of personal pronouns. The ordering pattern of topic – personal pronoun – finite verb in (28a) represents an unmarked process of cliticization to adjoin clitic pronouns to a Case-assigning head on their right. In contrast, operators such as *wh*-phrases, *þa*, and *ne* cannot tolerate the intervention of personal pronouns before finite verbs as shown in (28b), since an operator and a finite verb are claimed to form an inseparable single unit through index transmission from the former to the latter (van Kemenade, 1987:138-140).²²

Her idea on the adjacency requirement between operators and finite verbs is essentially similar to a licensing condition of the *Wh*-Criterion proposed by Rizzi (1996) as in (29).

(29) *Wh*-Criterion

Principle A: Each [+*wh*] X⁰ must be in a Specifier-Head relation with a *wh*-phrase

Principle B: Each *wh*-phrase must be in a Specifier-Head relation with a [+*wh*] X⁰

²¹ Following a recent development of generative grammar, van Kemenade (1997) significantly modifies her earlier assumption on the phrase structure of Old English. She originally proposes that instead of CP a maximal projection of INFL should be the highest functional projection within a clause and host topics and operators in its specifier position. The head INFL attracts finite verbs in a main clause or selects lexical complementizers in a subordinate clause. However, the introduction of CP does not affect her original assumption that finite verbs always move to the highest head in a main clause.

²² The claim still fails to predict the presence of personal pronouns between a *wh*-phrase and a finite verb in embedded *wh*-questions as in (i).

(i) hu us bið æt gode gedemed (CH I, 3:139-140)
how to-us at God judged

Cross-linguistic evidence, however, testifies that an adjacency requirement cannot be universal even in *wh*-questions. Modern French, for example, allows object clitics to appear between *wh*-phrases and finite verbs as shown in (30).²³

- (30) Quand l'as-tu mangé?
When it-have-you eaten

Therefore, van Kemenade's accounts cannot be a principled answer to the supposed distributional asymmetry of pronouns in consideration of a language-particular property of the adjacency requirement between operators and finite verbs.²⁴

The assumption cannot be vindicated that sentence initial adverbs such as *ne* and *ça(bonne)* constitute syntactic operators on a par with *wh*-phrases. As mentioned in footnote 9, the negative particle *ne* before finite verbs is unlikely to enjoy a status of maximal projection even if it has scope over a whole clause. It is therefore unlikely that *ne* occupies a specifier position of CP and imposes Spec-Head agreement on the head C.²⁵ Likewise, the adverb *ça* is too dubious to be grouped into operators. It neither functions as a scope-bearer nor binds a variable within a clause, which supports Stockwell's (1977) assumption that *ça* should be treated as a conjunction element on a par with *and* or *ac*. If *ne* and *ça* are excluded from syntactic operators, the adjacency constraint holds only for the cases related to *wh*-phrases at best. Consequently, the

²³ It can be said that adjacency requirement holds at least between *wh*-phrases and subject pronouns in Modern French as shown in (i).

(i) Que manges-tu? (*Que tu manges?)
what eat you

However, no other convincing evidence is found to prove that the subject pronoun *tu* in (i) should be a clitic pronoun.

²⁴ Alternatively, Tomaselli (1995:363-4) suggests that two distinct types of cliticization should be involved with the seemingly optional application of an adjacency requirement to the *Wh*-Criterion. The first type of cliticization, that is, the cliticization through the left adjunction of clitic pronouns to a head is assumed to be subject to the *Wh*-Criterion, since it creates another node above the head. On the other hand, the second type of cliticization is assumed to occur to a head-internal level without creating any additional node. As a result, the second type becomes exempt from the adjacency condition. These accounts not only rely on an anti-cyclic operation but also become incompatible with the bare phrase theory by Chomsky (1995) under which no X-bar levels should have any linguistic significance.

²⁵ Haebeli & Haegeman (1995) also suggest that *ne* should occupy the head position of a functional projection to trigger negative accord at LF. Once it is admitted that *ne* occupies a head position, a string of *ne* and a finite verb in a clause-initial position is regarded as a syntactic unit formed by adjunction and cannot be split by an intervening element. The argument here indicates that the adjacency requirement between *ne* and finite verbs arises from adjunction structure rather than licensing condition.

constraint is not appropriate to cover the asymmetry in (28), not to mention the fact that the asymmetry itself is not empirically justifiable in Old English.

4.3.2. IP-V2 analysis and clitic positions

Pintzuk (1993,1994,1999) argues that the asymmetric distribution of Old English personal pronouns cannot receive a proper explanation under the CP-V2 analysis. She instead suggests that finite verbs in Old English should have the head I rather than the highest head C as a final landing site. Finite verbs in a main clause are claimed to move into C in a small set of constructions such as verb-initial declarative and imperative clauses, questions, and clauses beginning with the negative particle *ne* and some single adverbs. Another conspicuous departure from van Kemenade (1987) lies in the assumption that topics including clause-initial full NP subjects occupy a specifier of IP rather than CP. Therefore, the asymmetry in (28) is ascribed to the dual location of finite verbs within a main clause in conjunction with the presumption that the position of clitic pronouns is fixed around the boundary of IP in Old English.²⁶ More specifically, three possibilities are postulated for clitic pronouns: either left or right adjunction to a specifier of IP and left adjunction to the maximal projection IP itself.

Now consider how Pintzuk's proposal works for the asymmetry in (28). The order of topic – subject pronoun – finite verb in (28a) is explained as an instance where subject pronouns are attached to the right of topics in a specifier of IP as schematized in (31).²⁷

(31) $[_{IP} [_{I'} [\text{topic}] \text{subject pronoun}] [_{I'} V_{\text{finite}} [_{VP} \dots$

In contrast, the order of *wh*-phrase/*pa/ne* – finite verb – subject pronoun in (28b) results from verb movement to C. Both sentence-initial elements and finite verbs move into the functional projection CP while subject pronouns remain around the boundary of IP.

²⁶ Halpern (1992) and Kiparsky (1995) share the same assumption that clitic pronouns in Old English should occupy a position around IP.

²⁷ Pintzuk supposes that subject pronouns should be clitics unless they happen to become a topic in a clause-initial position.

Under Pintzuk's analysis, the position of subject pronouns becomes structurally ambiguous: left adjunction to IP and to a specifier of IP can be equally permitted as schematized in (32).

- (32) a. $[_{CP} [wh\text{-phrase}/ba/ne] [_{C'} V_{finite} [_{IP} \text{clitic pronoun} [_{IP} \dots$
 b. $[_{CP} [wh\text{-phrase}/ba/ne] [_{C'} V_{finite} [_{IP} [\text{clitic pronoun}]_{XP} \dots]] [_{I'} \dots$

It is however doubtful whether Pintzuk's IP-V2 analysis is successful in explaining the alleged distributional asymmetry of Old English personal pronouns. In essence, her accounts introduce optionality in the direction of adjunction in place of the adjacency constraint. Although clitic pronouns are attached to the right in (31) or to the left in (32), no syntactic factors can be relevant to the direction of adjunction. For instance, her analysis cannot provide any compelling reason to rule out the possibility that in (30) clitic pronouns undergo left adjunction to the functional projection IP or to a specifier of IP as schematized in (33).

- (33) a. $[_{IP} \text{clitic pronoun} [_{IP} \text{topic} [_{I'} V_{finite} \dots$
 b. $[_{IP} [\text{clitic pronoun} [\text{topic}]] [_{I'} V_{finite} \dots$

The only possible candidate to block the unwanted derivations in (33) is the adoption of a constraint to prevent clitic pronouns from appearing in a clause-initial position. The constraint may be analogous to the so-called Tobler-Mussafia Law (henceforward TML), which prohibits clitic pronouns in a clause-initial position in the Medieval Romance languages.²⁸ The effect of the TML is illustrated in (34) from Old French.

- (34) *Voit le li rois* (Old French from Roberts (1993))
 Sees him the king

Instead of its regular pattern of proclisis, the clitic pronoun *le* in (34) is encliticized to the finite verb *voit* to avoid the violation of the TML.

However, the TML cannot be easily employed in Old English to block the derivations in (33). First, the TML itself represents a phonological tendency at best. Benincà (1995), for instance, indicates that clitic pronouns can occupy the initial position of yes-no questions in the Medieval Romance languages as shown in (35).²⁹

- (35) a. *S'est il donques corrouciez a nos?* (Old French)
 Himself-is he then vexed with us
 b. *Me voj tu dar la taverna?* (Old Italian)
 Me want you give the tavern

Irrespective of the structural position of finite verbs, it is evident that the TML fails to predict the presence of clitic pronouns in a clause-initial position in (35).³⁰ Second, the nature of the TML in the Medieval Romance languages cannot explain the alleged asymmetry of personal pronouns in Old English. The TML is more precisely formulated by Benincà (1995:325) as in (36).

- (36) a. *# clitic-verb
 b. # (X) verb-clitic (X = left-dislocated element beyond CP)

The generalizations in (36) state that proclisis is prohibited in a clause-initial position while enclisis is permitted either in a clause-initial position or in a second position preceded by some peripheral element.³¹

If (36b) is applied to Old English, no distributional asymmetry can be expected for

²⁸ TML was originally suggested by Tobler (1875) for Old French and by Mussafia (1886) for Old Italian.

²⁹ According to Benincà, Old French permits clitic pronouns in an initial position of a coordinate sentence as well.

³⁰ It is generally agreed that Old French and Old Italian follow the V-2 pattern in contrast with their modern counterparts even if the landing site of finite verbs is controversial in both languages. See Adams (1987), Roberts (1993), and Benincà (1995) for the CP-V2 analysis and Fontana (1997) for the IP-V2 analysis. Interestingly, as we see in (i) from Benincà (1995), both languages exhibit the ordering pattern analogous to a string of topic– object pronoun – finite verb in Old English.

(i) a. *Si en est li rois moult a malese* (Old French)
 So of-it is the king very troubled
 b. *An lo dies tu ben* (Old Italian)
 Indeed it said you well

However, the above languages contrast with Old English, in that they do not allow interpolation in a subordinate as well as a main clause.

personal pronouns: they should always follow verbs whether X is substituted by topics or by *wh*-phrases/*pa/ne*. In case X stands for a left-dislocated DP as in (37)(=(25)), subject pronouns in Old English precede finite verbs, contra the generalization of (36b).

- (37) Se ðe is þæra æhta ðeow *he ðeowað* him swa swa hlaforde (CH II, 31:32-3)
 One who is (of) those properties-gen servant he serves them just as lord

Therefore, the TML cannot be a proper constraint on the direction of adjunction in Old English, which undermines Pintzuk's assumption that different landing sites of finite verbs explain asymmetric ordering patterns in Old English with a position of clitic pronouns fixed.³²

Pintzuk's IP-V2 analysis is crucially dependent on the cliticness of subject pronouns. The asymmetry in (28) provides major empirical evidence in supporting the analysis under which finite verbs in Old English only reach the head I within a main clause except for some special cases as in (28b). It should be noticed that the asymmetry of pronouns validates her IP-V2 analysis only if two presupposed conditions are met. First, subject pronouns should be clitics in a non clause-initial position. Second, their position should be fixed in the left periphery of IP. Otherwise, her argument becomes inherently circular. In consideration of empirical evidence in 4.2.1, the first condition cannot be satisfied that subject pronouns are syntactic clitics in Old English.³³ It is also not easy to motivate the second condition concerning canonical clitic positions. Under the multiple specifier hypothesis by Chomsky (1995), all the adjoined positions either to IP or to a specifier of IP are understood as a specifier position of IP since maximal projection YP cannot adjoin to another maximal projection XP.³⁴

³¹ According to Benincà, a dislocated element in (35b) usually binds a resumptive pronoun within a clause.

³² Following Rudin (1988), Fontana (1997:232-3) supposes that the empirical evidence for right adjunction can be found in multiple *wh*-fronting constructions in Bulgarian. However, Richards (1999) and Boskovic (1999) offer alternative analyses without resort to right adjunction.

³³ Syntactic evidence for the cliticness of subject pronouns is hard to find in the Romance as well as the Germanic languages. Sportiche (1995: 217), for example, suggests that weak subject pronouns in Modern French should not be syntactic clitics at all. Zwart (1993) also fails to provide unambiguous syntactic evidence for the cliticness of weak subject pronouns in Modern Dutch.

³⁴ Head-to-head adjunction is the only legitimate type of adjunction within the minimalist framework (Chomsky, 1995:318-323).

4.3.3. Revised IP-Analysis and clitic positions

Kroch & Taylor (1997) share the IP-V2 analysis of Old English with Pintzuk but adopt a different strategy to explain the supposed asymmetry of pronouns in (28). In contrast with Pintzuk, they assume that topics in Old English undergo movement into the specifier of CP rather than IP. Their assumption implies that the functional projection CP hosts topics as well as *wh*-phrases/*pa/ne* in its specifier as schematized in (38).

- (38) a. [_{CP} topic [_{C'} [_{IP} clitic pronoun [_{IP} ... V_{fin} ...
b. [_{CP} *wh*-phrases/*pa/ne* [_{C'} V_{fin} [_{IP} clitic pronoun [_{IP} ...

Without Pintzuk's constraint on the direction of adjunction, a change in the landing site of topics in (38a) accommodates the supposed asymmetric distribution of Old English pronouns. Their analysis can also predict a string of topic – full NP subject – finite verb, since a specifier of IP can host a full NP subject before finite verb as in (39).

- (39) [_{CP} topic [_{C'} [_{IP} full NP [_{I'} V_{fin} ...

Kroch & Taylor's strategy, nevertheless, accompanies some complicated assumptions to keep the IP-V2 analysis. First, topics are claimed to move through a specifier of IP on their way to a specifier of CP. Their intermediate movement is motivated by the stipulation that in topic-initial clauses the V-2 constraint is met through a Spec-Head relation between a trace of a topic and a finite verb within IP. Second, with a structural position for finite verbs still fixed as I, full DP subjects in topic-initial clauses should remain within VP. Otherwise, no structural position is available in IP for a topic to move into to satisfy the V-2 constraint through a Spec-Head relation. Consequently, an empty pronominal subject is introduced for the feature checking of I through a Chain relation to a post-verbal subject. It is furthermore assumed that an empty pronoun should be incorporated into the head I to provide a locus for a trace of a topic to meet the V-2 constraint. Following their assumptions mentioned above, the precise structure of topic-initial clauses should be as the following.

(40) $[_{CP} \text{topic}_i [_{C'} [_{IP} \text{subject pronoun } [_{IP} t_i [_{I'} \text{pro}_j + V_{\text{int}} [_{VP} \text{full DP subject}_j \dots$

The empty pronominal *pro* in (40) has no independent agreement and Case features to check the head I and therefore represents a pure expletive, that is, a covert counterpart of *there* in Modern English.

Notice that under Kroch & Taylor's analysis postulation of an empty expletive *pro* is too powerful in Old English: it should be introduced in every topic-related clause to form a Chain relation with a post-verbal full DP subject. Not to mention conceptual economy requiring introduction of abstract elements to be minimized, the unconstrained presence of an empty expletive contradicts the general assumption that the distribution of expletive elements is strictly restricted in the Germanic languages. Vikner (1995:196-213), for instance, observes that overt expletive subjects in Germanic languages occur with a limited set of predicates lacking an external argument such as ergatives, passives, intransitives, impersonals, and copulas.³⁵ Even if Old English is assumed to have an empty expletive, it is hard to justify why even a transitive predicate such as *geneosað* in (41) should select an empty expletive as its external argument.³⁶

(41) On manegum gemetum *geneosað* se ælmihtiga god manna sawla
in many ways visits the almighty God men's souls (CH I, 28:156-7)

Moreover, Kroch & Taylor's assumptions have no way to exclude merge of an empty expletive subject even in case a clause begins with *wh*-phrases/*pa/ne*. The structure represented in (38b) can be ambiguous as shown in (42) under their analysis.

(42) $[_{CP} \text{wh-phrases/pa/ne } [_{C'} \text{pro} + V_{\text{int}} [_{IP} \text{clitic pronoun } [_{IP} \dots$

The incorporated *pro* in (42) moves along as a free rider when finite verbs rise to the head C. In Old English, an empty expletive can be conceptually motivated in so-called impersonal constructions where an external argument with the nominative Case marking

³⁵ Abraham (1993) also suggest that Old High German should have a null expletive subject in the constructions related to weather verbs, experience verbs, extraposed subject clauses, impersonal passives, and ergative predicates.

³⁶ If Kroch & Taylor's assumption is correct, Old English should be a *pro*-drop language like Italian.

is missing. Nevertheless, its ubiquitous presence in clauses introduced by non-subject topics is untenable unless empirical as well as theoretical evidence proves that all nominative subjects should remain within ν P-shell or VP and have their Case features checked or deleted in-situ.

The minimalist framework denies the assumption that topics move through a specifier of IP. First, no solid trigger can be established for topic movement into a specifier of IP. Once movement is understood as an uninterpretable feature-driven operation, the stipulation is no longer sustainable that a topic moves to satisfy the V-2 constraint within IP through a Spec-Head relation. Second, in terms of the nature of features related to an operation, topicalization is interpreted as an instance of A'-movement. Non-subject topics have their Case features deleted against the functional head ν before I is merged into a derivation. Therefore, their movement into a specifier of IP represents an unnecessary step in computation, which is irrelevant to deletion of uninterpretable features of Case/agreement. All in all, Kroch & Taylor's analysis is still costly in terms of theoretical burdens to justify even if they aim to explain the asymmetric distribution in (28) without depending on optionality in the direction of adjunction.

4.3.4. Verb movement and ordering patterns

The critical review made in the previous sections indicates that neither CP-V2 nor IP-V2 analysis can explain the putative asymmetry of ordering patterns in (28). Both of them have to introduce a speculative constraint on the direction of adjunction. The revised IP-V2 analysis proposed by Kroch & Taylor relies on some unjustified assumptions, which induce unwanted complexity into the grammar of Old English. It is however evident that the above-mentioned analyses face more difficulties in explaining the empirical fact that the descriptive generalizations in (28) should be modified into the ones in (43) in accordance with the observations made in 4.2.

- (43) a. Topic – subject pronoun /full NP subject – finite verb – subject pronoun/full NP subject
 b. *wh*-phrase/*pa/ne* – finite verb – subject pronoun/full NP subject

The ordering pattern of (43a) indicates that finite verbs should appear in multiple positions at least in topic-initial sentences. Otherwise, it can hardly be expected that full NP as well as pronominal subjects occupy either a pre-verbal or a post-verbal position as shown below.

- (44) a. þa lufe ure *scyppend* us gewutelode þurh hine sylfne (CH I, 35:144-5)
the love our Creator us showed through him self
b. Þis tacn worhte *se hælend* ærest on his menniscnysse (CH II, 4:22-3)
this token made Jesus first in his incarnation

Let us now consider Roberts' (1997) head-initial analysis under which finite verbs in Old English can move into a head position other than C and I in main clauses. He suggests that the split AgrP and optional verb movement should explain the putative asymmetry of personal pronouns in Old English as schematized in (45).

- (45) a. [_{CP} topic [_{Agr1P} [_{Agr1} clitic pronoun + finite verb [_{AgrSP} full NP subject [_{AgrSP} [_{TP} ...]]]]]]]
b. [_{CP} *wh*-phrase/*þa/ne* [_C finite verb [_{Agr1P} [_{Agr1P} clitic pronoun [_{AgrSP} full NP subject [_{AgrSP} [_{TP} ...]]]]]]]]]

His analysis presupposes that the head of Agr1P is a canonical position for clitic pronouns. Therefore, optional application of Agr1-to-C movement, which depends on the strength of verbal features in C, is claimed to produce the asymmetry between (45a) and (45b). In topic-initial clauses represented in (45a), the functional head C is assumed to have weak verbal features and cannot force finite verbs to undergo further movement to C after they reach the functional head Agr1. They remain adjoined to clitic pronouns, which result in the order of topic – clitic pronoun – finite verb. In clauses beginning with *wh*-phrases/*þa/ne*, the functional head C is supposed to take strong verbal features and trigger verb movement across a clitic position as shown in (45b).

Roberts' analysis has a considerable advantage in deriving ordering patterns in Old English. Postulation of two separate functional categories above TP provides more landing sites for finite verbs and subjects, which makes it unnecessary to introduce ad

hoc speculations such as directionality of clitic adjunction and empty expletive pronouns for topic-initial clauses. His analysis can accommodate the distribution of full NP subjects in (44) as long as variation in the position of full DP subjects is admitted in topic-initial sentences of Old English as schematized below.

- (46) a. [_{CP} topic [_{Agr1P} full NP subject [_{Agr1} finite verb [_{AgrSP} [_{TP} ...]]]]]
 b. [_{CP} topic [_{Agr1P} [_{Agr1} finite verb [_{AgrSP} full NP subject [_{AgrSP} [_{TP} ...]]]]]]]

On the other hand, the order of topic – finite verb – subject pronoun can be derived by verb movement to a head position higher than Agr1P as in (47).

- (47) [_{CP} topic [_C finite verb [_{Agr1P} [_{AgrSP} subject pronoun [_{AgrS} ...]]]]]

In spite of descriptive merits, Roberts' analysis leaves some issues unanswered. First, it is arguable whether his assumption of a fixed clitic position illuminates the contrast between topic-initial vs. *wh*-phrase/*pa/ne*-initial clauses. To derive the order of topic – pronoun – finite verb rather than topic – finite verb – pronoun, finite verbs should be right adjoined to pronouns in a fixed position of Agr1 as shown in (45a). In other words, his analysis introduces the directionality of verb adjunction in place of the directionality of clitic adjunction. In case finite verbs precede pronouns as in (45b) and (47), another stipulation is required that finite verbs should skip the intermediate head Agr1 on their way to the highest head C. Otherwise, clitics would be carried along by verb movement to produce the order of *wh*-phrase/*pa/ne* – pronoun – finite verb. The stipulation, however, violates a locality requirement of the Head Movement Constraint, since finite verbs move across the nearest head Agr1 lexically filled by a clitic pronoun.³⁷ Second, the split of AgrP into Agr1 and AgrS lacks a conceptual motivation. Even if postulation of Agr1P depends on the assumption that personal pronouns occupy a fixed position, it is not convincing that in topic-initial clauses either Agr1P or AgrSP can attract full NP subjects for deletion of Case/agreement features. As discussed in

³⁷ The only way to meet the Head Movement Constraint is to assume that clitic pronouns are excorporated from finite verbs before verb movement to C.

chapter 3, a functional category of AgrP itself cannot be maintained under a recent development of the minimalist framework. A functional head T, which is independently justified on semantic grounds, replaces Agr(S) in deleting the nominative Case feature and agreement features between nominative subjects and verbs.

Without AgrPs and a separate position for subject pronouns, I suggest that derivations selecting full NP subjects as well as subject pronouns should be simplified in Old English as the following.

- (48) a. [_{CP} topic [_C finite verb [_{TP} full NP subject/subject pronoun [_T finite verb [_{VP} ...]]]]]]
 b. [_{CP} *wh*-phrase/*pa/ne* [_C finite verb [_{TP} full NP subject/subject pronoun [_T ...]]]]]

In topic-initial clauses represented in (48a), the final landing site of finite verbs determines the ordering pattern with a position for full NP subjects/subject pronouns fixed as a specifier of TP. Finite verbs move into the highest head C to derive the order of topic – finite verb – full NP subject/subject pronoun or into the lower head T to produce the order of topic – full NP subject/subject pronoun – finite verb. In accordance with the minimalist framework, the analysis of (48) presupposes that, in contrast with Kemenade (1997), verb movement itself is irrelevant to deletion of the nominative Case feature of subjects. Both full NP subjects and subject pronouns undergo an independent operation into a specifier of TP for Case/agreement relations. Inconsistency in V-to-C movement in (48a) results from the nature of the functional head C associated with topicalization in Old English.³⁸ In (48b), clauses beginning with *wh*-phrases/*pa/ne* are supposed to have the functional head C invariably forcing verb movement, which agrees with all the analyses reviewed and produces the order of *wh*-phrase/*pa/ne* – finite verb – full NP subject/subject pronoun.

4.4. Object pronouns and cliticization

³⁸ A detailed discussion on verb movement in Old English will be suggested in the following chapters.

4.4.1. Object pronouns in Old English and evidence for an XP status

Following van Kemenade's (1987) generalization mentioned in 4.2.2, non-topic object pronouns in main clauses can precede nominative subjects as summarized below.

- (49) a. topic – object pronoun – finite verb – nominative subject
 b. *wh*-phrase/*pa/ne* – finite verb – object pronoun – nominative subject

In deriving ordering patterns in (49), all the assumptions reviewed in 4.3 face the same problems that they experience in explaining the distribution of pronominal and full NP subjects. The CP-V2 analysis has to depend on the unmotivated notion of operatorhood to determine whether clitic pronouns should be proclitic or enclitic in (49). The IP-V2 analysis suggested by Pintzuk and Kroch & Taylor introduces some stipulation on the direction of clitic adjunction or resorts to the unconstrained presence of an empty pronominal subject in topic-initial clauses.

Proliferation of functional categories makes it comparatively easy for Roberts' analysis to derive ordering patterns in (49). Since the position of pronominal objects is designated as the functional head Agr1, finite verbs should move into C whenever object pronouns appear in a post-verbal position as in (50).

- (50) [_{CP} *wh*-phrase/*pa/ne* [_C finite verb [_{Agr1P} [_{Agr1P'} object pronoun [_{AgrSP} nominative subject [_{AgrSP'} [_{TP} ...]]]]]]]]]

In case object pronouns appear between topics and finite verbs, verb movement is limited to the functional Agr1 as in (51).

- (51) [_{CP} topic [_C [_{Agr1P} [_{Agr1P'} object pronoun + finite verb [_{AgrSP} nominative subject [_{AgrSP'} [_{TP} ...]]]]]]]]]

In addition to the conceptual issue of split AgrPs, the same problems raised against Roberts' analysis of subject pronouns are reiterated here. His analysis cannot answer

why finite verbs should undergo right rather than left adjunction to object pronouns in (51) and furthermore skip them on their way to the functional head C in (50).

The fundamental problem in Roberts' assumptions is associated with the syntactic status of personal pronouns in Old English. Let us now consider object pronouns between lexical complementizers and nominative subjects in subordinate clauses where finite verbs often converge on a clause-final position as in (52).

- (52) complementizer– object pronoun – nominative subject – (X) – finite verb
gif *him* ænig heafodman hwilces ðinges forwyrnde (CH II, 34:253-9)
if (to) him-dat any elder any thing denied

If the pronoun *him* in (52) is regarded as a clitic pronoun, it represents an instance of interpolation dissociated from a verb. Presence of interpolation makes doubtful the assumption that just as clitic pronouns in Modern Romance languages personal pronouns in Old English should be subject to X^0 (head) movement. It is true that interpolation is attested even in Modern French with well-developed paradigms for clitic pronouns as we can see in (53) from Kayne (1991).³⁹

- (53) ...*en* fort bien parler...
of-it strong well speak

However, interpolation is more frequently observed in Old Spanish and in Serbo-Croatian as exemplified (54) from Rivero (1997).

- (54) a. Si *lo* el rey por bien toviere, mandeme quemar (Old Spanish)
if it the king for good had, order-me burn
b. Ako *ti* bog ne pomogne (Serbo-Croatian)
if you God not help

³⁹ Kayne (1994) suggests that interpolated clitics should be adjoined to an empty functional head. He furthermore assumes that functional categories can be permitted as many as possible as long as they can have interpretive contents and meet the requirement by the LCA.

The italicized clitics in (54) are often called C-oriented clitics, since their surface positions tend to gravitate to a clause-initial position. Following Rivero's argument, C-oriented clitics have a relatively independent status than I-oriented, i.e., verb-related clitics and therefore occupy an XP position for specifiers.

In addition to interpolation, Haverkort (1994) suggests licensing of parasitic gap, clitic climbing, and split of clitic clusters as empirical evidence to testify the XP status of Germanic weak pronouns against the X^0 status of Romance clitic pronouns.⁴⁰ As far as the above evidence is concerned, object pronouns in Old English follow the behavior of Germanic weak pronouns rather than Romance clitic pronouns.⁴¹ As mentioned earlier, Old English not only tolerates interpolation of object pronouns but also permits them to climb out of infinitival clauses. Old English also allows split of clitic clusters as in (55) if both italicized object pronouns are claimed clitics and initially adjoined to the same head.

- (55) þæt we *hi* swutelicor *eow* onwreon (CH I, 20:51-2)
 that we them more-distinctly (to) you-dat explain

Further support for the XP analysis of Old English pronouns comes from their distribution within DP. According to the hypothesis made in Chapter 3, possessive movement in Old English targets a specifier of DP for deletion of relevant uninterpretable features to prove the XP status of personal pronouns. In contrast, Italian possessives have the status of X^0 and undergo head movement into the functional head D.

Admitting that object pronouns in Old English are supposed to occupy a position of maximal projection, more scrutiny is required to determine their structural position. In particular, economy considerations under the minimalist framework dismiss the introduction of a separate functional category unless it has independent justification other than the locus of object pronouns. Thus, Roberts' Agr1P cannot be a solution even

⁴⁰ The issue concerning parasitic gap is more complicated than Haverkort assumes. For example, the genitive clitic *en* permits parasitic gap constructions in Modern French while dative weak pronouns cannot permit them in Modern Dutch (Sportiche, 1996).

⁴¹ Unfortunately, no proper example of a parasitic gap is attested in Ælfic's *Catholic Homilies*.

if a position for personal pronouns is modified from head to specifier.⁴² The idea that personal pronouns in Old English have a status of XP has already been suggested in the IP-V2 analysis.⁴³ They are assumed to occupy an adjoined position of IP or its specifier, which presupposes that they should enjoy a status of maximal projection (Pintzuk (1993, 1994, 1999), Fontana (1997), and Kroch & Taylor (1997), *inter alia*). Nevertheless, the IP-V2 analysis depends on an unmotivated operation of XP-adjunction to YP under the bare phrase theory and still has to answer what makes different the syntactic behavior of Old English object pronouns from that of Romance clitic counterparts.

4.4.2. Weak pronouns and clitic pronouns: XP vs. X⁰

The discrepancy between Old English and Modern Romance object pronouns raises two major issues. First, what makes their syntactic behavior different from each other? Second, can a single operation of cliticization explain the distribution of both types of pronouns? With regard to the first question, Cardinaletti & Starke (1994) and Cardinaletti (1994) argue that the contrast between pronouns results from the differences in their internal structure. Their argument hypothesizes the tripartition of strong, weak, and clitic pronouns rather than the traditional dichotomy of clitic and non-clitic ones.⁴⁴ An intermediate type of weak pronouns is justified by the fact that they are morphologically the same but syntactically different from strong pronouns. Both weak and clitic pronouns are therefore characterized by their deficiency in the properties present in strong pronouns and full noun phrases. Weak pronouns are less deficient than clitic ones in terms of syntactic status: the former type is associated with an XP position whereas the latter one should be attached to a head.

Cardinaletti & Starke (1994) suggest that in parallel with the structure of CP, DP should contain maximal projections Σ P and NP associated with prosodic and lexical

⁴² Similar attempts have been made to introduce a separate functional category for clitics in other languages. To mention a few, Uriagereka (1995) suggests FP for West Romance clitics and Rivero (1997) proposes WP/TMP for Serbo-Croatian and Bulgarian clitics respectively.

⁴³ Fischer, van Kemenade, Koopman and van der Wurff (2000:123-8) argue that the functional projection FP is merged between CP and TP and its specifier hosts personal pronouns. Aside from the conceptual plausibility of FP, their argument has to answer the question why finite verbs in topic-initial sentences move into either C or F.

⁴⁴ Haverkort (1995) proposes the classification of pronouns in terms of the combination of the features [\pm projection] and [\pm maximal], which produces four possible types of pronouns.

features respectively.⁴⁵ Deficiency in weak and clitic pronouns is structurally defined as lack of those projections below DP. Weak pronouns dispense with NP but more deficient clitic pronouns lack ΣP as well as NP. Following their assumption that cliticization represents a process to recover missing features in the structure of pronouns, cliticization in weak pronouns and clitic ones should take a different nature due to their differences in structural deficiency.

In contrast with Cardinaletti & Starke, Chomsky (1995:337-8) assumes that cliticization is the outcome of the ordering constraint at the phonological component. As mentioned in chapter 2, his idea comes from Kayne's (1994) Linear Correspondence Axiom according to which asymmetric c-command relations determine linear ordering among terminal elements. In terms of the minimalist framework, Chomsky interprets it as the phonological constraint that non-branching complements cannot be tolerated in a clause-final position due to their lack of asymmetric c-command relation. Following Chomsky's assumption that pronouns are directly merged into the functional head D, they are subject to the constraint and undergo a phonological operation of cliticization when they remain in a complement position of VP after computation.

Even if personal pronouns are supposed to be merged into a head position, their status cannot be fixed as X^0 . Chomsky's bare phrase theory based on the relational nature of categories does not assign any linguistic significance to fixed bar-levels in syntactic objects. A projection that has no complement is defined as head whereas a projection that does not project further is understood as maximal projection. Pronouns exhibit both properties of head and maximal projection: they have no complement and cannot project further at the same time. The dual property of pronouns can be a partial answer to the asymmetric distribution between weak pronouns and clitics by Cardinaletti & Starke. However, the ordering constraint at the phonological component cannot distinguish landing sites such as XP for weak pronouns and X^0 for clitics. Under the minimalist framework, the phonological component constitutes nothing but formal representation relevant to sound (Chomsky, 1995:169). If we want to impose on cliticization a condition on landing sites, cliticization from X^0 to Y^0 should be an

⁴⁵ The functional category ΣP was originally proposed by Laka (1990) for the locus of polarity and focus features.

operation in the component of Morphology after the overt syntax. According to Chomsky (1995:334-5), Morphology whose output is subject to the ordering constraint is associated only with X^0 elements to allow the adjunction of a head to another head. In other words, if clitic pronouns with a status of X^0 undergo movement into Y^0 , the operation should be triggered by their affixal property rather than by the ordering constraint. Therefore, the attempt proves unfruitful to attribute the distribution of clitics (X^0) as well as weak pronouns (XP) to the ordering constraint at the phonological component.

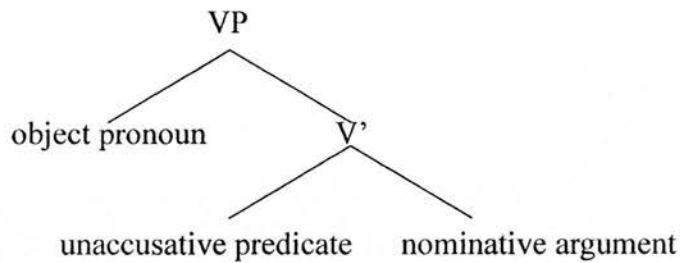
The argument in this section shows that it is hardly conceivable to integrate the distribution of weak and clitic pronouns into a single process either syntactic or phonological. If the assumption is maintained that the distribution of object pronouns in Old English is involved with a syntactic operation, their displacement amounts to movement into a specifier position of a functional category. The assumption also implies that a syntactic operation relevant to object pronouns should be motivated by universal requirements at the interfaces as well as by idiosyncratic properties of pronouns.

4.4.3. Proposal: Old English cliticization as a subtype of middle-distance scrambling

Following the generalization made in 4.2.3, precedence of non-topic object pronouns over nominative subjects can be distinguished in Old English depending on the type of predicates. First, object pronouns take the dative forms and occur with unaccusative predicates such as *cuman*, *becuman*, *standan*, *beon* and psyche verbs. Second, they are merged as an internal argument of transitive predicates but followed by nominative arguments with a theta role of Agent. The distinction signifies that in spite of the same ordering pattern object pronouns in those two cases originate from different structural positions. In the light of the general assumption that lack of an external argument characterizes unaccusative predicates, both object pronouns and nominative arguments are merged within the same projection of VP. Under the head-initial analysis of Old English, VP in unaccusative constructions will be schematized as in (56).⁴⁶

⁴⁶ An extensive argument against the head-final hypothesis of Old English will be suggested in chapter 5 and 6.

(56)



The structure of VP in (56) reflects the idea of thematic hierarchy according to which Goal is higher than Theme (Grimshaw, 1990). As long as the assumption holds that there exists a uniform mapping between thematic and syntactic structure (Baker, 1988), the order of merge in (56) arises from thematic hierarchy between arguments. A dative object pronoun typically carrying a thematic role of Goal is merged later than a nominative argument with a thematic role of Theme. Thus, the former occupies a specifier rather than a complement position of VP and becomes closer to the functional head T selected above VP.

The agreement features of T, which are associated with the EPP features, force dislocation of a proper syntactic element into a specifier of TP for deletion of relevant uninterpretable features. Dative object pronouns are active for the operation since their Case features remain undeleted due to the absence of the functional head ν in unaccusative constructions. Nominative arguments, on the other hand, can keep their base position within VP with their nominative Case feature deleted through Agree against the functional head T, which produces the precedence of dative object pronouns over nominative subjects. The analysis assumes that the functional head T in unaccusative constructions can attract a non-nominative argument as long as the argument has an uninterpretable feature to be deleted by the operation.⁴⁷ The same analysis is applicable to impersonal constructions as shown in (57), where no nominative argument is selected at all.

(57) [þam þrim þingum], *us* gedafenað t_i þæt we wiðcweþon on urum ðeawum
those three things-dat us-dat is-fitting that we contradicted in our habits

⁴⁷ A similar suggestion is made in Collins (1997) for Locative Inversion constructions in Modern English and Chomsky (2000) for quirky subject constructions in Icelandic. A detailed discussion will be made in chapter 6 and 7.

(CH I, 32:89-90)

The object pronoun *us* in (57) occupies a specifier of TP while *þam ðrim þingum* moves into a specifier of CP for topicalization. In Old English, movement into a specifier of TP, of course, is not restricted to pronouns. As seen in 4.2.3, full NP objects with the dative Case marking can undergo the operation to delete uninterpretable features of T in unaccusative constructions.

If we continue the assumption that finite verbs are subject to head movement independently attracted by a higher functional head, their final landing site determines whether dative objects in a specifier of TP is pre-verbal or post-verbal in unaccusative constructions. In case finite verbs move into the highest functional head C, they come to appear before dative objects in a specifier of TP and consequently precede both dative and nominative argument. Under the head-initial analysis, finite verbs come to follow dative objects when they are attracted by T or a lower functional head. Therefore, neither empirical nor conceptual evidence supports the argument that dative pronouns are subject to a separate operation of cliticization in unaccusative constructions. Dative pronouns, which have a status of XP just as full NP counterparts, are forced to move into a specifier of TP for deletion of uninterpretable features in the functional head T.

Let us now consider how object pronouns selected by transitive predicates appear in a position immediately preceding nominative subjects under the head-initial analysis of Old English. In contrast with unaccusative predicates, transitive ones take a nominative subject as an external argument with a theta role of Agent, which is merged as a specifier of the functional head *v* as schematized in (58).

(58) [_{VP} nominative subject [_v v [_{VP} V object pronoun]]]

In (58), the nominative subject occupies a structurally higher position than the object pronoun within VP. After the derivation selects the functional head T above *vP*, the nominative subject is forced to move into a specifier TP for deletion of uninterpretable features in the functional head T as shown in (59).

(59) [_{TP} nominative subject_i [_T T [_{VP} t_i [_{VP} V object pronoun]]]]

The above analysis assumes that object pronouns preceding nominative subjects should occupy a position between TP and CP unless they carry a feature associated with topicalization or *wh*-movement. In consideration of conceptual economy and an XP status of object pronouns in Old English, the only structural position available for them should be a specifier of TP as in (60).⁴⁸

(60) $[_{TP} \text{ object pronoun}_j [_{TP} \text{ nominative subject}_i [_{T'} T [_{vP} t_i [_{VP} V t_j]]]]]$

TP in (60) has two specifiers: one for the nominative subject and the other for the object pronoun. However, a trigger for movement of the object pronoun cannot be the same one for the nominative subject. In transitive constructions, the functional head *v* deletes the uninterpretable Case feature of an internal argument. When the agreement features of *v* are associated with the EPP features, they force movement of an internal argument into a specifier of *vP*. Otherwise, a simple operation of Agree precludes a complex operation of movement for deletion of relevant uninterpretable features in *v* and the internal argument. In terms of geometry concerning deletion of Case and agreement features, object pronouns have no reason to be attracted by the remote functional head *T* rather than by the local head *v*.

The argument against the A-movement analysis of object pronouns receives further support from the fact that they are frequently followed by indefinite nominative subjects such as *man* and *hwa* as exemplified below.⁴⁹

- (61) a. þa sæde *him man* þæt hi of engla lande wæron (CH II, 9:60-1)
 then said (to) him-dat man that they from angels' land (= England) were
 b. gif *hine hwa* þonne mid tihtinge 7 gebysnungum goddra weorca
 if him-acc someone then with exhortation and examples of good works
 getrymð (CH I, 21:175)
 strengthens

⁴⁸ In fact, the object pronoun first moves into a specifier of *vP* and has its Case feature deleted.

⁴⁹ As in other Germanic languages, sentences with the indefinite subject *man* sometimes carry a passive interpretation in Old English (Traugott, 1972:82), which raises the possibility that those sentences can receive the same treatment as unaccusative constructions.

In (61), uninterpretable features associated with the nominative Case and subject-verb agreement are deleted by *man* and *hwa* in a specifier of TP. Thus, it seems more plausible that movement of object pronouns in (61) is involved with a definiteness or specificity effect, which exclusively requires an (in)definite expression in a certain syntactic environment.⁵⁰ A similar generalization holds for other leftward operations such as Object Shift and scrambling in some Germanic languages. Holmberg (1999, 2000) argues that Object Shift in the Scandinavian languages is common to definite, light, and non-focused categories. Welbelhuth (1992) also suggests that middle-distance as well as short-distance scrambling can be similarly characterized in Modern German.⁵¹

As an alternative to the A-movement analysis, the A'-movement analysis can be considered for object movement into a specifier of TP in transitive constructions. Following Chomsky (2000:107-110), a functional head H optionally takes uninterpretable P(eripheral)-features, which represent the peripheral system at the interfaces such as force, topic, focus, etc. and force A'-movement due to their association with the EPP features. Nevertheless, his idea of P-features is inapplicable for the following reasons. First, he restricts the presence of P-features to *v* and C, both of which constitute a phase, that is, a subarray of a derivation determining a verb phrase or a clause. Second, an operation solely motivated by a definiteness effect cannot be included in uninterpretable feature-driven operations. Without morphological evidence, the assumption becomes untenable to introduce an uninterpretable feature attracting definite objects into a specifier of TP in transitive constructions of Old English or Modern German. Phi-features for subject-verb agreement are the only uninterpretable features available for the functional head T while the uninterpretable Case feature of

⁵⁰ Recall that object pronouns can appear between a topic and a finite verb in transitive constructions as in (i) (= (ii) in fn.15) even if few occurrences are confirmed in Ælfric's *Catholic Homilies*.

(i) to ðære *us* gebrincð se hælend gif... (CH I, 14:96)
to that us-dat brings the Saviour if...

If the assumption is to be maintained that in transitive constructions only middle-distance scrambling can move object pronouns into a specifier of TP, an empty pronominal subject is required between the object pronoun and the finite verb as schematized in (ii).

(ii) [_{CP} to ðære [_{TP} *us* [_T pro_i [_T gebrincð [_{VP} se hælend, [...

The analysis of (ii) presupposes that a definiteness effect in T is also responsible for the precedence of the object pronoun over the empty subject.

⁵¹ In spite of similar semantic effects, Object Shift and short-distance scrambling are distinguished from middle-distance scrambling in terms of deletion of uninterpretable features: only the former operations are relevant to Case/agreement features associated with the functional head *v*. A comprehensive discussion on Object Shift and short-distance scrambling will be made in Chapter 7.

definite objects, if any, is deleted against the functional head *v*.

In spite of the absence of uninterpretable features, middle-distance scrambling cannot be entirely excluded from syntactic operations. The operation produces perceptible effects in both interface levels of PF and LF. It not only changes linear ordering but also contributes to the interpretation of a derivation concerning logical or information structure.⁵² Following Diesing (1992) and Holmberg (1999), a sentence is divided into two parts in terms of information structure: the focus expressing new information in the discourse and the presupposition containing old information. The focus domain of a sentence corresponds to VP, which implies that a focused argument should be within VP whereas a non-focused one should move out of VP to reach the presupposition domain.⁵³ Middle-distance scrambling testifies that the requirement on information structure can be implemented at the syntax in some languages including Old English and Modern German. Therefore, the attempt to confine middle-distance scrambling to a purely stylistic/phonological operation leaves the semantic aspect of the operation unexplained. Under the language design of the minimalist framework, no interaction is assumed between a PF representation and an LF representation after Spell-Out (Chomsky, 1995:229).

The analysis made here suggests that middle-distance scrambling should be related to information structure of a derivation by displacing definite or specific elements out of VP in Old English. Object pronouns can be the best candidate for the operation since definiteness or specificity constitutes their inherent nature. Nevertheless, recall that middle-distance scrambling of full NP objects is prohibited in Old English even if they have the interpretation of definiteness. As seen in 4.2.2, the same restriction is not pertinent to middle-distance scrambling in Modern German where the operation can displace a definite full NP object.

The fact that the application of middle-distance scrambling is limited to object pronouns in Old English implies that cliticization of object personal pronouns represents a subtype of middle-distance scrambling. Suppose that the functional head T can have the [+definite] feature responsible for middle-distance scrambling to host a definite

⁵² See Tada (1993), Grewendorf & Sabel (1996), and Grewendorf (1999) for binding and weak crossover effects related to middle-distance scrambling in Japanese and Modern German.

⁵³ Unlike Diesing and Holmberg, Kiss (1995) argues that TP should be the focus domain of a sentence. The argument, however, is grounded on the layered CP analysis, which I will leave aside here.

expression even if the feature is interpretable in itself. Crosslinguistic variation concerning middle-distance scrambling will be explained as the following. In Modern German, both pronominal and definite full NP objects are displaced into a specifier of TP as long as T is selected with the [+definite] feature. In Old English, on the other hand, the [+definite] feature of T is parameterized to host only personal pronouns whose defective as well as definite nature makes them active for the operation.

In sum, object pronouns in Old English can occupy a specifier of TP and precede nominative subjects in a structurally lower position. However, the precedence of object pronouns is not attributable to a single operation of cliticization. In unaccusative constructions, movement into a specifier of TP arises from the requirement on deletion of uninterpretable features of the functional head T. Therefore, the operation affects not only object pronouns but also full NP objects. In transitive constructions, a specifier of TP other than the one for nominative subjects is irrelevant to deletion of uninterpretable features. Instead, the operation to displace object pronouns into a specifier of TP is understood as middle-distance scrambling associated with a definiteness effect to represent information structure at the syntax. Old English restricts the application of middle-distance scrambling to object pronouns, which makes cliticization a subtype of middle-distance scrambling.

4.5. Conclusion

Personal pronouns have been generally regarded as syntactic clitics under the generative studies of Old English. The main argument for clitichood of personal pronouns comes from the observation that they occupy unique positions at syntax. In particular, their distribution is claimed to depend on the initial element of the main clause: pre-verbal in topic-initial sentences and post-verbal in clauses beginning with *wh*-phrases/*þa/ne*. The asymmetry of personal pronouns is related to the issues concerning the final landing site of finite verbs in a main clause and the nature of cliticization in Old English. Various suggestions have been made to explain the asymmetry and keep the V-2 constraint (either CP-V2 or IP-V2) at the same time. However, all of them have to resort to some speculative constraint on the direction of clitic adjunction or introduce unwanted complexity to the grammar of Old English.

Empirical evidence testifies that the asymmetry is not only optional but also detectable even in the distribution of full NP subjects. With the absence of canonical positions for subject pronouns, the assumption cannot be vindicated that they undergo a separate operation of cliticization. Verb movement, which is independently motivated by an attracting functional head, determines whether subject pronouns and full NP subjects, both of which regularly occupy a specifier of TP, become pre-verbal or post-verbal.

As in case of subject pronouns, no canonical positions are available for object pronouns except for the one in which they immediately precede nominative subjects in transitive constructions. Even if it is argued that those occurrences support the clitichood of object pronouns in Old English, they should be distinguished from Romance cliticization. Both empirical and theoretical considerations indicate that irrespective of their clitichood displaced object pronouns in Old English appear in an XP (maximal projection) position rather than an X^0 (head) one for Romance clitic pronouns. Thus, the attempt proves unsuccessful to attribute the distribution of two different types of pronouns to a unified process of cliticization either at the syntax or at the phonological component.

Following the XP analysis of object pronouns in Old English under the SVO hypothesis, they are assumed to move into a specifier of TP and precede nominative arguments in a structurally lower position in the following cases. First, their precedence over nominative arguments in unaccusative constructions reflects the order of merge in argument structure. The operation to displace object pronouns as well as full NP counterparts into a specifier of TP is implemented by the requirement to delete uninterpretable features in the functional head T. Second, object pronouns in transitive constructions are subject to a definiteness effect in the functional head T and undergo movement into a specifier of TP. The operation amounts to middle-distance scrambling closely related to information structure of a derivation at the interface. In Old English, the application of the operation is restricted to object pronouns, which signifies that cliticization in Old English represents a subtype of middle-distance scrambling.

Chapter 5. Distribution of Finite Verbs in Old English

5.1. Introduction

It has been widely believed that finite verbs in Old English have asymmetric surface positions depending on clausal types (van Kemenade (1987), Roberts (1993), *inter alia*). In main clauses, they usually occupy the second position even when preceded by non-subject elements as in (1a). On the other hand, they tend to occur in a final position in subordinate clauses as in (1b).

- (1) a. *Pis tacn worhte se hælend ærest on his menniscnysse* (CH II, 4:22-3)
this token made Jesus first in his incarnation
b. *Pu eart mære and micel ðe wundra wyrcest* (CH II, 1:271-2)
you are glorious and great who wonders perform

As regards this apparent variation in the position of finite verbs, which is often called an asymmetric V-2 pattern, traditional analyses under a generative approach have employed two major assumptions.¹ First, they assume that asymmetric V-2 languages like Old English, German, and Dutch have a head-final structure for both VP and IP. The assumption presupposes that finite verbs first undergo rightward movement to the clause-final I before they reach the highest head C in main clauses. The asymmetry of verb movement between main and subordinate clauses is therefore attributed to the presence of lexical complementizers in subordinate clauses, which prevents finite verbs in the clause-final I from moving into C. Second, each step of verb movement is supposed to have an independent motivation. V-to-I movement, even if string-vacuous under the head-final analysis of asymmetric V-2 languages, is understood as an obligatory operation to pick up verbal inflectional endings associated with the morphological richness of verbal paradigms in those languages. I-to-C movement represents the compulsory lexicalization of C triggered by syntactic requirements on

¹ Traditional analyses here refer to the CP-V2 hypothesis of V-2 languages according to which finite verbs uniformly move into the highest functional head C at least in main clauses (den Besten, 1989).

Case/agreement systems or by intrinsic properties in C.

Following the above analysis, both verbs in (1a,b) should first move into the clause-final I as schematized in (2).²

- (2) a. [[se hælend [ærest on his menniscnysse þis tacn t_i]_{VP} *worhte*_i]_{IP}
b. [Op_i ðe [e_i [wundra t_j]_{VP} *wyrcst*_j]_{IP}]_{CP}

The finite verb *worhte* in (2a) moves further into the highest head C on independent grounds. The finite verb *wyrcst* in (2b) remains in a clause-final position due to the insertion of the lexical complementizer *ðe* blocking further verb movement into C.

However, traditional head-final assumptions are inconsistent with Kayne's (1994) universal SVO hypothesis in which asymmetric c-command implies linear precedence. Under his hypothesis, every head including V and I should always c-command and consequently precede its complement even in asymmetric V-2 languages. No rightward operation can be tolerable since it destroys strict correspondence between structural hierarchy and linearity. Once neither head-final parameter nor rightward movement is available for the analysis of asymmetric V-2 languages, the clause-final finite verb in (1b) is assumed to remain within VP as demonstrated in (3).

- (3) [Op_i ðe [e_i [wundra_j [*wyrcst* t_j]]_{VP}]_{IP}]_{CP}

The derivation in (3) shows that the clause-final position of the finite verb *wyrcst* originates from leftward movement of its complement *wundra* rather than from rightward verb movement. In main clauses, finite verbs can move further into C as seen in (1a) as long as the operation is independently triggered.

Although neither of the two approaches can claim empirical superiority over the other in explaining the simple pair of sentences in (1), the distribution of Old English finite verbs is much less constrained than their German or Dutch counterparts. First, finite verbs within subordinate clauses can be followed by syntactically light elements such as single adverbs, particles, participles and pronominal complements as

² Raising of subjects is omitted in (2). *Op* and *e* in (2b) represent an empty operator and its bound variable in relative clause constructions.

exemplified in (4).

- (4) a. Witodlice hi andetton þæt ða aræredan menn næron soðfæste gewitan
Assuredly they confessed that those raised men not-were true witnesses
cristes æristes buton hi wæron *ecelice arærede* (CH I: 30:79-80)
of Christ's resurrection but that they were eternally raised
- b. buton ða lareowas *screadian* symle ða leahtras þurh heora lare *aweg*
(CH II, 5:59-60)
unless those teachers prune always those sins by their teaching away
- c. Swa swa min fæder sende *me* swa sende ic eow (CH I, 14: 46-7)
Just as my father sent me so send I you

In contrast with Old English, German and Dutch exhibit more rigidity on post-verbal elements within subordinate clauses: single adverbs, particles, participles and nominal complements can never occupy a post-verbal position (Koster, 1994).

Second, the position of finite verbs is not restricted to the second position within main clauses: they can appear in the first or the third position as we can observe in (5).³

- (5) a. *Wearð þa stephanes ben fram gode gehyred* (CH I, 3: 110)
Became then Stephen's prayer by God heard
- b. *æfter soðum gecynde þæt wæter is bronsniendlic wæta* (CH II, 15:117-8)
following true nature that water is perishable liquid

Those positions for finite verbs in (5) are hardly expected in terms of the fact that Old English has been grouped as a V-2 language. In particular, all other V-2 languages, both symmetric and asymmetric, prohibit subjects from intervening between sentence-initial elements and finite verbs as exemplified in (6).⁴

- (6) a. I går så børnene filmen (Danish)

³ In addition, finite verbs can appear even in a final position as shown below.

(i) *Þær næfre heora wyrm ne swyft* (CH I, 8:189)
There never their serpent not perishes

⁴ Examples in (6) are from Vikner (1995:42).

- Gestern sahen die Kinder den Film (German)
 Yesterday saw the children the film
- b. *I går børnene så filmen
 *Gestern die Kinder sahen den Film
 Yesterday children saw the film

Whatever structural positions finite verbs may occupy in Old English, their diversity imposes a serious empirical burden on both head-initial and head-final analysis of Old English. In what follows, various empirical and conceptual issues are raised against the traditional CP-V2 analysis of Old English under the head-final hypothesis before the minimalist alternative is made in the next chapter. In 5.2, empirical evidence is suggested to deny the assumption that under the head-final analysis, finite verbs in Old English undergo obligatory V-to-I movement within subordinate clauses. It is argued that a rightward operation of extraposition cannot rescue the CP-V2 analysis since the operation not only lacks syntactic motivations but also leaves unexplained miscellaneous types of post-verbal elements in Old English. In 5.3, crosslinguistic examination invalidates a logical correspondence between verb movement and morphological richness in verbal inflection, which constitutes a core conceptual basis of obligatory verb movement in Old English. In 5.4, empirical and theory-internal evidence is provided indicating that contrary to the prediction of the CP-V2 analysis, finite verbs in Old English do not necessarily reach the highest functional head C in main clauses.

5.2. Verb movement in subordinate clauses of Old English

5.2.1. Adverbs and verb movement

According to the pioneering analysis of Emonds (1976), V-to-I movement can be confirmed in the relative order between finite verbs and sentence adverbs. Given the position of sentence adverbs is fixed between VP and I, finite verbs cannot precede them without overt movement to the head I. Consider the following examples from French and English, both of which belong to indisputable head-initial languages.

- (7) a. (que) Marie *parle souvent* le français
 b. (que) * Marie *souvent parle* le français
- (8) a. (that) *Mary *speaks often* French
 b. (that) Mary *often speaks* French

The adverb *souvent* in (7) should follow the finite verb *parle* while the adverb *often* in (8) should precede the finite verb *speaks*. Thus, the contrast between (7) and (8) can be illuminated by the assumption that only French has verb movement to I across sentence adverbs.

Alleged head-final languages, on the other hand, always place sentence adverbs before finite verbs within subordinate clauses as shown in (9) from Dutch.⁵

- (9) a. dat Jan *waarschijnlijk* dat boek gekocht
 that Jan probably that book bought
 b. *dat Jan gekocht dat boek *waarschijnlijk*

The head-final analysis assumes that the adverb *waarschijnlijk* in (9) occupies the leftmost position of VP. If the adverb is supposed to occupy the rightmost position of VP, it has no chance to precede the finite verb *gekocht* undergoing movement into a clause-final I. Sentence adverbs, therefore, fail to provide any tangible evidence for the presence of V-to-I movement in head-final languages. Finite verbs always move into a clause-final I with a structural position for sentence adverbs fixed around the left boundary of VP.⁶

Following the above head-final assumptions, sentence adverbs in Old English are also expected to precede finite verbs in subordinate clauses. Now consider the distribution of negative adverbs, which have been believed to mark the left boundary of VP in many Germanic languages.⁷ Although *ne* is the most frequent form to indicate

⁵ *Dat boek* in (9a) can be scrambled before the adverb *waarschijnlijk* as the following.

(i) dat Jan dat boek *waarschijnlijk* gekocht

⁶ Vikner (1995:152-157) argues that the presence of V-to-I movement cannot be separately confirmed in asymmetric V-2 languages. Yet, he gives no explanation for the systematic absence of evidence in those languages.

⁷ It is controversial whether negative elements project their own functional projection as Haegeman & Zanuttini (1991) assumes. Even if their proposal is accepted, it has no significant influence on the

negation in Old English, it appears immediately before finite verbs and often coalesces into them in every type of clause (Mitchell, 1985:§1599).⁸ In contrast, *næfre* is more safely classified as an independent negative adverb, in a sense that it can be freely separated from finite verbs.

Contrary to the prediction of the head-final analysis, textual evidence from *Catholic Homilies* reveals conflicting patterns with respect to the distribution of *næfre* within subordinate clauses. Along with the expected order in which *næfre* precedes finite verbs as in (10a), post-verbal *næfre* is attested as in (10b) in seven out of twenty seven cases.⁹

- (10) a. swa þæt hi *næfre* siððan þær gesewen *næron* (CH II, 32:109)
 so that they never afterwards there seen were
 b. se þe ne *bið* hire *næfre* ætbroden (CH II, 29:17)
 one that not is (to) her-dat never taken-away

The frequency of post-verbal *næfre* increases in conjunctive clauses, which are supposed to share the same ordering patterns with subordinate clauses (Kemenade (1987), Pintzuk (1999:224-227)).¹⁰ *Næfre* occupies a post-verbal position in six out of sixteen occurrences as exemplified in (11b).

- (11) a. 7 mine word *næfre* ne *gewitað* (CH I, 40:19)
 and my words never not depart
 b. Ac seo lufu ne *ateorað* *næfre* (CH I, 18:121)

argument made here: a negative adverb becomes a specifier of Neg(ative) projection whose head finite verbs can move through.

⁸ Sometimes *ne* is used independently in a sentence-initial position before subjects. However, those subjects are not restricted to personal pronouns as shown below.

- (i) *ne* nan cristen man þæt *næfre* ne sceal gelyfan (CH I, 20:146)
 not no Christian man that never not will believe

⁹ Mitchell (1985:§1626) reports that *næfre* can appear before nominative subjects within subordinate clauses as shown in (i) below.

- (i) þær ðær *næfre* ær ne becom nan ðing ðes gecyndes (CH II, 22:183-4)
 where never earlier not came-to-pass nothing of this kind

Given that the predicate *becuman* in (i) is unaccusative, it is unlikely that *næfre* is relevant to the V-2 pattern within a subordinate clause and occupy a specifier of CP. Presumably, it keeps a base position around *vP* with an empty pronominal subject in a specifier of TP.

¹⁰ Davis (1997:67-99) also makes a similar suggestion based on his statistics from Ælfric's *Catholic Homilies*.

But the love not ceases never

It is therefore inevitable that the head-final analysis should resort to an idiosyncratic operation of negative adverb movement for post-verbal occurrences of *næfre* as in (10b) and (11b).¹¹ Otherwise, finite verbs, which obligatorily move into a clause-final I, cannot precede *næfre* within subordinate clauses.

VP-adverbs in Old English also show inconsistent distribution within subordinate clauses. In contrast with Dutch and German counterparts, they can occupy both pre-verbal and post-verbal positions as exemplified in (12).

- (12) a. Ne forseah crist his geongan cempaþ þeah ðe he *lichamlice* on heora slege
Not neglected Christ his young warriors though he bodily in their slaughter
andwerd nære (CH I, 5:93-4)
present not-were
- b. Ac ðeahhwæðere godes gelaðung wyrð gyt dæghwomlice þa ylcan wundru
But however God's congregation performs yet daily those same wonders
gastlice þe ða apostoli ða worhton *lichamlice* (CH I, 21:163-4)
spiritually that those apostles then performed bodily

Two possible accounts can be considered for contrastive positions of VP-adverbs in Old English. First, Cinque (1997:28-30) suggests that a range of functional categories can be projected between VP and IP to host adverbial modifiers in their specifiers. Nevertheless, the head-final analysis of Old English fails to explain the presence of post-verbal manner adverbs including *lichamlice* in (12b).¹² Whether an adverbial projection appears to the left or to the right of VP, the finite verb *worhton* cannot reach the clause-final I in (12b).¹³ Second, single adverbs can be merged as an argument of a

¹¹ Notice that all three post-verbal elements in (10b), that is, the pronoun *hire*, the adverb *næfre*, and the past participle *ætbroden* are light elements and would resist extraposition in Dutch and German.

¹² As Haegeman & Guéron (1999:462-3) argues, Cinque's assumption has to introduce VP-movement into a specifier of an adverbial functional projection to explain alternating ordering patterns as the following.

- (i) a. The enemy *completely* destroyed the city.
b. The enemy destroyed the city *completely*.

¹³ Donati & Tomaselli (1997) suggest that Cinque's idea should illuminate an ordering constraint between adverbial complements in German subordinate clauses. Although their analysis aims to argue against

predicate even if they are not affected by the operation of movement (Chomsky, 1995:331). His accounts predict that the adverb *lichamlice* in (12) is merged in different positions. Under the I-final analysis, it is merged as a VP-internal argument in (12a) or right adjoined to VP in (12b).

Notice that V-to-I movement should be ruled out in both options mentioned above. Once finite verbs undergo movement into the clause-final I, they invariably precede VP adverbs whose structural position should be below I. Post-verbal adverbs in Old English, therefore, testify that even under the head-final analysis finite verbs can remain within VP. If the head-final analysis is to maintain obligatory V-to-I movement in subordinate clauses, there remains no other option but to introduce a language-particular rightward operation to extrapose VP adverbs beyond finite verbs in a clause-final position.

5.2.2. Post-verbal elements and extraposition

The head-final analysis of asymmetric V-2 languages assumes that any post-verbal element within subordinate clauses results from a rightward operation of extraposition across a finite verb. With the absence of distinctive morphosyntactic or semantic triggers, extraposition is more likely to be dependent on phonological or stylistic factors such as heaviness or balance. However, those factors still fail to explain extraposition of single adverbs in Old English. The same argument can be raised against post-verbal particles and personal pronouns within subordinate clauses as in (13)=(4b,c).¹⁴

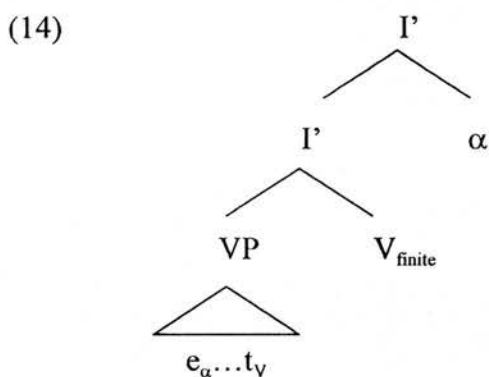
- (13) a. buton ða lareowas screadian symle ða leahtras þurh heora lare *aweg*
 (CH II, 5:59-60)
 unless those teachers prune always those sins by their teaching away
- b. Swa swa min fæder sende *me* swa sende ic eow (CH I, 14: 46-7)
 Just as my father sent me so send I you

Kayne's universal SVO hypothesis, it cannot shed any hint at the presence of post-verbal adverbs in Old English.

¹⁴ Pintzuk (1999:49-63) also suggests that post-verbal particles and pronouns within subordinate clauses provide evidence for the presence of a head-initial I in Old English.

If finite verbs in Old English always undergo V-to-I movement, post-verbal elements in (13) should occupy structural positions higher than a clause-final I within subordinate clauses.

To sustain obligatory verb movement to a clause-final I, two fundamentally different operations can be considered for post-verbal elements within subordinate clauses. First, they are directly merged into I with their copies within VP as shown in (14).



However, the base-adjunction assumption cannot be acceptable under the minimalist framework based on a derivational strategy. Chomsky (1995:248) strongly denies a form of merge that constructs a new syntactic object by selecting an element embedded under some object already formed. He argues that the operation only makes a grammar costly and complicated without any empirical and conceptual grounds.¹⁵

Second, movement can be responsible for post-verbal elements within subordinate clauses, which has been traditionally assumed by proponents of the head-final analysis. They have frequently suggested that extraposition can be a legitimate and well-constrained syntactic operation based on Case requirements.¹⁶ For instance, Case requirements within VP are supposed to force clausal complements to appear in a post-verbal position in alleged head-final languages as in (16) from Old English.

¹⁵ If a type of merge shown in (14) is permitted in a grammar, it seriously undermines basic ideas of generative grammar such as cyclicity and extension in computation.

¹⁶ Some efforts have been made to prove that a syntactic operation of extraposition contributes to semantic interpretation. Baltin (1987) argues that extraposition should play a crucial role to avoid regression problem in the interpretation of so-called Antecedent Contained Deletion Constructions as in *John kissed everyone that Sally did* [_{VP} e]. However, Hornstein (1994) and Fox (2000) suggest the minimalist alternatives of ACD constructions without introducing extraposition.

- (16) ðonne hi gelyfað þæt we godas sind 7 us offriað (CH I, 31:142-3)
 when they believe that we gods are and us offer

Under the head-final analysis of Old English, the clausal complement in (16) is at first merged to the left of the finite verb *gelyfað*. However, it has to move rightward to a non-Case marking position due to its failure to receive Case. The idea comes from Stowell's (1981) Case Resistance Principle, which denies Case-marking for clausal arguments.¹⁷

The above analysis of extraposition, nevertheless, has both empirical and theoretical weaknesses. First of all, it offers no syntactic accounts of post-verbal elements within subordinate clauses except for clausal complements. On the other hand, it leaves the question unanswered why clausal complements cannot undergo extraposition in such head-final languages as Korean, Japanese, and Bengali (Bayer, 1997). Beerman, Leblanc, and Riemsdijk (1997:1-6) summarize two traditional arguments against the assumption that extraposition is a syntactically motivated operation. First, some principles for other syntactic operations are inapplicable to extraposition. The general theory of movement such as the ECP and Subjacency, for instance, cannot illuminate the Right Roof Constraint imposing an upward boundary on extraposition. Second, extraposition affects some syntactic elements which otherwise remain unsusceptible to syntactic operations. Relative clauses are illustrative of the idiosyncrasy of extraposition, since they resist any other operation including topicalization and scrambling.

Extraction out of clausal complements provides another kind of evidence against extraposition. If they are right-adjoined to the clausal-head I (or IP) as a result of extraposition, they occupy a non-theta marked position and therefore should become a barrier against the extraction of every internal element. Old English, however, permits extraction out of clausal complements as in (17).¹⁸

- (17) a. even nu ge habbað gehyred hwilc þes god_i is *Op_i* þe ge wendon þ [e_i] eow
 even now you have heard what this god is that you thought that you
 gehælde (CH I, 31:146-7)

¹⁷ Büring and Hartmann (1997) further refine Stowell's principle into the following generalization.

(i) Finite sentences may not be governed by V or I.

¹⁸ The translation of *sýxa sum* into *with five others* in (17b) is from Whitelock (1967). See also Bately's (1980:188-9) commentary for a more detailed discussion on this sentence.

healed

b. *þæra*, he sæde þæt he syxa sum ofsloge syxtig t, on twam dagum (Orosius, 15/5-6)

of-them he said that he of-six one killed sixty in two days

‘he said that he killed sixty of them with five others in two days’

Even if prosodic features can be relevant to extraposition, they cannot be appropriately defined for the operation. Heaviness can be a candidate in terms of the fact that clausal complements are invariably displaced rightward from their base positions under the head-final analysis. Nevertheless, noun phrases modified by clauses reveal inconsistency concerning extraposition in spite of their heaviness as exemplified in (18).

- (18) a. Se hælend cwæð þæt heofenan rice wære gelic *sumum hiredes ealdre se ðe*
Jesus said that kingdom of heaven was like to some family’s head who
ferde on ærnemerigen and wolde hyrian wyrhtan into his winegearde (CH II,
5: 3-6)
went in dawn and wanted (to) hire workers in his vineyard
- b. Ne us ne gedafenað þæt we *urne lichaman þe gode is gehalgod on þam*
Not us not fitting that we our body that to god is sanctified in the
halwendum fulluhte mid unþæslicum plegan 7 hileaste gescyndan (CH I, 32:
95-7)
sanctuary baptism with inappropriate game and folly put to shame

As mentioned earlier, extraposition of light elements is not explicable at all under any accounts depending on heaviness without introducing a language-specific stipulation such as rightward particle movement.

5.2.3. Modal complexes and Verb Raising

Ordering patterns of a modal complex provide further evidence against the postulation of extraposition in Old English. Following the head-final analysis, a modal complex

should have the base order of $[[O V_{\text{main}}] V_{\text{modal}}]]$. It is furthermore assumed that Verb Raising or Verb Projection Raising, both of which constitute subtypes of extraposition, enables infinitival main verbs and their objects to follow finite modal verbs within subordinate clauses (van Kemenade, 1987). It is suggested that those operations represent a process of clause-union by which complements of infinitival verbs can move into a higher clause beyond their clausal boundary. Given that they are originally motivated for the head-final analysis of verbal complexes in other West Germanic languages such as Dutch and West Flemish, Verb Raising and Verb Projection Raising seem less vulnerable than extraposition of phonologically light elements.

Let us now consider whether the head-final analysis can explain the syntactic distribution of modal complexes in Old English through extraposition of an infinitival clause. If we allow free arrangements between modal verbs, infinitival main verbs, and complements of main verbs, six ordering patterns can be attained in principle within subordinate clauses. Pintzuk (1999:25), however, indicates that only five out of six possible orderings are attested from her corpora of Old English. Complements of infinitival main verbs can intervene between two neighboring verbs only when modal verbs precede infinitival main verbs. The list in (19) summarizes ordering patterns in a modal complex and shows how they are analyzed under the head-final assumption.¹⁹

- (19) a. S $V_{\text{main}} V_{\text{modal}} O$: DP-extraposition
 gif ðu buton geleafan æt us *leornian wylt ða halgan gerynu* ðurh heardum
 if you without belief from us (to) learn want those holy secrets through hard
 swinglum (CH II, 18:81-2)
 chastisement
- b. S O $V_{\text{modal}} V_{\text{main}}$: Verb Raising
 gif we *us selfe nellað fordon* mid unpeawum (CH I, 19:181)
 if we ourselves not-wanted (to) destroy with vices
- c. S $V_{\text{modal}} O V_{\text{main}}$: Verb Projection Raising
 þæt he *wolde manna bearn* on þissere tide *geneosian* (CH I, 22:197-8)
 that he wanted man's offspring in this time (to) visit
- d. S O $V_{\text{main}} V_{\text{modal}}$: Underlying Structure

hwæþer we on reste oððe on wite þone gemenelican dom andbidan sceolon
(CH I, 40:185-6)

whether we in rest or in punishment the common judgement expect should

e. S V_{modal} V_{main} O : Verb Raising & DP-extrapolation

þ fela wytegan 7 ryhtwise men woldon geseon cristes tocyne (CH I, 9:38-9)

that many prophets and wise men wanted (to) see Christ's advent

f. *S V_{main} O V_{modal}

Under the head-final analysis, extrapolation of DP in an infinitival clause is responsible for both orderings in (19a) and (19e) except that (19e) additionally undergoes Verb Raising.²⁰ It is, however, evident that Verb Raising, that is, extrapolation of an infinitival clause, cannot be a prerequisite for extrapolation of a complement of an infinitival verb. In (19a), they move into a clause-final position without resort to Verb Raising. In other words, transparency between modal and infinitival clauses can be guaranteed in Old English without the application of Verb Raising or Verb Projection, which denies the assumption that extrapolation of an infinitival clause can be justified based on clause-union. Moreover, the absence of the ordering pattern (19f) forces the head-final analysis to employ an ad-hoc constraint that only a higher clause should be a landing site for a complement of an infinitival verb. Otherwise, extrapolation to an infinitival I as in (19f) cannot be ruled out under the head-final analysis.²¹

Since Old English exhibits such diverse post-verbal elements within subordinate clauses, it seems unconvincing that they can be contingent on a single process of extrapolation even under the head-final analysis. As in the case of post-verbal light elements, remedies for some problems can often lead to contradictory effects to undermine basic assumptions of the head-final analysis. For instance, the head-final analysis can explain post-verbal elements in terms of merge without adopting a

¹⁹ The list is from Roberts (1997:416).

²⁰ Following the head-final analysis, Old English becomes the only one that permits extrapolation of a complement of an infinitival verb among presumably head-final West Germanic languages.

²¹ Pintzuk (1999:27-28) proposes that infinitival main verbs in a modal complex should have a status of VP rather than IP. She furthermore assumes that the landing site of extrapolation should be limited to IP. Consequently, a complement of an infinitival main verb cannot undergo extrapolation in (19f) since the operation illegitimately targets an infinitival clause, that is, VP. However, she gives no accounts to why infinitival clauses should be VPs and what is responsible for the constraint on the landing site of extrapolation.

controversial operation of extraposition. Then, post-verbal elements are directly merged to the right of VP and frozen in-situ. The solution, however, faces two immediate problems. First, it makes direction of merge inconsistent in Old English: pre-verbal elements are merged to the left while post-verbal elements are to the right.²² Second, the head-final analysis should abandon the obligatoriness of V-to-I movement when post-verbal elements appear within subordinate clauses. It is therefore clear that the head-final analysis fails to provide principled accounts for post-verbal elements within subordinate clause in Old English.

5.2.4. Unaccusative predicates and V-2 in subordinate clauses

The assumption that Old English is an asymmetric V-2 language predicts that nominative subjects should always occupy a pre-verbal position within subordinate clauses. In contrast, they are supposed to appear in a post-verbal position within main clauses whenever a non-subject topic or a *wh*-phrase introduces a clause. The contrast can be confirmed in *wh*-questions as exemplified below.

- (20) a. *Ɔæra assena hlaford axode hwi hi untigdon his assan* (CH I, 14:69)
 The lord of asses asked why they untied his asses
 b. *hwi stande ge þus starigende wið heofenas weard* (CH I, 21:21-2)
 why stand you thus staring towards heaven

Yet, a small group of predicates permits post-verbal nominative arguments within subordinate clauses as shown in (21).²³

- (21) a. *gif him bið oftogen his bigleofa* (CH I, 19:113)
 if (to) him-dat is withdrawn his food-nom
 b. *þæt him ne gelimpe se egeslica cwyde* (CH II, 34:122-3)
 that (to) him-dat not befall the terrifying discourse-nom

²² Right merge of DP complements can cause a serious problem to the head-final hypothesis where internal arguments should be merged to the left of a predicate.

²³ The ordering of dative-nominative-finite verb will be covered in chapter 7.

It should be noticed that in spite of nominative case markings neither of nominative arguments in (21) has the thematic role of agent. The absence of agent argument in passive and impersonal predicates can be reinforced in the examples below.

- (22) a. Nu cwyþ se trahtnere þæt rihtlice *is gecweden* þæt he sæte æfter his upstige
(CH I, 21:227-8)
Now says the interpreter that truly is said that he sat after his ascension
- b. 7 nyste hu hyre were *gelumpen wæs* (CH I, 22:96)
and not-knew how (to) her husband-dat befallen had

In (22a,b), no nominative argument can be found for both *is gecweden* and *gelumpen*.²⁴ While nominative arguments can be completely missing in passive and impersonal predicates, they show fluctuation in their surface positions in some predicates as in (23).²⁵

- (23) a. for ði þonne *he* cymð to ðam miclan dome (CH I, 15:107-8)
therefore when he comes to the great judgement
- b. Men geseoð oft þæt of anum lytlum cyrnele cymð *micel treow*
(CH I, 16:120-1)
Men see often that from one little seed comes large tree

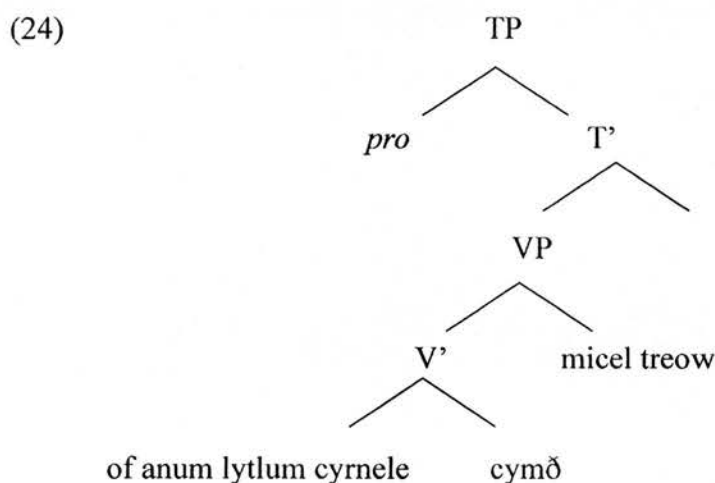
The verb *cuman* follows the nominative argument *he* in (23a), but precedes the nominative argument *micel treow* in (23b). It is however apparent that just as passive and impersonal predicates, the verb *cuman* has no agent thematic role to assign to its arguments. In other words, both nominative arguments in (23) are devoid of the thematic role of agent. Van Kemenade (1997:334-8) therefore defines as unaccusative those predicates that can have post-verbal nominative arguments within embedded clauses.

Now consider structural positions appropriate for post-verbal nominative arguments

²⁴ *Wæs* in (22b) is used to represent perfect rather than passive.

²⁵ Van Kemenade (1997:336) indicates that the same pattern can be confirmed in predicates such as *wesan*, *weorþan*, *hweorfan*, *licgan*, *sittan*, *standan*, and *gan*.

in unaccusative constructions. Following the head-final analysis with obligatory V-to-I (or T) movement, the application of extraposition seems inevitable to place nominative arguments after finite verbs. Alternatively, nominative arguments are supposed to be merged to the right of VP headed by unaccusative predicates. They keep their base position and the expletive *pro* is selected as a formal subject to delete relevant uninterpretable features of T as schematized in (24) for the derivation of (23b).



If *pro* is not listed in the numeration, the nominative argument moves into the specifier of TP and produces the order of subject-PP-finite verb with V-to-T movement as in (23a).

The head-final analysis has yet to answer how Old English allows post-verbal merge of nominative arguments for unaccusative predicates. As far as putative head-final languages except for Old English are concerned, nominative arguments as well as other DPs can never appear in post-verbal positions within subordinate clauses. On the other hand, they can occupy post-verbal positions in some unaccusative constructions of head-initial languages as shown in (25).²⁶

- (25) ...*(at) der ventes mange mennesker* (Danish)
 (that) there are-waited many people

²⁶ Inflectional ending *-s* in *ventes* represents so-called s-passive in Mainland Scandinavian languages. The source of (25) is Allan et. al. (1995:322).

If we consider the fact that Danish has no V-to-T movement in subordinate clauses (Roberts (1993), Vikner (1995)), the post-verbal nominative argument in (25) represents its base position as an internal argument in unaccusative constructions. The analysis agrees with the traditional assumption of head parameters that head-initial languages including Danish merge an internal argument in a post-verbal position whereas head-final languages merge it in a pre-verbal position. Consequently, the head-final hypothesis of Old English should admit exceptions to the direction of merge to explain post-verbal nominative arguments in unaccusative predicates, which inevitably leads to the denial of head parameters. Otherwise, it needs a language-specific operation to extrapose nominative arguments after unaccusative predicates in the clause-final I.²⁷

5.3. Conceptual issues against obligatory V-to-T movement in Old English

It has been generally believed that rich verbal inflections trigger verb movement to T at syntax. Since Roberts (1985), many proposals have been made to determine to what extent verbal paradigms should be inflected to force an overt operation on finite verbs. It is, however, still obscure whether they have made a substantial success or even whether verbal inflections can be a real trigger for overt V-to-T movement. Let us first consider Faroese, which has three distinctive endings in present indicative; *-i* for 1st singular, *-ir* for 2nd/3rd singular, and *-a* for plural. French also has the same number of verbal endings in present indicative; *-e/ -es/ -ent* for 1st and 3rd singular / 2nd singular / 3rd plural, *-ons* for 1st plural, and *-ez* for 2nd plural.²⁸ In spite of the same number of distinctive endings with French, Faroese has no overt movement for finite verbs as shown from the position of the negative adverb *ikke* in (26).²⁹

- (26) a. ...at dreingirnir als ikki *voru* osamdir
 that boys-the at-all not were disagreed
 b. ...* at dreingirnir *voru* als ikki osamdir

²⁷ Van Kemenade (1997) adopts an operation of nominative-finite verb inversion to explain post-verbal nominative arguments within subordinate clauses.

²⁸ Pronunciation rather than spelling is the criterion here to count the number of distinctive endings.

²⁹ Negative adverb *ikki* in (26) marks the boundary of VP (Vikner, 1995:148).

Concerning the contrast between Faroese and French, Vikner (1997:200) suggests the generalization that overt V-to-T movement can happen only if person morphology is found in all tenses.³⁰ Although both Faroese and French have distinctive person endings in present indicative, only the latter can distinguish person in past indicative. French has three different endings (*-ais/ -ait/ -aient* for 1st and 2nd singular / 3rd singular / 3rd plural, *-ons* for 1st plural, and *-ez* for 2nd plural) while Faroese has two endings without person distinction (*-i* for singular and *-u* for plural).

It should be noticed that Faroese shares similar verbal inflectional paradigms with Modern Dutch as listed in (27).³¹

(27)	Faroese	Modern Dutch
	Infinitive hoyra (hear)	horen (hear)
	Present Indicative	
	1 st sing. Eg hoyri	ik hoor
	2 nd sing. tu hoyrir	je hoort
	3 rd sing. hann hoyrir	hij hoort
	1 st plur. vit hoyra	we horen
	2 nd plur. tit hoyra	ju horen
	3 rd plur. tey hoyra	ze horen
	Past Indicative	
	1 st sing. Eg hoyr-d-i	ik hoor-d-e
	2 nd sing. tu hoyr-d-i	je hoor-d-e
	3 rd sing. hann hoyr-d-i	hij hoor-d-e
	1 st plur. vit hoyr-d-u	we hoor-d-en
	2 nd plur. tit hoyr-d-u	ju hoor-d-en
	3 rd plur. tey hoyr-d-u	ze hoor-d-en

³⁰ Vikner (1997) argues that his criterion overcomes the shortcomings of Roberts' (1993) idea depending on distinctive number morphology and Rohrbacher's (1994) definition requiring distinctive 1st and 2nd person morphology at least in one tense. However, he admits that his accounts are not applicable to presumable head-final languages as well as Yiddish in which past tense is exclusively marked by auxiliaries rather than by inflectional endings.

³¹ The table (27) is from Vikner (1997:197).

The above table shows that both languages have the same number of verbal distinctions in every tense and make no person distinction in past indicative. It is therefore predicted that Modern Dutch as well as Faroese should dispense with overt V-to-T movement to contradict the traditional head-final analysis.

The arguments based on verbal inflections seem to explain the contrast between indisputable VO languages such as French and Faroese, but do not work well for presumably head-final languages (Vikner, 1997:191-2). Unlike Modern Dutch, some of those languages exhibit person distinction in both present and past indicative. Modern Frisian has *-e* for 1st/3rd singular and *-est* for 2nd singular in past indicative. Modern German also has *-e* for 1st/3rd singular, *-est* for 2nd singular, *-en* for 1st/3rd plural, and *-et* for 2nd plural in past indicative. However, no fundamental differences are observed on the position of finite verbs between Modern Dutch, Modern German, and Modern Frisian. Finite verbs in those languages regularly occupy a clause-final position within subordinate clauses. In other words, those languages always have string-vacuous V-to-T movement under the head-final hypothesis, irrespective of the number of distinctive endings or the presence of person distinction in every tense.

Old English also proves the fact that inflectional richness cannot justify the presence of V-to-T movement in putative head-final languages. In contrast with Modern Dutch, Old English shows person distinction in both present and past indicative as exemplified by the inflection of the verb *hieran* ('hear') in (28).

(28)	Present	Past
	1 st sing. ic hier-e	1 st sing. ic hier-d-e
	2 nd sing. þu hier-st	2 nd sing. þu hier-d-est
	3 rd sing. he hier-þ	3 rd sing. he hier-d-e
	1 st plur. we hier-aþ	1 st plur. we hier-d-on
	2 nd plur. ye hier-aþ	2 nd plur. ye hier-d-on
	3 rd plur. hi hier-aþ	3 rd plur. hi hier-d-on

The traditional head-final analysis, in fact, should ignore their differences in the richness of verbal morphology to assume that both Old English and Modern Dutch share overt verb movement to a clause-final T.

Even if overt verb movement in Modern Dutch can be the vestige of more complex verbal morphology in an earlier period, the operation of V-to-T movement becomes always string-vacuous in head-final languages. It is however arguable whether such a string-vacuous operation can be sustainable under the minimalist framework in which all syntactic operations should be associated with the requirement of interpretation at the interface levels PF and LF. Let us consider the economy condition (29) proposed by Chomsky (1995:294).³²

(29) α enters the numeration only if it has an effect on output.

Under the earlier version of the minimalist framework, overt verb movement is understood as a feature checking or deletion process triggered by a strong verbal feature in T (Chomsky, 1995:196).³³ The operation deletes the strong feature and produces a visible effect at PF, that is, the rearrangement of the linear position of a verb. If T has a weak verbal feature, the principle of economy demands that the operation should be covert without resort to a costly option of overt movement.

If the condition (29) is applied to obligatory V-to-I movement in putative head-final languages, α becomes a strong verbal feature in T. The condition requires that the insertion of α should contribute to interpretation either at PF or at LF. Yet, the operation to delete α , that is, V-to-T movement, is always string-vacuous and consequently has no effect at PF. It is also irrelevant to semantic interpretation at LF. In other words, string-vacuous V-to-T movement is equivalent to the covert insertion of an overt feature, which is intolerable in terms of the economy condition under the minimalist framework.

5.4. Verb movement in main clauses of Old English

³² Fox (2000:75) proposes a slightly different condition as the following.

(i) Word Order Economy
Overt optional operations cannot be string-vacuous (i.e., they must reverse the relative order of the two—perhaps phonologically overt—expressions

Yet, in his footnote 66, he admits the possibility that the condition restricts certain instances of obligatory movement.

³³ Following Chomsky's (1995) later version of the minimalist framework, a feature responsible for verb movement becomes the [+Affix] feature. However, the change of a feature has no significant effect on the argument against string-vacuous operations.

It has been frequently argued under the CP-V2 analysis that finite verbs in V-2 languages should occupy a higher head than T in main clauses. The analysis presupposes that the V-2 pattern is representative of finite verb movement to the head of CP whose specifier hosts topics or *wh*-phrases. Nominative subjects are also regarded as topics when they appear in a sentence-initial position. It is however controversial what makes finite verbs move into C and how they reach it in main clauses of V-2 languages. In what follows, traditional assumptions on verb movement to C are examined against various positions of finite verbs in Old English main clauses.

5.4.1. V-1 constructions in Old English

Old English has several constructions in which finite verbs occupy a sentence-initial position as shown below.

(30) a. *yes/no* question

Wenst ðu þ he nyste hwæt se blinda wolde se ðe hine gehælan mihte?

(CH I, 10:98-9)

believe you that he not-knows what the blind wanted one who him cure could

b. imperatives

Beoð gemyndige hwæt seo sylfe soðfæstnyss on ðam halgum godspelle behet

(CH I, 3:134-5)

Be mindful what the same truth in the holy gospell promised

c. V1 declaratives

Is þeahwæðere micel smeagung be aunm worde þe crist cwæð (CH I, 33:123)

Is however much reflection about one word that Christ said

d. condition

Gewite þ ungesewenlice ut þonne fylð adune þ gesewenlice (CH I, 10:123-4)

(If) depart the invisible (soul) out then falls down the visible (body)

Each V-1 construction in (30) is related to some semantic force or mood distinguished from a plain declarative. The interpretation of V-1 declarative sentences such as (30c), is, however, somewhat controversial. Mitchell (1985:974-975), for instance, strongly

refutes Bacquet's (1962:588) idea that they convey special emphasis in Old English and suggests that emphatic interpretation in (30c), if any, should result from the adverb *þeahwæðere* rather than the position of the finite verb *is*. In fact, V-1 declaratives are found not only in Old English but also in Icelandic and Yiddish as shown in (31).³⁴

- (31) a. *Hafði Petur þa ekki enn lesið bókina* (Icelandic)
 Had Petur then not yet read book-the
 b. *Hot der yid nekhtn gegeben dem yingl dos dozike bukh* (Yiddish)
 Has the man yesterday given the boy this book

According to Sigurðsson (1990:45), V-1 declaratives are prompted by discourse cohesion involving such factors as presupposition, maintained situation, consequence, explanation, and cause. Now consider the context in which V-1 declarative (5a), repeated here as (32), is employed.

- (32) *stephanus soðlice gebigedum cneowum drihten bæd þ he saulum alysd:*
 Stephan truly (with) bending knees (to) the Lord prayed that he Saul redeem
Wearð þa stephanus ben fram gode gehyrd 7 saulus wearð alysed (CH I, 3:109-111)
 Became then Stephan's prayer by God heard and Saul became redeemed

As Sigurðsson suggests, the sentence beginning with the finite verb *wearð* states the consequence caused by the preceding sentence, that is, Stephan's praying. Even if the finite verb *wearð* in (32) is not certain to play an emphatic role, it carries some discourse function at any rate. If the above assumptions are correct, all V-1 constructions in (30) can receive a unified account that displacement of finite verbs into a sentence-initial position has an independent semantic or functional motivation.

5.4.2. Arguments against obligatory verb movement to C under the CP-V2 analysis

³⁴ Examples in (31) are from Sigurðsson (1990:50) and Viker (1995:88). Sigurðsson (1990:62) indicates that V-1 declaratives are largely obsolete in most Germanic languages except for Icelandic and Yiddish.

In comparison with V-1 constructions, it is harder to determine the trigger for verb movement to the second position. The traditional CP-V2 analysis argues that finite verbs should move not for topicalization but for independent syntactic reasons and supposes that their landing site should be consistent in main clauses irrespective of preceding elements. Many attempts have focused on the nature of C to attract finite verbs even if they all agree that the lexicalization of C contributes to the Case marking of nominative subjects through government in V-2 languages.

It is however evident that nominative Case marking cannot be the sole trigger for verb movement to the functional head C in V-2 languages. First, verb movement is not a universal condition for nominative Case marking in main clauses. Modern English, for instance, can have subjects case marked or checked without overt verb movement. Second, oblique noun phrases and expletive subjects after finite verbs as in (33) weaken the assumption based on nominative Case marking.

- (33) a. Ða þeahhwæðere ofpuhte þam ælmihtigum gode ealles manncynnes yrmða
(CH I, 13:10-11)
Then however caused-regret (to) almighty God-dat all mankind's miseries
- b. gif we teoðiað þas gearlican dagas þonne beoð þær six 7 þrittig
if we tithes those yearly days then are there thirty six
teoðincgdagas (CH I, 11:191-2)
tithing-days

Both *þam ælmihtigum gode* in (33a) and *þær* in (33b) can be hardly expected in post-verbal positions if finite verbs in main clauses move for nominative Case marking.³⁵ The evidence suggested here indicates that the claim is too strong that verb movement is triggered for nominative Case marking through government in V-2 languages. Moreover, the minimalist framework uniquely associates Case/agreement features of a nominative subject to those of the functional head T and therefore denies the role of government for Case relations between nominative subjects and verbs.³⁶

³⁵ Chomsky (1995:287) assumes that expletives have neither Case nor agreement features.

³⁶ Aside from the plausibility of the notion of government, the CP-V2 analysis has to adopt two different strategies for nominative Case marking: spec-head agreement for non V-2 languages and government by C for V-2 languages. Without indisputable evidence, bifurcation of Case marking inevitably violates the

The assumption seems more promising that some feature in C attracts finite verbs in V-2 languages. Possible candidates, inter alia, include the finiteness feature [+F] (Platzack, 1995), dominant functional headness (Hulk & Kemenade, 1995), tense/agreement features (Tomaselli, 1995), and the predication feature [+I] (Rizzi, 1996).³⁷ In spite of differences in details, all the above proposals agree that V-2 languages have verb movement for the lexical realization of those features in C. Non V-2 languages, on the other hand, are assumed to have a different locus or combination for those features. Either I becomes the host for the finiteness feature, dominant functional headness, and tense/agreement features or C lacks the predication feature [+I].

It should be noticed that the arguments for the postulation of the above features are mainly based on nominative Case marking and the distribution of an empty expletive. As mentioned earlier, nominative Case marking cannot support the presence of those features in C, since the notion of government no longer holds for Case/agreement relations under the minimalist framework. Evidence on the distribution of empty expletives in V-2 languages is not so persuasive, either. Consider the asymmetry of expletive elements in Icelandic and German as shown below.³⁸

- (34) a. *Það* hefur komið strákur (**pro* hefur komið strákur)
 There has come a-boy
 b. *Í gær* hefur *pro* komið stákur (**Í gær* hefur *það* komið stákur)
 Yesterday has come a-boy
- (35) a. *Es* ist ein Junge gekommen (**pro* ist ein Junge gekommen)
 There is a boy come
 b. *Gestern* ist *pro* ein Junge gekommen (**Gestern* ist *es* ein Junge gekommen)
 Yesterday is a boy come

The contrast in (34) and (35) demonstrates that only overt expletives (*það* in Icelandic and *es* in German) can appear before finite verbs. If the assumption is to be maintained

methodological economy which requires as few assumptions as possible.

³⁷ See Viker (1995:51-64) for a comprehensive review of those features.

³⁸ Examples are from Schwartz & Vikner (1996:20). Notice that (35b) can receive an alternative analysis under which *ein Junge* occupies a specifier of TP without the introduction of the empty pronominal subject *pro*. The analysis is however undermined by the fact that adverbs such as *heute* 'today' and *nicht*

that the functional head C in the above languages invariably hosts finite verbs and licenses an empty expletive, it needs an extra stipulation that lexical expletives should move into a specifier of CP while empty expletives should remain in a specifier of TP. The distribution of expletives is more complex in Old English, where both lexical and empty expletives can appear after finite verbs in main clauses as in (36)((36a)=(33b)).

- (36) a. gif we teoðiað þas gearlican dagas þonne beoð þær six 7 þrittig
 if we tithe those yearly days then are there thirty six
 teoðincgdagas (CH I, 11:191-2)
 tithing-days
- b. þa wearð *pro* gesewen niwe steorra (CH I, 15:174)
 then became seen new star

The postulation of features is, therefore, still vulnerable as long as they fail to provide a *raison d'être* on empirical and conceptual grounds. Otherwise, they can hardly go beyond descriptive generalizations between V-2 and non V-2 languages.

5.4.3. The minimalist consideration of verb movement to C

In terms of the minimalist framework, obligatory verb movement to C under the CP-V2 analysis implies the presence of some feature in C to be checked or deleted during computation. As seen in 5.4.1, verb movement to C in V-1 constructions is linked with a proper interpretation of a clause. Yet, verb movement in V-2 constructions seems irrelevant to semantic interpretation since clause-initial topics and *wh*-phrases are enough to provide information on the semantic type of a clause. Let us consider interrogatives in Old English.³⁹ If it is assumed that the feature [Q] represents the semantic type of an interrogative clause, it should be selected by the functional head C to derive both *wh*- and *yes/no* question. The feature [Q] in C can be associated with two totally different categories; finite verbs (heads) and *wh*-phrases (maximal projections) as in (37).

³⁹ *'not'* can appear between the finite verb *ist* and the noun phrase *ein Junge*.

³⁹ The argument made here is from Chomsky (1995:289-294).

- (37) a. *Hu is ðære leode cyning gehaten?* (CH II, 9:75)
 How is that people's king called
 b. *hæbbe ge her ænig þincg þe to etenne si?* (CH I, 15:58)
 Have you here any thing that to eat is

In (37a), both finite verb and *wh*-phrase move together, which makes one operation redundant for the checking of [Q] in C.⁴⁰ The same argument holds for topicalization in V-2 languages when both topic and finite verb move into CP. If the assumption is to be maintained that verb movement to C is a separate syntactic operation from *wh*-movement or topicalization, the minimalist framework also needs a morphosyntactic trigger to force overt verb movement.

Given that the discussion in the previous section dismisses Case marking for nominative subjects as trigger for verb movement, agreement relations can be the next candidate. Haegemann (1990) indeed suggests that evidence for a morphosyntactic trigger should be confirmed in some V-2 languages where lexical complementizers show agreement with nominative subjects and finite verbs as in (38).

- (38) *dan-n-k ik kom-(e)n* (West Flemish)
 that-1st sing.-subject clitic I com-1st sing.

Although the complementizer *dan* and the finite verb *kom* in (38) share the inflectional marker *-n* for person and number agreement, agreement in complementizers cannot motivate overt verb movement to C in V-2 languages. Under the minimalist framework, syntactically significant agreement relation is asymmetric and irreflexive: a verb agrees with its argument, not vice versa (Chomsky, 2000). As far as subject-verb agreement in nominative-accusative languages is concerned, the functional head T is assumed to have an uninterpretable feature of agreement while nominative subjects have an interpretable feature of agreement. Raising of a nominative subject to a specifier of TP is enough to check all the features associated with subject-verb agreement. Therefore, the complementizer in (38) has no compelling reason to override T in agreement with the

⁴⁰ In case of embedded *wh*-questions, no verb movement to C is accompanied in Old English as shown in (20b).

subject.⁴¹

In addition to a morphological trigger, the minimalist framework requires verb movement to C to meet economy considerations in computation. The idea has already been encapsulated by the constraint on head movement as in (39).⁴²

(39) The Head Movement Constraint (Travis, 1984)

An X^0 may only move into the Y^0 which properly governs it.

The constraint (39) states that a head cannot skip an intervening head when it moves into a higher position. In terms of the minimalist framework, the constraint represents a general principle of economy to make the distance of movement as short as possible.

It is however unclear whether a lexically empty T prevents verbs within VP from moving into C. *Do*-support in Modern English seems to support the idea that it should be the case as shown in (40).

- (40) a. [_C do_i [_{TP} you [_T t_i [_{VP} trust him]]]]
b. * [_C trust_i [_{TP} you [_T t_i [_{VP} t_i him]]]]

In (40a), movement of *do* to C satisfies economy considerations: *do* is directly merged into the functional head T and no other head intervenes between T and C. In (40b), *do* is not available from the numeration and the nearest head to C becomes the verb *trust* within VP. Yet, verb movement in (40b) is illegitimate even if the verb is assumed to undergo an intermediate operation of V-to-T movement before it reaches the final landing site C. Evidence from (40) indicates that finite verbs can move to the highest head C only if they are already in T through merge or an independent V-to-T movement as far as Modern English is concerned.⁴³

⁴¹ See Zwart (1993:318-322) for an extensive argument on complementizer agreement under the minimalist framework. He considers complementizer agreement as morphological reflex of V-to-C movement rather than its trigger.

⁴² Chomsky (1986) argues that the Head Movement Constraint can be submerged into the Empty Category Principle employing the notion of barrier. Rizzi (1990) also suggests that Relativized Minimality, that is, a unified principle to constrain empty categories, can replace the Head Movement Constraint.

⁴³ Following Chomsky's (1995:146) earlier version of minimalist framework, Radford (1997:219) proposes that *Do*-support should be understood as a last resort to satisfy a strong verbal feature in C.

Mainland Scandinavian languages, however, show a different picture for V-to-C movement. Like Modern English, they lack V-to-T movement, which can be confirmed by the relative order between negative adverbs and finite verbs in subordinate clauses as exemplified below.

- (41) a. ...att hon *inte köpte* en bil igår (Swedish)
 that she not bought a car yesterday
 b. ...at hun *ikke købte* en bil I går (Danish)

In main clauses, on the other hand, they have verb movement to C without introducing an extra element into T as in (42).

- (42) a. [_C köpte_i [_{TP} du t_i [_{VP} t_i en bil igår?]]] (Swedish)
 bought you a car yesterday
 b. [_C købte_i [_{TP} du t_i [_{VP} t_i en bil i går?]]] (Danish)

In contrast with Modern English counterparts which fails to reach C even with an intermediate operation of V-to-T movement, finite verbs in (42) move through an intervening head T on their way to the highest head C. Therefore, V-to-C movement does not necessarily presuppose a blocking effect of a lexically empty T or the independent presence of V-to-T movement.

5.4.4. Verb movement and topicalization in Old English

As discussed in chapter 4, Old English exhibits inconsistency in the position of finite verbs in main clauses. Unlike other V-2 languages, it sometimes permits both topic and subject to precede finite verbs in main clauses, which seems to deny the obligatoriness of verb movement for topicalization. Concerning the violation of the V-2 constraint in topicalization, traditional analyses have insisted that cliticization should be responsible for non V-2 patterns in Old English (Kemenade (1987), Pintzuk (1999), Kiparsky (1995), inter alia) as mentioned in chapter 4. They predict that only clitic elements such as personal pronouns and a small group of adverbs can intervene between topics and

finite verbs in main clauses. Contrary to their prediction, the position of pronominal subjects is not fixed as shown in (43).

- (43) a. For ðyssere twynunge nolde *we* hreppan his ðrowunge (CH II, 34:15-6)
Because of this ambiguity no-wanted we touch his suffering
b. Sumne dæl þises andgites *we* trahtnodon hwene ær (CH II, 22:165-6)
Some part of this meaning we interpreted somewhat previously

The pronominal subject *we* follows the finite verb *nolde* in (43a) while it precedes the finite verb *trahtnodon* in (43b). The same fluctuation can be found when full DP subjects appear in main clauses with a separate topic as exemplified below.

- (44) a. Dis tacn worhte *se hælend* ærest on his menniscnysse (CH II, 4:22-3)
this token made the Savior first in his incarnation
b. þa lufe *ure scyppend* us gewutelode þurh hine sylfne (CH I, 35:144-5)
the love our Creator us showed through him self

The ordering pattern of (43b) and (44b) corresponds to that of topicalization in Modern English: neither involves subject-verb inversion.

Evidence from the above examples demonstrates that two ordering patterns co-exist for topicalization in Old English: the one with subject-verb inversion and the other without it. A possible explanation for the co-existence of those ordering patterns is to assume that non-subject elements undergo movement into different functional categories above TP depending on their nature. The assumption is based on the CP-layer hypothesis under which CP is decomposed into several different functional categories above TP.⁴⁴ Elements inducing subject-verb inversion are claimed to target a structurally higher functional category than the ones that accompany no subject-verb inversion. However, no significant justification can be found to place sentence-initial

⁴⁴ Puskas (1997) proposes a three-layer CP: TopP (for topics) and FocP (for operators) below CP. Culicover (1991), on the other hand, postulates a two-layer system: the functional category PolP below CP, which hosts operators such as *wh*-phrase, *Neg*, and focus. However, they share the basic idea that only operators can trigger subject-aux inversion and should occupy different structural positions from those of non-operators.

elements in (43) and (44) into different functional categories. Except for ordering patterns, those elements cannot be distinguished, since we have no intuitive access to Old English data and consequently cannot tell whether there exist any functional differences between them.⁴⁵ If the CP-layer hypothesis is not acceptable for the analysis of ordering patterns in (43) and (44), it is plausible to assume that all the sentence-initial elements in (43) and (44) undergo topicalization into a specifier of CP. The assumption implies that the discrepancy in the final landing sites of finite verbs produces the variation in the ordering patterns of topic-initial sentences. Finite verbs reach the highest head C in (43a) and (44a) while their movement is restricted to a lower functional head in (43b) and (44b).

Optionality of verb movement to C in Old English main clauses is also confirmed in cases where finite verbs occupy a clause-final position as shown below.

- (45) Soðlice min lareow crist sumne cniht ðe gewilnode þæe ecan lifes þisum
truly my teacher Christ some youth who wished the eternal life (with) these
wordum *lærde* (CH I, 4:58-9)
words taught

Against the traditional assumption that finite verbs in Old English as well as other V-2 languages invariably move to C in main clauses, the finite verb *lærde* in (45) cannot be said to appear in C even under the head-final analysis. All in all, the empirical evidence suggested above demonstrates that a structural position for finite verbs in Old English cannot be restricted to the functional head C in contradiction to the CP-V2 analysis.

5.5. Conclusion

The traditional CP-V2 analysis has assumed that Old English is an asymmetric V-2 language with a head-final phrase structure of VP and TP. Finite verbs are therefore supposed to undergo obligatory movement into a clause-final T before they reach the

⁴⁵ Culicover (1991:33-7) suggests that topic and focus in Modern English can be distinguished even if both of them induce no subject-aux inversion. In contrast with topic, focus shows the property of an operator in terms of extraction and Weak Crossover effects. Unfortunately, no prosodic or orthographic evidence is available in Old English to distinguish between topics and foci.

highest head C in main clauses. The traditional analysis, however, faces both empirical and conceptual problems in explaining the distribution of finite verbs within subordinate clauses of Old English. First, the presence of post-verbal elements makes it necessary to introduce a rightward operation of extraposition, which does not appear to be constrained by universal syntactic principles. Second, a rightward operation of extraposition fails to provide principled and unified accounts to cover a wide range of post-verbal elements in Old English subordinate clauses such as single adverbs, particles, infinitival clauses, and DPs (including pronouns and nominative arguments). Without extraposition, the head-final analysis of Old English has to give up either uniformity in the direction of merge or obligatoriness of V-to-T movement. Third, obligatory V-to-T movement in Old English lacks conceptual as well as empirical justification. Crosslinguistic evidence reveals that morphological richness in verbal inflection cannot entail overt verb movement. In addition, V-to-T movement is always string-vacuous under the head-final analysis and, consequently, has no effect at the interface, in violation of the principle of economy.

The CP-V2 analysis cannot illuminate the distribution of finite verbs in Old English main clauses either. First, it fails to establish a proper trigger for obligatory verb movement to C. The operation is largely justified by nominative case marking through government, which becomes untenable under the minimalist framework. Second, the assumption cannot be validated that the V-2 constraint should be understood as a syntactic requirement on a specific structural position for finite verbs. The assumption presupposes that finite verbs always reach the highest head C in main clauses of V-2 languages. An unconvincing stipulation is consequently required that sentence-initial subjects and expletive elements should be topics and undergo string-vacuous topicalization into a specifier of CP. Third, as far as the V-2 constraint is concerned, Old English exhibits more inconsistency than other putative V-2 languages. Finite verbs sometimes resist inversion when a sentence begins with a non-subject topic. They can appear even in a clause-final position. In sum, the argument in this chapter indicates that verb movement in Old English cannot receive a proper explanation under the CP-V2 analysis based on the head-final hypothesis.

Chapter 6. The Minimalist Analysis of Head Movement in Old English

6.1. Introduction

As mentioned in the previous chapter, most problems in the asymmetric CP-V2 analysis of Old English are rooted in the assumption that both VP and TP in Old English have a head-final structure. Given that the analysis disallows optionality in verb movement, the head-final assumption necessitates obligatory verb movement to a clause-final T and a syntactically unmotivated operation of extraposition within subordinate clauses. It is furthermore predicted that finite verbs in a clause-final I always undergo movement to the highest head C unless it is filled by a complementizer, which conflicts with the diverse structural positions in which finite verbs appear in Old English main clauses.

Once we adopt the head-initial hypothesis for Old English, various types of post-verbal elements within subordinate clauses can receive straightforward accounts without resort to extraposition. The head-initial hypothesis has yet to explain the seemingly inconsistent distribution of finite verbs in Old English including optionality in V-to-T and V-to-C movement. If the above issue is addressed in terms of the minimalist framework, some uninterpretable feature is required to force movement of verbs and, at the same time, its presence should be optional in a derivation. It is of course presupposed that verb movement represents not an isolated type of head movement but a syntactic operation motivated for deletion of uninterpretable features and constrained by economy considerations. In what follows, it will be examined how the minimalist framework under the head-initial hypothesis interprets verb movement in Old English and overcomes both empirical and conceptual problems raised against the CP-V2 analysis under the head-final hypothesis.

In 6.2, the minimalist analysis of V-to-T movement in Old English is suggested based on the relative order between adverbs and finite verbs. It is assumed that the [+Affix] feature requiring verbal affixation forces V-to-T movement but that its presence in T is optional in Old English. In 6.3, it is argued that the minimalist analysis of V-to-T movement equally holds for verb-particle constructions and verbal complexes in Old English and provides more principled accounts for them than the CP-V2 analysis

under the head-final hypothesis. In 6.4, subordinate V-2 constructions, which raise serious empirical and conceptual problems for the asymmetric CP-V2 analysis of Old English, are analyzed by the minimalist accounts grounded on the quirky argument assumption of oblique subjects. In 6.5, I argue against assumption is denied that finite verbs in Old English main clauses invariably move into C to meet a syntactic constraint of V-2. It is alternatively suggested that the minimalist accounts of head movement should also illuminate verb movement to C in Old English. Finite verbs are assumed to undergo movement into C only when the operation is forced by the [+Affix] feature whose presence in C is at best optional in Old English.

6.2. V-to-T movement in Old English

6.2.1. Distribution of adverbs and verb movement

Following the argument made in chapter 5, the head-final analysis of Old English should attribute post-verbal adverbs within subordinate clauses to right-merge or an operation to extrapose them after finite verbs. Both operations, however, suffer from a lack of empirical and conceptual justification as discussed in 5.2. The head-initial analysis, on the other hand, depends on leftward verb movement to explain the relative position of adverbs to verbs. Let us consider again the distribution of the negative adverb *næfre* within subordinate clauses as shown below.

- (1) a. swa þæt hi *næfre* siððan þær gesewen *næron* (CH II, 32:109)
 so that they never afterwards there seen were
 b. se þe ne *bið* hire *næfre* ætbroden (CH II, 29:17)
 one that not is to-her never taken-away

The negative adverb *næfre* precedes the finite verb *næron* in (1a) but follows the finite verb *bið* in (1b). The head-initial analysis ascribes the above contrast to the asymmetric application of verb movement to T as schematized below.

- (2) a. swa þæt [_{TP} hi_i *næfre* siððan [_{VP} þær gesewen_k *næron* t_k t_i]]

so that they never afterwards there seen were

- b. se þe [_{TP} e_i ne *bið*_k hire_j *næfre* [_{VP} t_k t_j ætbroden t_i]]
one that not is to-her never taken-away

In (2a), the finite verb *næron* remains within VP and consequently follows the negative adverb *næfre* whose position is fixed above VP. In (2b), V-to-T movement makes the finite verb *bið* precede the negative adverb *næfre*. Therefore, ordering patterns in (2) testify that Old English has V-to-T movement optionally under the head-initial analysis.

VP adverbs in Old English also have both pre- and post-verbal positions within subordinate clauses as exemplified in (3).

- (3) a. ...þeah ðe he *lichamlice* on heora slege andwerd nære (CH I, 5:93-4)
...though he bodily in their slaughter present not-were
b. ... þe ða apostoli ða worhton *lichamlice* (CH I, 21:163-4)
that those apostles performed bodily

Just like the negative adverb *næfre*, the manner adverb *lichamlice* either precedes a finite verb as in (3a) or follows it as in (3b). Yet, the post-verbal adverb *lichamlice* in (3b) cannot prove the presence of overt verb movement to T under the head-initial analysis. Head-initial languages can have post-verbal manner adverbs even if they have no independent verb movement as shown below.

- (4) selvom du kan klare det *hurtigt* (Danish from Allan et. al. (1995:500))
even though you can do it quickly

Following Chomsky's (1995:331) analysis mentioned in 5.2, the post-verbal adverb in (3b) represents a position of its merge as shown in (5).¹

- (5) [_{CP} Op_i þe [_{TP} ða apostoli ða [_{VP} e_i worhton *lichamlice*]]]

¹ V-to-v movement and object shift are disregarded here, since they make no effect on the relative ordering between the finite verb and the adverb in (5).

In (5), the adverb *lichamlice* appears in an internal argument position and provides no evidence for verb movement to T.² A similar situation arises under Cinque's (1993:30) proposal that a distinct projection should be arranged for each adverb. Then, a derivation for (3b) has the following structure for VP.

(6) [_{VP} *lichamlice* [_{V'} v [_{VP} worhton e]]]

In (6), the finite verb can precede the adverb *lichamlice* without movement to T as long as a lower VP moves to the specifier of a higher VP presumably to establish a predication relation between VP and adverbs.

VP adverbs provide convincing evidence of V-to-T movement for the head-initial analysis of Old English when they intervene between finite verbs and their complements as shown below.

(7) þ hi bodedon *freolice* godes naman reðum cynegum 7 wælraewum
(CH I, 16:71-2)
that they proclaimed freely God's name (to) savage and cruel kings

The head-initial analysis assumes that the finite verb *bodedon* in (7) undergoes overt movement to T across the manner adverb *freolice*. VP-raising cannot explain the position of the finite verb here, given that complements of the finite verb are left behind the adverb. The ordering pattern of (7) is not permitted in languages lacking overt V-to-T movement as shown below.

(8) *selvom du ikke klarede *hurtigt* det (Danish)
even-though you not did quickly it

In (8), intervention of the adverb cannot be tolerated between the finite verb and its complement.³ Therefore, post-verbal adverbs within subordinate clauses not only

² If the adverb *ða* in (5) is assumed to mark the boundary of VP, the finite verb *worhton* should remain within VP.

³ Early generative grammars call this constraint the Adjacency Condition for Case assignment, which requires that complements should be adjacent to their Case-assigning verbs. Chomsky (1995:332)

support the head-initial analysis but also to testify the presence of optional verb movement to T in Old English.

6.2.2. The minimalist interpretation of V-to-T movement

The earlier minimalist framework (Chomsky, MP) assumes that a strong verbal feature in T (AgrS) triggers overt verb movement to T.⁴ The assumption is, however, unsustainable under recent versions of the minimalist framework in which overt checking or deletion is invariably correlated to uninterpretable features violating legibility conditions at the interface levels (Chomsky, MI:94). In terms of interpretability, the verbal feature, which denotes a substantive category V, is classified with the interpretable features. Even if it is selected by the functional head T, it cannot force overt verb movement in consideration of its interpretable nature. The same argument holds for the verbal feature inherent in V. It also has no reason to undergo an overt operation of movement to T at the expense of economy.

Under the minimalist analysis (Chomsky, CT:278), the functional head T is assumed to have two kinds of uninterpretable features; the EPP feature and agreement features with nominative subjects. If those uninterpretable features remain undeleted at LF, they fail to receive a proper interpretation and therefore make a derivation crash due to the violation of the legibility condition. However, raising of nominative subjects to a specifier of TP can check and delete all the relevant uninterpretable features. Nominative subjects and their inherent agreement features delete the EPP and agreement features of T while the inherent Case feature of T deletes the uninterpretable Case feature of nominative subjects. It should be noticed that lexicalization of T through verb movement is not a prerequisite for deletion of uninterpretable features in T and nominative subjects as confirmed in languages without overt V-to-T movement.

If V-to-T movement is irrelevant to Case or agreement relations, it needs other

interprets the condition as locality for the Case checking. If an adverb is merged into a higher position than a complement, it can block case checking of the complement against a functional head above VP.

⁴ Henceforth, different labels will be used to distinguish Chomsky's ideas on the minimalist framework. MP will refer to the third chapter of Chomsky (1995), which is titled *A Minimalist Framework for Linguistic Theory*. CT will designate his fourth chapter named *Categories and Transformation*. MI will be termed for Chomsky (2000) entitled *Minimalist Inquiries: Framework*.

motivations to become a legitimate syntactic operation within the minimalist framework. Chomsky (MP:185-6) suggests that overt verb movement should be associated with the extension of a checking domain for further operations. His suggestion accounts for Object Shift in Icelandic as shown in (9).⁵

- (9) a. Jón las_i bækurnar_j ekki [_{VP} t_i t_j]
 John read the-books not
 b. *Jón hefur bækurnar_i ekki [_{VP} lesið t_i]
 John have the-books not read

The contrast in (9) is often called Holmberg's generalization, which requires that Object Shift should coincide with overt verb movement. If the generalization has a universal property to constrain syntactic operations, the head-initial analysis of Old English should assume that finite verbs move out of VP within subordinate clauses whenever their objects precede them as in (10).⁶

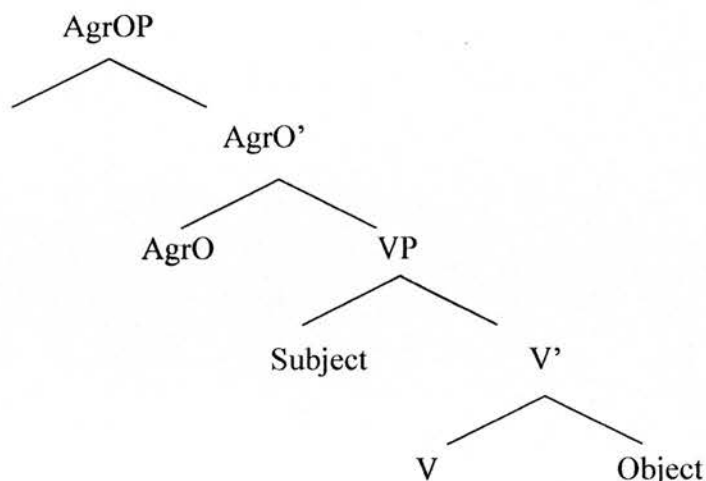
- (10) þa þa he ðas gerynu tocneowe (CH II, 13:190)
 when he those secrets knew

Let us now consider how Chomsky (1995, MP) explains verb movement in Holmberg's generalization. Following the clause structure suggested in Chomsky's MP, TP is split into separate functional categories AgrSP and AgrOP depending on agreement features. When AgrO is projected above VP, a derivation will have the structure (11) in the next page. Both subject and object are merged within VP, but the principle of economy prevents the object from moving into a specifier of AgrOP. Its movement across the subject violates the Minimal Link Condition defined in (12) (Chomsky, CT:311).

⁵ Examples in (9) are from Collins & Thráinsson (1993). Following Holmberg (1986), Object Shift is also found in Swedish but its application is restricted to pronominal objects in main clauses.

⁶ Roberts (1997:415), in fact, proposes that finite verbs in Old English should move at least to the head AgrO within embedded clauses.

(11)



(12) $H(K)$ attracts α only if there is no β , β closer to $H(K)$ than α , such that $H(K)$ attracts β .

The notion of closeness in (12) is understood in terms of c-command and equidistance. However, when the verb moves into the head AgrO and forms a chain (V, t) in (11), the minimal domain of the chain headed by the verb comes to include [Spec, AgrO], [Spec, V], and the object. In other words, both subject ([Spec, V]) and object are virtually within the same distance from the head AgrO. If the object (α) and the subject (β) are equidistant from the chain (V, t) headed V in AgrO (γ), the subject (β) cannot prevent the object (α) from being attracted by the head AgrO (γ) as is defined below (Chomsky, CT:299).

(13) β does not prevent $H(K)$ from attracting α if β is in the minimal domain of CH, where CH is the chain headed by γ , and γ is adjoined to $H(K)$.

When the subject in (11) moves into a specifier of AgrSP, overt verb movement is also required to the head AgrS. Otherwise, movement of the subject fails to obey the Minimal Link Condition due to the presence of the object in a specifier of AgrOP, which is closer to the head AgrS than the subject within VP.

The above argument, however, holds only if AgrOP enjoys the status of an

independent functional projection. Chomsky (1995, CT) argues against the postulation of AgrPs within the minimalist framework on the grounds that they have no linguistic significance except for providing a locus for uninterpretable features. He instead suggests that ν P, which is primarily based on the binary branching hypothesis and Larson's (1988) shell structure, should replace AgrOP. The introduction of ν P-shell modifies the clause structure (11) into the following.

(14) $[_{\nu P} \text{ subject } [_{\nu} V_{i+\nu} [_{\nu P} t_i \text{ object }]]]$

In (14), a light verb ν heads the functional projection ν P and selects an external argument as specifier to meet theta structure requirements. Notice that movement of V to a light verb is not restricted to languages allowing object-shift but universal across languages due to the inherent affixal property of a light verb.⁷

Under the multiple-specifier hypothesis, Object Shift represents object movement into a specifier of maximal projection ν P when the head ν has the EPP features. Movement of the object in (14) observes the Minimal Link Condition, since verb movement to ν forms a chain to make both subject and object equidistant from the head ν . Once the object undergoes Object Shift, both object and subject become the specifiers of the same projection ν P as the following.

(15) $[_{\nu P} \text{ object}_j [_{\nu P} \text{ subject } [_{\nu} V_{i+\nu} [_{\nu P} t_i t_j]]]]$

When T is merged above ν P in (15), it has both specifiers within the same minimal domain without verb movement out of ν P. In (15), no c-command relation can be established between the subject and the object, which makes neither of them closer to T. The next step is subject movement to a specifier of TP to delete relevant uninterpretable features in T. In contrast, the object should be frozen in a specifier ν P with its all uninterpretable features deleted by the operation of Object Shift. The introduction of ν P and the multiple-specifier hypothesis, therefore, deprives overt verb movement of its

⁷ It is debatable whether ν P-shell appears above all verb projections. Chomsky (1995, CT) originally suggests that it should be selected only for transitive verbs. Collins (1997:15), however, argues that ν P-shell is merged above all predicates including unaccusative as well as transitive verbs. Collins' idea will be pursued later in this chapter.

contribution to the extension of minimal domain. Whenever the functional head ν is merged with the EPP features, Object Shift can be forced irrespective of verb movement to T. Following the argument made here, Holmberg's generalization represents nothing but an idiosyncratic aspect of Object Shift in some Scandinavian languages rather than a general principle in universal grammar.⁸

If the earlier assumption is no longer acceptable that a strong verbal feature in T (AgrS) triggers overt verb movement, the light verb ν can provide a clue for an alternative. As mentioned earlier, V always moves to the light verb ν to meet the requirement for verbal affixation by the light verb. If the operation is expressed in terms of a morphological feature, the light verb ν is supposed to have the feature [+Affix] attracting a verbal affix. The feature [+Affix] is obviously uninterpretable due to the lack of interpretation at LF. V itself moves for theta-grid requirement since its external argument is selected as specifier of the light verb ν . Now suppose that T forces overt verb movement whenever it has the [+Affix] feature (Chomsky, CT:269).⁹ V, on the other hand, has a tense affix to be checked or deleted by T. In contrast with the ubiquitous presence of [+Affix] in the light verb ν , selection of the [+Affix] feature by T varies across languages. In languages where overt verb movement is obligatory, T is always merged into a derivation with the feature [+Affix] attracting a finite verb. In languages without V-to-T movement, T is supposed to lack the feature and accordingly have no reason to force the operation.

The question has yet to be answered whether verb movement to T is fully compatible with all economy considerations and how it allows optionality in Old English. With regard to the first question, consider a computational principle of Last Resort below (Chomsky, CT:280).

- (16) H(K) attracts α only if α enters into a checking relation with a sublabel of K, where a sublabel K is a feature of the zero-level projection $H(K)^{0_{\max}}$.

According to (16), T can attract V if some uninterpretable feature in V can be in a

⁸ Holmberg (1997,1999) himself argues that Holmberg's generalization amounts to a phonological constraint based on information structure.

⁹ Chomsky's original notation [- ν] ("take verbal affix") is generalized as [+Affix] here.

checking relation with a matching feature in T. If the feature in V is interpretable, it has no reason to move since it receives a proper interpretation at LF without a complex operation of movement. In analogy with DP movement, suppose that finite verbs have an uninterpretable tense feature, which can be checked and deleted by movement into the head T. However, the principle (16) cannot explain why the operation should involve movement of a whole V rather than just a set of relevant features. It needs an additional condition to justify pied-piping as stated below (Chomsky, CT:262).

(17) F carries along just enough material for convergence.

According to the constraint stated in (17), convergence at PF is responsible for pied-piping of V to delete the [+Affix] feature of T and the tense feature of V.

The Last Resort Principle in (16) still has the dilemma that uninterpretable features in α should depend on movement even when the target for α has no uninterpretable feature to force an overt operation. For instance, even in languages with no overt verb movement, a set of formal features in V should move to T at LF for deletion of its uninterpretable features.¹⁰ Feature-movement, however, leads to unwanted complexity in a grammar. Movement, which represents a complicated and costly operation, should be introduced for both overt and covert feature checking. It furthermore undermines the derivational perspective of the minimalist framework. In case of feature movement of V, computation should look back into T after it already finishes merge of all functional heads and deletion of their uninterpretable features at (overt) syntax.

To overcome the aforementioned problems, Chomsky (2000:MI) modifies his ideas on feature checking and deletion. Instead of attraction by a target, he postulates an operation of Agree, which deletes uninterpretable features under matching between a probe (uninterpretable feature in a target) and an active local goal as summarized below (Chomsky, MI:122).

- (17) a. Matching is feature identity.
b. Domain of a probe is its sister (c-command domain).

¹⁰ Chomsky (1995, CT:265) supposes that feature movement automatically carries along a set of formal features of a lexical item.

c. Locality reduces to “closest c-command”.

When T is merged into a derivation with the uninterpretable [+Affix] feature, a probe in T (the uninterpretable feature [+Affix]) seeks a goal for its deletion. Given that a goal is active as long as it has uninterpretable features, V adjoined to the light verb *v* can be an active local goal to a probe in T. It is the closest c-commanded head to T and keeps the uninterpretable tense feature intact. Verb movement to T is motivated to delete uninterpretable features in the probe ([+Affix]) as well as in the goal (tense feature in V). If T is merged without the [+Affix] feature, no probe exists in T to force a costly operation of movement on a verb.¹¹ In terms of economy considerations, verb movement is unnecessary and an uninterpretable feature in V is deleted through Agree against c-commanding T. The postulation of feature matching, therefore, avoids covert feature movement and subsequent conceptual problems. Following the above assumption of feature matching, the inconsistency of V-to-T movement in Old English is associated with the optional presence of the [+Affix] feature in T. Only when T is merged into a derivation with the [+Affix] feature, it forces overt verb movement for deletion of uninterpretable features in both T and V. Otherwise, a simple operation of Agree rather than verb movement should delete the uninterpretable tense feature in V to satisfy economy considerations in computation.¹²

¹¹ Chomsky (2000, MI), in fact, excludes head-movement from feature matching operations, arguing that head movement cannot meet the presupposition of feature matching that both probe and goal should have an uninterpretable feature. However, his assumption cannot work well for A'- as well as head movement. For instance, interrogatives in Old English are expressed by XP movement (*wh*-question) or head movement (*yes/no* question). Concerning *wh*-movement, C and *wh*-phrases are supposed to share the [Q] feature. Yet, it is assumed that [Q] in C is uninterpretable while [Q] in *wh*-phrases is interpretable. When C has the EPP features as well as [Q], *wh*-phrases, which keep the uninterpretable [+*wh*] feature, are forced to undergo movement into a specifier of CP. The operation deletes all the relevant uninterpretable features: the EPP/[Q] feature in C and the [+*wh*] feature in *wh*-phrases. Chomsky's assumption that [Q] in C is uninterpretable, however, causes a problem in explaining *yes/no* question. If the feature is to be deleted by verb movement, an odd stipulation is required that finite verbs should carry an interpretable feature of [Q] from the numeration. Otherwise, the nature of the [Q] feature in C should vary depending on the type of interrogatives (interpretable for *yes/no* question and uninterpretable for *wh*-question). Without the assumption that [Q] in C is uninterpretable, *wh*-questions can be fully explicable. If C has the EPP features associated with an interpretable [Q] feature, *wh*-phrases are forced to move for deletion of uninterpretable features (the EPP in C and [+*wh*] in themselves). If C carries only [Q] without the EPP feature, *wh*-phrases can still delete their [+*wh*] feature through Agree against [Q] in C as seen in *wh*-in-situ questions. The argument raised here indicates that the presence of an uninterpretable feature other than the EPP feature or the [+Affix] feature is not a prerequisite to force an operation of movement irrelevant to Case/agreement relations.

¹² A more fundamental question is set aside why the insertion of [+Affix] should be optional in Old English T. The answer is presumably associated with language-external factors. The double base

6.3. Applications of the minimalist analysis of head movement

6.3.1. Verb-particle constructions and particle movement

Under the head-initial analysis of Old English, a post-verbal element within subordinate clauses is given a straightforward explanation. It appears in a post-verbal position as long as a verb moves into a functional projection higher than the one that it occupies. On the other hand, a pre-verbal element is supposed to result from leftward movement across finite verbs. For instance, the optional application of Object Shift can produce the contrast in the relative position of a pronominal object to a finite verb as exemplified below.¹³

- (18) a. gif hi awar *us* geæbiligdon (CH II, 7:42)
if they in any way us exasperated
b. Swa swa min fæder sende *me* (CH I, 14: 46-7)
Just as my father sent me

In contrast with complements subject to XP movement of Object Shift, particles are susceptible to head movement, which determines their relative position to a finite verb. Kayne (1994:76-77) indeed suggests that a complex of particle-V should be derived from the incorporation of a particle to V as schematized below.¹⁴

- (19) [_v particle_i+V [_{sc} DP t_i]]

hypothesis (Pintzuk (1999), Kroch & Taylor (1997)) can be considered as an alternative to explain optionality in verb movement. In spite of its descriptive adequacy, it is still arguable whether it can be a proper explanation for a synchronic grammar. First, the hypothesis needs empirical evidence from languages other than Old English to testify the co-existence of head-initial and head-final grammar. Second, it should explain how a language learner in Old English acquires both grammars, which can cause serious confusion in language acquisition and use. See Traugott & Smith (1993) and Lightfoot (1995,1997) for arguments against the learnability of diglossia although their primary aim lies in the denial of a head-initial grammar in Old English.

¹³ In addition to a syntactic motivation, the information structure of a clause can be involved here to displace a syntactic object bearing old information out of VP (Diesing, 1992). Pronominal objects, which inherently carry old information, are most likely to be influenced, but they resist the operation when they receive special emphasis. A more extensive discussion will be made in the following chapter.

¹⁴ See Roberts (1991) for a detailed discussion of excorporation. Kayne's idea originally comes from Koopman's (1993) analysis on Dutch particle constructions. Johnson (1991:600) also makes a similar

If DP in (19) undergoes movement out of small clause, the derivation will have the order of DP–particle–verb as in (20).

(20) $[_{VP} DP_j [_V \text{particle}_i + V [_{SC} t_j t_i]]]$

Kayne's analysis hypothesizes that the verb in (20) can precede the particle by the operation to excorporate the former from the complex of particle–V. Yet, excorporation is not easy to justify in the minimalist framework. V first allows the adjunction of a particle but afterwards jettisons it for movement to a higher head. In Old English, excorporation in particle constructions should be arbitrary at best since a complex of particle–V can appear in the second position within main clauses as in (21).

(21) of ðam *nyper astah* se ælmihtiga godes sunu (CH I, 8:16-7)
from it down descended the almighty God's son

Although it is arguable whether the complex *nyper astah* constitutes a single lexical item, the finite verb *astah* in (21) should be exempted from excorporation and accompanied by the particle *nyper*.¹⁵

As an alternative to the excorporation-based analysis, let us assume that the accounts made for V-to-T movement also holds for the distribution of particles in Old English. Then, particles are supposed to undergo movement into V only if V requires particle affixation. Incorporation of a particle to V represents a morphological procedure of reanalysis to form a single head of particle–V. Once a particle is adjoined to V, it cannot be split again as seen in (21). The analysis proposed here no longer depends on excorporation and the lexicon to explain particle constructions.¹⁶ Moreover, it can

suggestion where a complex is represented as V-particle rather than particle-V.

¹⁵ As far as *Catholic Homilies* is concerned, no example is attested where *nyper* and *astigan* is split or *nyper* follows *astigan*. Yet, the issue of how to decide the status of a particle-verb complex is controversial in Old English. Pintzuk's (1999) criterion that a particle-verb complex counts as a single word when it is listed in Toller's (1954) *An Anglo-Saxon Dictionary* is not convincing. Also notice that the transcription of particle-verb complexes such as *nyper astigan* varies in *Catholic Homilies* depending on edition: hyphenation in Thorpe (1884) and separation with no marking in Cleomes (1997) and Godden (1979).

¹⁶ Excorporation, of course, can be legitimate if it is required by the principle of economy. Boskovic (1997:170), for instance, suggests that economy considerations can justify excorporation in the following

explain various ordering patterns in particle constructions where a particle is separated from a verb as exemplified in (22).

- (22) a. Ond þonne of þæm sæ þær he *up* of þæm sonde *scyt* he is east
 And then from the sea where it up from the sand shoots it is to the east
 irnende þurh Æthiopica westenne... (Orosius, 11:10)
 running through Ethiopian wilderness
- b. buton ða lareowas *screadian* symle ða leahtras þurh heora lare *aweg*
 (CH II, 5:59-60, Pintzuk (1999:58))
 unless those teachers prune always those sins by their teaching away

In (22a), the particle *up* precedes not only the finite verb *scyt* but also the prepositional phrase *of þæm sonde* within the subordinate clause headed by *þær*. The split of particle–V by the intervening element cannot be expected by the assumption that the particle *up* first undergoes head movement to the verb *scyt*. Instead, a whole string of *up of þæm sonde* should be supposed to move into a specifier of ν P to produce the ordering pattern of (22a). In (22b), a derivation will reach the following stage after the verb *screadian* move into the light verb *v*.

- (23) [_v *screadian*_i+*v* [_{νP} þurh heora lare [_v t_i *aweg* ða leahtras]]

The analysis here presupposes that the verb *screadian* has no [+Affix] feature to force overt movement on the particle *aweg*. Both *ða leahtras* and *þurh heora lare* undergo further movement into a specifier of ν P with the particle *aweg* left behind. The finite verb *screadian* finally moves into T to precede the frequency adverb of *symle*.

6.3.2. Verbal complexes and movement of infinitival verbs

contrast.

- (i) a. *_{[CP} Gisteren moet hebben gelezen [_{IP} Jan het boek]] (Dutch)
 yesterday must have read Jan the book
 b. _{[CP} Gisteren moet [_{IP} Jan het boek gelezen hebben]]

The auxiliary *hebben* and the participle *gelezen* have their features checked by adjunction to the modal *moet*. Therefore, the modal verb excorporates from the verbal complex and moves into the highest C as in (ib).

Given that both verb movement and particle movement are reduced to a general operation of movement forced by the uninterpretable feature [+Affix], the same accounts are expected to illuminate the distribution of verbal complexes in Old English. The first step is to establish the status of pre-modal verbs in Old English in consideration of their equivocal nature. Syntactic and semantic evidence shows that unlike Modern English counterparts, pre-modal verbs in Old English have dual properties of modals and full lexical verbs.¹⁷ Evidence for a status of lexical verbs is confirmed by the fact that pre-modal verbs can have a noun phrase or a clause as their complements as in (24).

- (24) a. Gif þu *wille* þæt ic þe on niwelnysse ne asende (CH I, 31:157)
 If you wish that I you in abyss not send
 b. se ðe *cann* þæra stafa gescead (CH I, 12:66)
 he who knows (of) those letters distinction

The interpretation of pre-modal verbs in (24) indicates that they are two-place predicates and select nominatives as their external arguments.

Following Denison (1990) and Warner (1993), evidence for the auxiliarihood of pre-modal verbs is found in cases where they accompany passive or impersonal predicates as shown below.¹⁸

- (25) a. Hi *mihton* beon lichamlice acwealde (CH I, 36:82)
 they might be bodily killed
 b. hu *mæg* ðe nu twynian þæs ecan leohtes þeah hit ungesewenlic sy
 (CH I, 10:134-5)
 how may (to) you-dat now cause-doubt (of) the eternal light-gen although it
 invisible is

¹⁷ The term 'pre-modal' is adopted here to represent their dual properties in Old English. Morphologically speaking, they have well-developed inflectional paradigms, but their present indicative forms are inflected just as preterit indicative forms of strong verbs. Moreover, some pre-modal verbs in Old English leave no records for infinitive or participle forms. See the table in Warner (1993:145).

¹⁸ Given that the past participle *acwælde* takes an agreement ending *-e*, it is controversial whether (25a) represents syntactic passive. Warner (1993:111-122) suggests that post-verbal ellipsis and pseudo-gapping also provide syntactic evidence for the auxiliarihood of pre-modal verbs in Old English.

In (25a), the passive predicate rather than the pre-modal selects the subject *hi*, which is supported by the plural agreement ending *-e* in the passive predicate *acwealde*. In (25b), the dative subject *ðe* originates from the argument structure of the impersonal predicate *twynian*. Therefore, pre-modal verbs in (25) are irrelevant or transparent in selecting the subject of a clause. Warner (1993: 16-7) furthermore proposes that lack of subject (external argument) selection, which represents modality in prototypical modal verbs in Modern English, can be attested in some occurrences of Old English pre-modal verbs as shown in (26).¹⁹

(26) a. epistemic modality

and hi ða ealle sæton, swa swa *mihte* beon fif þusend wera (CH I, 12:17-8)
and they then all sat so that (there) might be five thousand (of) men

b. (subjective) deontic modality

Ic sette nu ðis gebann on eallum minum folce þæt nan man ne beo swa
I set now this proclamation to all my people that no man not be so
dyrstig þæt he ænig word oððe ænig tal cweðe ongean eowerum gode gif hit
presumptuous that he any word or any blasphemy says against your god if it
hwa ðonne deð he *sceal* ðolian his æhta and his agnes lifes (CH II, 1:262-6)
any then does he shall suffer his properties and his own life

Concerning theta structure, both pre-modal verbs in (26) can be equated with unaccusative predicates: they are one-place predicates without an external argument and consequently permit raising of an internal argument.

The dual nature of pre-modal verbs in Old English has created a tough task for the generative grammar. For instance, van Kemenade (1985,1993) has to postulate two completely different structures under the head-final analysis of Old English.²⁰ When

¹⁹ His classification of modality originally comes from Palmer (1979). Dynamic modality can be a potential problem against generalization on modality. It is associated with the ability or volition of the subject rather than the speaker, which can deviate from subjectivity defining modality (Palmer, 1979:36). Warner (1993:17) suggests that selection of subject, if any, should pertain to non-prototypical properties of modals.

²⁰ Lightfoot (1979) makes a similar suggestion to Kemenade except that infinitival complements are inserted under subject position when pre-modals have epistemic interpretation. Roberts (1985), on the other hand, denies the existence of modality in pre-modal verbs and analyzes them as full lexical verbs.

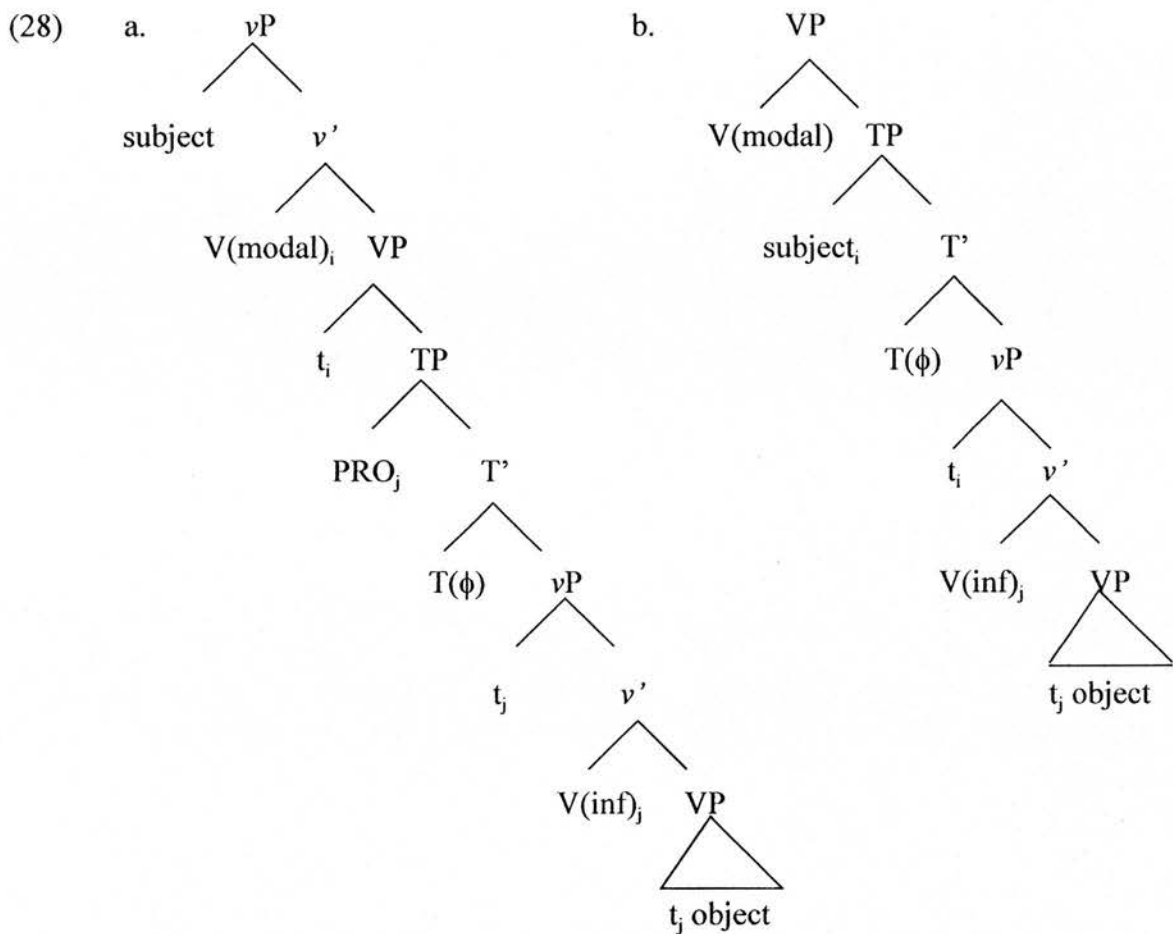
pre-modals are lexical verbs as in (24), they are assumed to have a base position within VP and select a clausal complement with an empty pronominal subject of PRO. If they show modality as in (25) and (26), they are directly inserted into T above VP. Under her analysis, the distinction between lexical and modal properties in pre-modal verbs is schematized as the following.

- (27) a. $[_{TP} \text{subject} [_{T'} [_{VP} [_{CP} [_{TP} \text{PRO} [_{VP} \text{object } V_{inf}]]] t_i] V_{i(\text{modal})}]$
 b. $[_{TP} \text{subject} [_{T'} [_{VP} \text{object } V_{inf}] V_{\text{modal}}]$

It should be noticed that the above distinction introduces the stipulation that the subject in (27b) undergoes insertion into TP in spite of lack of subject selection by the pre-modal verb. To explain various ordering patterns in verbal complexes, the head-final analysis needs rightward operations whose plausibility is already dismissed in the previous chapter. Van Kemenade argues that a rightward operation of Verb Raising, which represents a process of clause-union between main and embedded infinitival clauses, can happen only in (27a) where the infinitival complement is supposed to have a clausal status. Verb Raising is not permitted in (27b), since the infinitival complement under the auxiliary-like pre-modal verb fails to form a separate clause. If her assumption is accepted, auxiliary-like pre-modals should always occupy a clause-final position within a subordinate clause due to the absence of Verb Raising. Contrary to her prediction, the ordering pattern of (26a) and (26b) testifies that pre-modal verbs in Old English can be followed by infinitival complements within a subordinate clause when they exhibit a property of modality.

Following Boskovic's (1997) minimalist analysis of nonfinite clauses, control and raising infinitivals cannot be distinguished by c(ategorial)-selection and are claimed to be uniformly TP.²¹ If his analysis is applied to verbal complexes in Old English, derivations including pre-modal verbs will be schematized as (28) before a higher T is merged.

²¹ He admits that CP can be introduced by overt complementizers or by s(emantic type of complements)-selection. Otherwise, a principle of economy forces IP status on control and raising infinitivals. His main argument is based on the minimalist ideas in which Case checking or matching is free from the notion of government to distinguish between PRO in control infinitivals and NP-trace (anaphor) in raising constructions.



Structural differences between pre-modal verbs become minimized in (28). The pre-modal with a lexical verb property selects an external argument as in (28a) while the auxiliary-like pre-modal has no external argument as in (28b). Both derivations share defective T in an infinitival clause, which can delete the null Case feature of PRO in (28a) but not the Case feature of the lexical subject in (28b).²² As a result, the subject in (28b) remains active for further raising into a higher clause even if the EPP features in defective T force movement on both PRO in (28a) and lexical subject in (28b). When T is merged above both derivations in (28), its agreement features associated with the EPP

²² Chomsky (2000,MI:105) assumes that control infinitivals have non-defective T headed by C. His assumption can yield the generalization that defective T deletes no Case feature at all. It, however, fails to explain why non-defective T in control infinitivals cannot permit lexical DPs in its specifier in spite of capability to delete case feature. Moreover, Chomsky's assumption cannot predict the presence of an expletive object in the Exceptional Case Marking Constructions. There exists no reason for the expletive element *there* to move out of an infinitival clause as in *John expected there to be a political scandal*. Expletives are assumed to have nothing but a categorial feature whose interpretable nature cannot make them active for further operations.

features seek an active goal for deletion. However, only the subject in (28b) keeps the uninterpretable Case intact and becomes a legitimate goal to undergo overt movement. PRO in (28a) should remain within an infinitival clause since its uninterpretable Case feature is already deleted by defective T.

Let us consider how the above analysis of pre-modal verbs can explain various ordering patterns of verbal complexes within subordinate clauses without recourse to rightward operations such as Verb Projection Raising, Verb Raising, and extraposition. The following list shows logically possible combinations in verbal complexes within subordinate clauses and their analysis under the head-initial hypothesis.

- (29) a. S V_{main} V_{modal} O
 [TP S... [vP V_{(main)i}+V_{modal} [TP ... [vP t_i O]]]]
- b. S O V_{modal} V_{main}
 [TP S... [vP O_j [v' V_{(modal)i}+v [vP t_i [TP ... [vP V_{main} t_j]]]]]]
- c. S V_{modal} O V_{main}
 [TP S... [vP V_{modal} [TP ... [vP O_j [v' V_{(main)i}+v [vP t_i t_j]]]]]]]]
- d. S O V_{main} V_{modal}
 [TP S... [vP O_k [v' V_{(main)j}+V_{(modal)i}+v [vP t_i [TP ... [vP t_j t_k]]]]]]]]
- e. S V_{modal} V_{main} O
- f. * S V_{main} O V_{modal}

Under the head-initial analysis, complements of an infinitival verb are assumed to keep their base position in (29a,e).²³ They move into a specifier of a higher vP as in (29b,d) or of a lower vP as in (29c) depending on a locus of the EPP features in the light verb v. Notice that their movement into a higher vP cannot be blocked by PRO in (29a) or the trace of the subject in (29b), since the operation constitutes A-bar movement motivated by peripheral rather than case/agreement features (Chomsky, MI:109). The distribution of infinitival verbs can be illuminated by the minimalist analysis of head movement made earlier. They undergo head movement to pre-modal verbs as in (29a,d) as long as

²³ The possibility cannot be ruled out that both object and complex of main and pre-modal verb undergo movement out of vP.

pre-modal verbs have the [+Affix] feature requiring verbal affixation.²⁴ Although defective T stands between pre-modal and main verbs, its defective nature keeps it from blocking the operation. Intervention of complements between infinitival and pre-modal verbs is impossible as shown in (29f), since complements, which have a status of maximal projection, cannot move into a head position occupied by a cluster of infinitival and pre-modal verb.²⁵ Considering the lack of a tense feature in infinitival verbs, the possibility is also ruled out that the infinitival verb in (29f) appears in a higher T with its complement in a specifier of a higher *vP*.²⁶

The analysis of pre-modal verb constructions can be extended to the distribution of causative and perception verbs, which also select infinitival complements as exemplified below by the causative verb *hatan*.

- (30) a. *se het afyllan ane cyfe mid weallendum ele 7 þone mæran godspellere þæron*
 who ordered fill one tub with boiling oil and the glorious evangelist therein
besceofon (CH I, 4:23-4)
 thrust
- b. *ac on ende þyssere worulde se soða deman hæst his englas gadrian þone*
 but in end (of) this world the true judge orderd his angels gather the
coccel byrþenmælum 7 awurpan into ðam unadwæscendlicum fyre
 cockle (in) heaps and cast-off into the inextinguishable fire
 (CH I, 35:123-5)

The recipient of the order is implicit in (30a) while it is expressed by *his englas* in (30b). According to the general assumption that the verb *hatan* belongs to three-place predicates, the accusative *his englas* in (30b) results not from raising but from selection by the verb *hæt*. Therefore, derivations in (30) share the structure with (lexical) verb-

²⁴ Roberts (1997) proposes that under the head-initial analysis VP-raising should be responsible for the precedence of infinitival verbs over pre-modal verbs. However, he cannot explain why VP-raising including both main verbs and their complements cannot be allowed in Old English as shown in (29f).

²⁵ Frisian and Dutch have a similar constraint on verbal complexes, which is often called the Head Final Cluster Generalization (Hoekstra, 1997:158) as below.

(i) HFCG: a head-final cluster cannot be broken up by non-verbal material.

Hoekstra suggests that head-final clusters in those languages should result from head movement to X^0 and therefore forbid the intervention of non-head elements.

²⁶ Movement into a higher T violates the HMC, since it skips a pre-modal verb.

like pre-modals except that the verb *hatan* has an additional internal argument (implicit in (30a) and lexical in (30b)) controlling PRO as shown below.

(31) $[_{VP} \text{ subject } [_{V'} \text{ *hatan*}_i +v \ [_{VP} \text{ object }_j \ [_{V'} \text{ }_i \ [_{TP} \text{ PRO }_j \ [_{T'} \text{ T } [_{VP} \text{ }_j \ [_{V'} \text{ V}_k +v \ [_{VP} \text{ }_k \text{ object}] \dots]]]]]]]]$

As in case of pre-modal constructions, an infinitival verb or its complement in causative/perception constructions should undergo movement as in (32) if their movement is forced by the [+Affix] feature and the EPP features respectively.

(32) *se cyning astries þe ðone apostol ofslean het* (CH I, 31:230)
 the king A. who the apostle kill ordered

The analysis also holds for infinitival complementation in perception and some causative verbs, which are assumed to select two rather than three arguments as shown in the occurrences of the perception verb *geseon* (Fischer, 1989).²⁷

(33) a. *Se hyra se ðe nys riht hyrde he gesihð þone wulf cuman...* (CH I, 17:5)
 The servant who not-is right shepherd he sees the wolf come
 b. *þa beheoldon ða hine þe on ðam geðeahte sæton 7 gesawon his nebwlite*
 then beheld those him who in the council sat and saw his face
swilce sumes engles ansyne (CH I, 3:26-7)
 as if (of) some angel face

The perception verb *gesihð* in (33a) shares a similar structure with auxiliary-like pre-modals, in that the accusative *þone wulf* is raised from an infinitival clause as schematized below.

(34) $[_{VP} \text{ }_i \text{ *þone wulf* }_i \ [_{VP} \text{ he } [_{V'} \text{ *gesihð*}_j +v \ [_{VP} \ [_{V'} \text{ }_j \ [_{TP} \text{ }_i \ [_{T'} \text{ T}_{def} \ [_{VP} \text{ }_i \text{ *cuman* }] \dots]]]]]]]]$

²⁷ See Denison (1993:163-217) and Visser (1963-73:§2055-81) for a detailed discussion on the possible number of arguments which individual perception and causative verbs can take.

In (34), the EPP features of T within the infinitival clause are assumed to force overt movement on the accusative complement *þone wulf*. Yet the operation fails to delete the Case feature of the accusative complement due to the defective nature of an infinitival T. The complement is still active after the operation and undergoes further movement into a higher *vP* to delete both its Case feature and agreement/the EPP features in a higher *v*.²⁸

6.4. Subordinate V-2 constructions and quirky subject subordinate clauses

Before the analysis of verb movement in main clauses, some problems should be addressed concerning V-2 patterns in subordinate clauses. When V-2 is represented by the ordering in which a finite verb immediately follows a nominative subject, the head-final analysis of Old English has to abandon V-to-T movement and depend on a rightward operation of extraposition to explain post-verbal elements. In contrast, the head-initial analysis adopted here simply assumes that post-verbal elements result from leftward verb movement. A more intricate issue arises when an argument with the oblique Case appears immediately before a finite verb in subordinate V-2 constructions as shown in (35).

- (35) a. *hit is awriten þ englum is beboden be ðe þ hi þe on hyra*
 it is writen that (to) angels-dat is ordered about you that they you in their
handum ahebban (CH I, 11:17-8)
 hands (should) lift-up
- b. *þæt him ne gelimpe se egeslica cwyde* (CH II, 34:122-3)
 that (to) him-dat not befall the terrifying discourse-nom

Unless the iteration of CP whose conceptual motivation seems unconvincing is

²⁸ The assumption, however, can be controversial that (30a) represents the Exceptional Case Marking constructions in Old English. Since more compelling evidence such as expletive objects or passivization is generally unavailable in Old English, the alternation in (30) cannot completely justify the presence of the ECM constructions. If (30a) is assumed to arise from control infinitival structure, it will have the same structure as (31). The accusative is merged as an internal argument of the perception verb while PRO is selected by the infinitival verb.

introduced, the head-final analysis has difficulties in explaining the distribution of nominative arguments as well as finite verbs in (35). Since the specifier of TP is generally regarded as a canonical position for nominative arguments, a special strategy is required to explain their presence within VP. Fischer & Leek (1983) and Kemenade (1997), for instance, introduce a notion of chain government by which T can assign nominative Case to arguments within VP through the medium of V.

Although the minimalist framework dismisses the role of government in Case relations, its earlier versions (Chomsky, MP & CT) also fail to provide a principled alternative. They assume that T has an inherent interpretable Case feature to check and delete the uninterpretable Case feature of a nominative argument. On the other hand, T has uninterpretable agreement features to be deleted by checking against the nominative argument. Therefore, nominative argument raising triggered by the EPP features of T causes all the relevant uninterpretable features to be deleted. The only exception overriding nominative argument raising is merge of expletive elements as in (36), which are claimed to carry no more than a Case feature.

- (36) a. þonne secole we huru wiðstande þ ðær ne beo nan geþafung to ðam yfel
 then must we indeed withstand that there (may) not be no consent to the evil
 weorce (CH I, 11:141-2)
 work
- b. gif [*pro*] bið an ure geferena on sumere earfoðnysse (CH I, 19:238)
 if ϕ is one of our companions in some difficulty

In terms of economy considerations, merge of an expletive element is, of course, favored over the costly option of movement whenever it is available from the numeration as in (36). The analysis however stipulates a chain relation (Chomsky, MP) or feature movement (Chomsky, CT) for agreement relations between a finite verb and a nominative argument in expletive constructions. It reveals a more serious drawback in explaining oblique arguments preceding nominative ones as seen in (35). If they are assumed to occupy a specifier of TP, they cause mismatch in Case and agreement features against T, which leads to the crash of a derivation.

Concerning oblique arguments in a specifier of TP, Chomsky (2000, MI) proposes

that oblique arguments with quirky Case can have both structural and inherent Case features.²⁹ Although he does not give a clear-cut definition of structural Case in quirky arguments, it is undeniable that quirky arguments in Old English exhibit a double nature. Morphologically they carry no nominative Case marking, but syntactically they function as grammatical subjects. The subjecthood of quirky arguments is confirmed in conjoined sentences as shown below even if Old English lacks some of the crucial evidence that supports the subjecthood of their counterparts in Icelandic.³⁰

- (37) a. *Da þeahhwæðere ofþuhte þam ælmihtgum gode ealles manncynnes*
 then however caused-regret (to) the almighty god-dat eall mankind's
yrmda 7 smeade hu he mihte his handweorc of deofles anwealde alysan
 miseries and pondered how he could his creation from devil's power set free
 (CH I, 13:10-12)
- b. *Ælc ðæra ðe hæfð him bið mare geseald and he genihtsumað. Se ðe*
 each of-those that has (to) him-dat is more given and he suffices. one who
næfð him bið ætbroden þæt þæt he hæfð (CH II, 38:150-2)
 not-has (to) him-dat is withdrawn what he has

If the assumption is correct that a subject of a coordinated clause can be missing under the identity with that of a preceding conjunct clause, the dative *þam ælmihtgum gode* in (37a) should be a subject since the verb *smeade* in the reduced conjunct cannot be an impersonal predicate.³¹ In (37b), left-disclosed clauses beginning with nominative head

²⁹ Levin & Simpson (1981) define quirky Case in Icelandic as the displacement of structural Case by non-nominative marking on subjects and non-accusative marking on objects.

³⁰ See Allen (1986,1995:104-7) and Kim (1996) for a comprehensive discussion on the subjecthood of oblique arguments with a thematic role of experiencer. Zaenen, Maling, & Thraisson (1990:100-106) provide various types of evidence to support the claim that oblique arguments in Icelandic passive constructions amount to grammatical subjects. Core evidence including expletive argument raising and reflexivization is, however, unattested in Old English due to the lack of data or, possibly, parametric differences.

³¹ Conjoined reduction cannot necessarily confirm the subjecthood of oblique arguments. Kim (1996) cites the following example from Mitchell (1985:630).

- (i) *Ða easternan tungelwitegan gesawon niwne steorran, beorhtne, na on heofenum betwux oþrum*
 The eastern star-prophet saw new star bright, not in heavens between other
tunglum ac [e], wæs angenga betwux heofenum 7 eorðan (CHI, 7:71-3)
 stars but was alone between heavens and earth

A missing subject in the conjoined clause refers to the accusative *steorran*, which cannot be a subject at all in the preceding clause.

nouns (*ælc* and *se*) have *him* as resumptive pronouns, which indicates that the dative pronoun *him* functions as subject in both sentences.³²

Once a quirky argument is assumed to carry an uninterpretable feature of structural Case, it becomes active to an operation forced by the EPP features of T. Then, raising of the quirky argument deletes the EPP features of T and the Case feature of the quirky argument. Agreement features in T delete themselves when they are default (3rd person singular) and therefore have no nominative argument to agree with. Otherwise, they remain and seek a goal (a nominative argument) for their deletion through the operation of Agree.

Let us now consider how the above assumptions work for passive constructions constituting core examples of subordinate V-2 constructions in Old English. Just as Icelandic, Old English has two types of passive constructions: the direct passive with nominative subjects and the impersonal passive with oblique subjects as shown in (38)((38b)=(35a)).³³

- (38) a. *Gif ðæs lareowes bodung bið underfangen þonne...* (CH II, 36:104-5)
 if this teacher's preaching is received then...
- b. *hit is awriten þ englum is beboden be ðe þ hi þe on hyra handum*
 it is writen that (to)-angels is ordered about you that they you in their hands
ahebban (CH I, 11:17-8)
 (should) lift-up

Mitchell (1985:§834-858) states that only accusative objects in active verbs become subjects in passive constructions. In other words, oblique arguments keep their Case

³² As in case of conjoined reduction, the Case marking in the head noun of a left-dislocated clause cannot always guarantee subjecthood as in the following.

(i) *Se ðe gewemð godes temple God hýne fordeð* (CH I, 14:108-9)
 He who defiles God's temple God him destroys

The resumptive pronoun *hýne* cannot be a subject even though it is bound by the clause headed by the nominative *se*.

³³ Following Zaenen & Maling (1990), Icelandic has two types of passive constructions as the following.

(i) *Hún var sannfærð af Höskuldi* (Höskuldur sannfærði hana)
 she(Nom) was convinced by Höskuldur(Dat) Höskuldur(Nom) convinced her(Acc)

(ii) *Skipinu var sökkt af skipstjóranum* (Skipstjórinn sökkti skipinu)
 the-ship(Dat) was sunk by the-captain(Dat) the-captain(Nom) sank the-ship(Dat)

The contrast in (i) and (ii) demonstrates that in passivization accusative objects become nominative subjects while oblique objects retain their Case markings.

markings even after the voice of verbs has changed from active to passive. The direct passive is represented in (38a) where movement of the nominative subject *ðæs lareowes bodung* into a specifier of TP suffices to delete all relevant uninterpretable features such as the EPP/agreement features of T and the Case feature of the nominative subject. The ordering pattern of (38b), on the other hand, demonstrates the impersonal passive. Following Chomsky's analysis of quirky arguments, the dative *englum* in (38b) is assumed to have structural as well as inherent Case and become active for movement forced by the EPP feature of T. Therefore, raising of the dative argument deletes the EPP feature of T and its own structural Case feature simultaneously. Agreement features in T delete themselves here, given that they are default (the third person singular) and no nominative argument to agree with.

In GIVE- or DEPRIVE-type passive predicates, a nominative DP can appear after a dative argument as shown below.

- (39) *gif him bið oftogen his bigleofa* (CH I, 19:113)
 if (to) him-dat is withdrawn his food-nom

Adopting Baker's (1988) hypothesis of a uniform mapping between thematic and syntactic structure, the dative argument *him* (with a thematic role of goal) is merged in a structurally higher position than the nominative argument *his bigleofa* (with a thematic role of theme) in (39).³⁴ Just as the dative argument *englum* in (38b), the dative *him* is supposed to have an uninterpretable feature of structural Case, which makes it subject to movement into a specifier of TP. The only difference distinguishing (39) from (38b) lies in agreement features in T. They have the nominative argument *his bigleofa* to match and undergo deletion through an operation of Agree.³⁵

³⁴ In fact, the order of merge between internal arguments is not crucial if unaccusative predicates also have a vP-shell structure. Verb movement to the light verb *v* in the shell makes internal arguments within VP equidistant from higher heads. It is therefore predicted that a nominative argument (theme) can move into a specifier of TP and precede a dative argument (goal) in passive constructions as shown below.

(i) *Ic secge eow þæt godes rice bið eow ætbroden and bið forgyfen ðære*
 I say (to) you that God's kingdom-nom is (to) you-dat taken-away and is given to the
 ðeode þe his wæstmas wyrcað (CH II, 5:46-7)
 people-dat that his fruits produces

³⁵ Deletion of a nominative Case feature raises some controversy in Chomsky's (2000, MI) quirky argument analysis. If oblique DPs are assumed to have a structural Case feature deleted by T, an additional assumption is required that T also deletes a Case feature of nominative arguments within VP.

The quirky argument analysis can also be applied to prepositional phrases preceding nominative arguments within subordinate clauses. Consider the following ordering patterns of the unaccusative verb *cuman*.

- (40) a. Men geseoð oft þæt of anum lytlum cyrnele cymð micel treow
 (CH I, 16:120-1)
 Men see often that from one little seed comes large tree
- b. for ði þonne he cymð to ðam miclan dome (CH I, 15:107-8)
 therefore when he comes to the great judgement

If it is assumed that unaccusative as well as transitive predicates have a *v*P-shell structure as suggested by Collins (1997), derivations in (40) share the following structure before T is merged.

- (41) [_v *cuman*_i+*v* [_{vP} DP(Nom) [_v t_i PP]]]

V-movement to *v* makes both internal arguments (nominative DP and PP) in (41) within the same minimal domain with respect to T. Both arguments, therefore, become legitimate goals for the EPP feature in T as long as they have uninterpretable features. The nominative argument, of course, has an uninterpretable feature of structural case, which makes it subject to movement into a specifier of TP as in (40b). If it is tenable that the PP complement of *of anum lytlum cyrnele* in (40a) is analyzed as a quirky argument carrying a structural Case feature, its movement into a specifier of TP is also forced by the EPP feature of T.³⁶

In sum, neither verb movement to C nor extraposition of a nominative argument is responsible for V-2 patterns in subordinate clauses of Old English. In most cases, finite verbs preceding nominative arguments in subordinate clauses constitute unaccusative predicates whose thematic structure lack an external argument. The minimalist analysis, therefore, assumes that arguments of an unaccusative predicate, which are all merged as

Unless the Case feature of in-situ nominative arguments is claimed to be interpretable, his quirky argument analysis becomes virtually the same as Chomsky's (1995,CT) Multiple Subject Hypothesis, in that both presuppose multiple checking or deletion by T.

³⁶ A more detailed discussion of PP complement movement will be suggested in the next chapter.

internal arguments within VP, become equidistant from a higher head T after the predicate moves into *v* heading a *v*P-shell above VP. Once the quirky analysis of oblique subjects is adopted, an oblique argument with an uninterpretable Case feature is supposed to undergo movement into a specifier of TP and produce the subordinate V-2 pattern.

6.5. Verb movement to C and the V-2 Constraint in Old English

The analysis of verb movement to C in this section is based on the previous assumption that V-to-T movement as well as other types of head movement amounts to an operation forced by the [+Affix] feature of a higher head. However, as mentioned in the previous chapter, empirical and conceptual evidence testifies that verb movement in Old English cannot be universal in main clauses, contra the traditional CP-V2 analysis of Old English. In terms of the minimalist assumption, C in Old English is not necessarily merged with the [+Affix] feature to impose verb movement. Consequently, the V-2 constraint, which implies a structurally fixed position for finite verbs in main clauses under the traditional analysis, should receive a different interpretation. In what follows, we examine under what circumstances finite verbs move into the highest head C in Old English and what is responsible for the distribution of finite verbs in main clauses if they fail to reach C.

6.5.1. Structural positions for finite verbs in Old English main clauses

The CP-V2 analysis argues that V-1 constructions in some Germanic languages cannot constitute genuine evidence against the V-2 constraint. The constraint is claimed to represent syntactic requirements on a specific position for finite verbs in main clauses. V-1 constructions satisfy the constraint as long as finite verbs reach the functional head C. Indeed, some empty operators are suggested for C to attract finite verbs in V-1 constructions and consequently meet a syntactic constraint of V-2 constraint. Roberts (1993), for instance, proposes an empty operator for *yes/no* questions, which corresponds to a covert counterpart of *whether*. Sigurðsson (1990) also postulates an empty operator for narrative inversion constructions (a subtype of V1 declaratives) in

Icelandic.³⁷ If their assumptions are correct, finite verbs in V-1 and V-2 constructions share the same structural position C within main clauses under the CP-V2 analysis. The ordering difference between those constructions results from the fact that in V-2 constructions overt elements such as subjects, *wh*-phrases, and topics are independently forced to move into a specifier of CP whose head is occupied by finite verbs.

If the CP-V2 analysis of V-2 languages is reinterpreted by the minimalist assumptions, the functional head C in main clauses is supposed to have the uninterpretable [+Affix] feature requiring verbal affixation, that is, pied-piping of verbs. The CP-V2 analysis should therefore presuppose that C always carries the [+Affix] feature when it is selected from the numeration for main clauses in V-2 languages. The introduction of the [+Affix] feature can overcome some problems mentioned in 3.2 against the traditional CP-V2 analysis. The feature reflects a universal property of head movement under the minimalist framework and enjoys conceptual advantages over the others whose main justification comes from the nominative Case marking through government.

In spite of descriptive simplicity, the assumption is yet arguable that verb movement to C is ubiquitous in main clauses of V-2 languages. The ordering of subject–finite verb, which predominates in main clauses of V-2 languages, can be a prime source of disagreement. If a functional head C in V-2 languages invariably has the uninterpretable [+Affix] feature, sentence-initial subjects in those languages should always occupy a specifier of CP as schematized below.

$$(42) \quad [_{CP} \text{subject}_i [_{C'} \text{verb}_j +C [_{TP} t_i [_{T'} t_j [_{VP} t_i [_{V'} t_j \dots$$

In (42), the subject deletes its uninterpretable Case feature in a specifier of TP by the operation prompted by the EPP features in T. It, therefore, needs some additional feature, that is, a topic-related feature to be active for further movement into a specifier of CP. In other words, sentence-initial subjects should become topics in V-2 languages under the CP-V2 analysis. The assumption raises a conceptual question why V-2 languages should adopt a costly and, what is worse, string-vacuous operation to represent the fact

³⁷ He distinguishes V-1 declaratives into two subcategories based on the presence of an overt subject.

that subjects are default topics. Moreover, it faces empirical problems when an expletive or a quasi-expletive subject appears in a sentence-initial position of Old English as shown below.

- (43) a. *þær næs eac nan geþafung for ðan þe ðær næs nan lustfullung* (CH I, 9:148)
 there not-was also no consent because there not-was no desire
 b. *Hit gelamp ða þæt ða apostoli becomon to þære foresædan byrig*
 (CH II, 33:213-4)
 It happened then that the apostles came to the aforementioned town

If the finite verbs in (43) are supposed to end up in C, both *þær* and *hit* should undergo topicalization despite their inherent lack of topichood.³⁸ The alternative assumption that they are merged directly into a specifier of CP cannot be a solution, since they fail to delete the EPP features in T. If it is to be upheld, two expletives should be merged in (43b): an empty expletive for the deletion of the EPP feature in T and a lexical expletive for the deletion of the EPP feature in C.

If the above argument is correct that sentence-initial elements are not necessarily within CP, the theta structure of a predicate can be crucial to decide structural positions for sentence-initial DPs or PPs. If a finite verb selecting an external argument is merged as a predicate in a main clause, any pre-verbal non-nominative DP and PP can be safely assumed to occupy the specifier of CP. Consider the following structure with a transitive predicate.

- (44) [_{CP} T [_{vP} subject [_v V_i+v [_{vP} t_i DP/PP]]]]

The internal argument in (44) moves into a specifier of *vP* whenever *v* has the EPP features. Yet, it should be frozen after the operation since its uninterpretable Case feature is deleted against the functional head *v*. Direct movement into a specifier of TP is also blocked due to the subject whose intervention makes the operation violate the

³⁸ Schwartz & Vikner (1996:20-1) assume that expletives are first merged into a specifier of TP and subject to movement into a specifier of CP. However, except for the theory-internal motivation to keep the CP-V2 analysis, no trigger can be found to force expletives to move to the specifier of CP.

locality condition in computation. Consequently, once the internal argument moves into a specifier of vP , the only operation available is movement into a specifier of CP forced by the EPP feature in C as well as its own topic feature.

Unaccusative predicates, on the other hand, cannot select external arguments as shown below.

(45) $[_T T [_{vP} V_{i+v} [_{vP} DP [_V t_i PP]]]]$

After V-to- v movement, both internal arguments in (45) become located within the minimal domain of T. The EPP feature in T, therefore, can be deleted by raising of either of two internal arguments as long as they have an uninterpretable Case feature. When one of them moves into a specifier of T with the other left behind within VP, the resulting order complies with the V-2 pattern irrespective of verb movement to T. All in all, except for theory-internal grounds to keep the uniform CP-V2 analysis, no convincing evidence can be verified that finite verbs in V-2 languages including Old English should always move to the highest head C in main clauses.

6.5.2. The nature of the V-2 constraint

Once we dismiss the core assumption of the CP-V2 analysis that finite verbs always move into the highest head C in main clauses of V-2 languages, the V-2 constraint needs a different interpretation. If the constraint no longer represents syntactic requirements of a specific structural position for finite verbs, it is more likely to imply a phonological constraint on the linear ordering of finite verbs in main clauses. Given that phonological constraints apply to the output of overt syntactic operations, the application of the V-2 constraint should be distinguished across V-2 languages depending on the presence of V-to-T movement. In mainland Scandinavian languages lacking independent V-to-T movement at syntax, the constraint requires that finite verbs should be in the second position of a main clause. The phonological nature of the constraint is demonstrated in the following examples from Swedish in which finite

verbs have no morphosyntactic motivation for overt movement.³⁹

- (46) a. Det *har* alltid varit en gåta varför han dog
It has always been a mystery why he died
b. ..(att) det alltid *har* varit en gåta varför han dog

In (46), the quasi-expletive subject *det* cannot carry a topic feature, which indicates that the position of the finite verb *har* before the frequency adverb *alltid* in (46a) should be T rather than C. Considering that Swedish has no independent V-to-T movement as in (46b), it is assumed that a phonological constraint of V-2 should be responsible for the second position of the finite verb in (46a).

When finite verbs undergo movement forced by the [+Affix] feature of C in topic-initial clauses, the V-2 constraint can be satisfied without any further arrangement as shown in (47).

- (47) Huset *sålde* han inte i går
the-house sold he not yesterday

In (47), the finite verb *sålde* moves into the highest head C and its complement *huset* with the [+topic] feature is also subject to the movement into a specifier of CP for deletion of the EPP feature in C. Syntactic operations in (47) consequently produce the ordering of V-2, which automatically satisfies the V-2 constraint at the phonological component.⁴⁰

In Icelandic and Yiddish where verb movement to T is obligatory, finite verbs usually occupy the second position in main clauses. First, they invariably move into T as in (48a) and furthermore into C if C is merged with the [+Affix] feature as in (48b).

³⁹ Examples in (46) and (47) are from Holmes & Hinchliffe (1994:557).

⁴⁰ The assumption that the V-2 constraint has phonological rather than syntactic nature can experience some problems in explaining V-1 constructions. Since phonological rules are assumed to be blind to syntactic or semantic information under the minimalist framework, a phonological constraint of V-2 cannot permit V-1 constructions based on semantic interpretation. If the application of the constraint is uncontrolled, all main clauses in V-2 languages come to have the same ordering of V-2 irrespective of their semantic types. Presumably, some principles related to language performance intervene later to distinguish clausal types unless a phonological component adopts strategies such as tone or intonation.

- (48) a. [_{TP} Pétur *las*_i ekki [_{VP} t_i þessa bók í gær]] (Icelandic)
 Peter read not this book yesterday
 b. [_{CP} Þessa bók_j *las*_i [_{TP} Pétur t_i ekki [_{VP} t_i t_j í gær]]]

In (48a) and (48b), the second position of finite verb *las* results from independent syntactic operations rather than a phonological constraint of V-2 constraint. Following the above assumptions, the V-2 constraint has a limited effect on V-2 languages. Only V-2 languages without an independent verb movement resort to the constraint when C with [+Affix] is not merged above TP as in (48a). Otherwise, the distribution of finite verbs in main clauses can receive straightforward accounts based on syntactic operations.

6.5.3. Distribution of finite verb in Old English main clauses

It is a well-known fact that the V-2 constraint was less rigid in the early stages of Germanic languages. For instance, V1-declaratives are mostly attested in Old English, Old High German, and Old Icelandic (Kiparsky, 1995:142). They are obsolete at best in Modern Germanic languages except for Modern Icelandic and Yiddish both of which still preserve archaism in many aspects. Old English demonstrates a constant frequency of V-1 declaratives during its whole period even if the figure is not so overwhelming.⁴¹ Old English, moreover, exhibits several non-V-2 properties in main clauses, which cannot be attested in other Germanic V-2 languages.

First, Old English has a group of adverbs functioning as speaker comment which are not integrated into the clausal structure (Swan, 1994). They are usually separated from other sentential elements and in many cases irrelevant to subject-verb inversion as shown below.⁴²

⁴¹ Figures from Bean (1983:66) show that V-1 constructions occupy between 1 and 10% in word order patterns in each section of *Anglo-Saxon Chronicle*. Pintzuk (1993) also states that V-1 constructions account for 5% in her corpora.

⁴² Although Swan makes no comment, the adverb *witodlice* itself can sometimes appear before a string of verb-subject as the following.

(i) *Witodlice* mihte drihten æmtig fatu mid wine afillan (CH II, 4:95)
 Assuredly could (the) Lord empty vessels with wine fill

- (49) a. *Witodlice* se drihten ðe ða gastlican pund his ðeawum betæhte
 Assuredly the Lord who those spiritual riches (to) his servants assigned
 cymð to ðam micclum dome (CH II, 38:86-7)
 comes to the great judgement
- b. *Witodlice* ne become we þurh ure foresceawunge to ðam wæstmæ
 (CH II, 31:63-4)
 Assuredly not come we by our foresight to the produce

The adverb *witodlice* in (49) has no influence on ordering patterns of main clauses behind. In (49a) the subject precedes the finite verb while in (49b) the finite verb moves into C for deletion of the [+Affix] feature in negation C. In contrast with Old English counterparts, speaker-comment adverbs in mainland Scandinavian languages have always triggered subject-verb inversion from the earliest written period as in (50).

- (50) a. *Vist* er sia knovngr storlyndr (Morkinskinna 351, from Swan (1994:258))
 Certainly is this king generous
- b. *Heldigvis* var han hjemme (Modern Danish, from Allan et al. (1995:357))
 Fortunately was he at-home

Clauses with a left-dislocated element in Old English also frequently violate the V-2 constraint as shown in (51).

- (51) a. *Se hælend þe petrum lærde on his andwerdnysse* se ylca me lærde mid
 The Jesus that Peter taught in his presence the same me taught with
 onwrigenyssæ (CH I, 26:204-5)
 revelation
- b. *ða ðincg þe he understent 7 undergytan mæg* ne undergytt he þa
 those things that he understands and understand can not understands he those
 ðincg þurh his lichaman ac þurh his saule (CH I, 10:119-120)
 things through his body but through his soul

Like speaker-comment adverbs in (49), left-dislocated clauses in (51) make no impact on

the ordering of the remaining part of the clause even if they bind resumptive phrases (*se ylca* in (51a) and *þa ðincg* in (51b)). In sum, ordering patterns related to speaker-comment adverbs and left-dislocated clauses seriously undermine the attempt to interpret V-2 as a phonological constraint in Old English.⁴³

Second, topic-initial sentences in Old English exhibit inconsistency concerning the position of a finite verb even when a topicalized element is theta-related to a predicate as shown below.

- (52) a. *Dis tacn* worhte se hælend ærest on his menniscnyse (CH II, 4:22-3)
 this token made Jesus first in his incarnation
- b. *þa lufe* ure scyppend us gewutelode þurh hine sylfne (CH I, 35:144-5)
 the love our Creator us showed through him self

In contrast with speaker-comment adverbs and left-dislocated clauses, both topicalized elements in (52) are merged as an internal argument of a transitive predicate. If the V-2 constraint works at all, it cannot predict the fourth position of the finite verb *gewutelode* in (52b), which in fact remains within *vP* whose specifier is occupied by the shifted object *us*.⁴⁴ The second position of the finite verb *worhte* in (52a) can also represent the syntactic operation of verb movement to C without resort to the phonological effect of the V-2 constraint. All the evidence in this section, therefore, denies the assumption that the V-2 constraint in Old English should play a substantial role in the distribution of finite verbs in main clauses.

Depending on the presence of verb movement to C, verb positions in Old English main clauses are summarized as follows.

⁴³ Structurally speaking, they should be located beyond CP in the following examples.

- (i) *Witodlice* ða ða he stod on his gebedum astrehtum handum (CH II, 32:185-6)
 Assuredly when he stood in his prayers (with) stretched hands
- (ii) *Se ðe ne lufað his broþor þone ðe he gesihð* hu mæg he lufian god þone ðe he ne gesihð
 One who not loves his brother that he sees how can he love God that he not sees
 lichamlice (CH I, 22:225-7)
 bodily

⁴⁴ Kiparsky (1995) suggests that CP in Old English should be optionally projected for topics. Following his assumption, CP is not projected when topics are immediately followed by personal pronouns. Instead, a phonological rule applies to place pronominal clitics around TP. However, his assumption cannot explain why the locus for feature matching for topics should be inconsistent in Old English, not to mention the fact that full NP topics can appear without subject-verb inversion.

- (53) a. (*wh*-phrase/*pa/ne*/topic) – finite verb – subject
 b. (topic) – subject – finite verb

Finite verbs in (53a) move into the highest head C, which is forced by the [+Affix] feature in C requiring verbal suffixation. When C carries the EPP as well as the [+Affix] feature, *wh*-phrases or topics undergo movement into a specifier of CP and happen to produce the V-2 pattern with the finite verb in C.⁴⁵ Otherwise, verb movement to C results in V-1 constructions. In (53b), the ordering pattern indicates that finite verbs fail to reach the head C due to the absence of the EPP features in C. Lack of operatorhood possibly leads to the optional presence of the [+Affix] feature in C associated with topicalization. Therefore, structural positions of finite verbs are restricted to T at most in (53b). Considering the assumption made in 4.1 that T has the [+Affix] feature optionally in Old English, finite verbs are predicted to appear either in T or in *v*. Indeed, in some occurrences where finite verbs immediately follow subjects, structural positions of finite verbs are, in fact, ambiguous even if the V-2 constraint is satisfied as exemplified below.

- (54) Gregorius rehte sume bysne be ðam worde ðe drihtne cwæð (CH II, 6:167)
 Gregory told some example about the word that (the) Lord said

The word order of (54) cannot tell whether the finite verb *rehte* moves into T, since no explicit evidence is confirmed for movement of the complement into a specifier of *v*P.

The aforementioned ambiguity in verb positions disappears when sentence adverbs appear around finite verbs as in (55a) or when raised objects precede finite verbs as in (55b)=(52b)).

- (55) a. Witodlice cristes lichama ðe deað ðrowade and of deað aras ne
 Assuredly Christ's body that death suffered and from death arose not
swylt næfre heononforð (CH II, 15:143-4)
 perishes never henceforth

⁴⁵ It is unlikely that *pa* and *ne* move independently to a specifier of CP to delete the EPP features in T. Following Stockwell (1977), *pa* can be a conjunction element just as *and* and *ac*. *Ne*, on the other hand, undergoes proclisis to a finite verb and becomes a freerider to verb movement to delete the [+Affix]

- b. þa lufe ure scyppend *us gewutelode* þurh hine sylfne (CH I, 35:144-5)
 the love our Creator us showed through him self

Given that the negative adverb *næfre* marks the boundary of vP, T in (55a) must have the [+Affix] feature to force movement of the finite verb *swylt* across the negative adverb.⁴⁶ On the other hand, T in (55b) lacks the [+Affix] feature, which makes the finite verb *geswultode* remain within vP and follow the shifted pronoun *us* in a specifier of vP.

Following the minimalist analysis made here, the distribution of finite verbs in Old English main clauses depends on the locus of the [+Affix] feature. They move into a higher position only when forced by functional heads T and C, both of which carry the [+Affix] feature optionally in Old English. Notice that similar attempts have been made to explain non-uniform positions of finite verbs in main clauses of V-2 languages. Zwarts (1993) assumes that a strong N(ominal) feature in T can be satisfied either by V-to-T movement (in subject-initial main clauses) or T-to-C movement (in non subject-initial main clauses). His idea on N-feature checking, of course, is untenable under Chomsky's (CT, MI) recent version of the minimalist framework, since the N-feature belongs to interpretable features and its nominal nature cannot be relevant to verb movement. Roberts (1997) argues that his split-AgrP analysis accommodates various surface positions of finite verbs in Old English. Under his analysis, finite verbs can virtually occupy every functional head except for Agr1 reserved for clitics. Yet, the issue remains unsettled what constrains a structural position for a finite verb.

The assumption that a structural position is fixed for finite verbs in main clauses (C in the CP-V2 analysis, T in the TP-V2 analysis) also fails to illuminate the distribution of finite verbs in Old English. The CP-V2 analysis has to force expletives and nominative subjects to undergo movement into a specifier of CP without any syntactic motivation. Moreover, it needs some ad hoc stipulation when more than one syntactic elements appear before finite verbs in main clauses. Clitic movement can be a partial solution at best in consideration of the ordering pattern of (55b) where two non-

feature in negation C.

⁴⁶ As mentioned earlier in this section, *witodlice* has no effect on the ordering pattern in (55a). The subject is therefore assumed to stay within a specifier of TP without further movement to CP.

pronominal elements precede the finite verb. The same problems are repeated in the TP-V2 analysis (Pintzuk (1993,1999)), according to which finite verbs are assumed to occupy the functional head T in main clauses.⁴⁷ Moreover, Pintzuk's analysis predicts that non-topic subjects should remain within VP, which causes problems in explaining Case/agreement relations between T and nominative subjects. In the minimalist terms, her analysis implies that Old English should permit quirky subjects whenever a clause begins with a non-subject topic.

6.6. Conclusion

In spite of seemingly complex patterns, the distribution of finite verb in Old English can receive a principled account under the minimalist analysis based on the head-initial hypothesis. Once the head-final hypothesis is abandoned, a rightward operation of extraposition whose postulation suffers the lack of syntactic motivations becomes unnecessary for various types of post-verbal elements within Old English subordinate clauses. Yet, the relative order between adverbs and finite verbs testifies that finite verbs optionally undergo movement to T in Old English. In analogy with V-to-*v* movement, verb movement to T is proposed as an operation forced by the [+Affix] feature in T. It is furthermore assumed that T in Old English carries the uninterpretable [+Affix] feature optionally to produce optionality in verb movement. Considering the minimalist presupposition that every syntactic operation is motivated by the requirement to delete uninterpretable features, the analysis of V-to-T movement is expected to hold for other types of head movement in Old English. In verb-particle constructions, the distribution of particles can be illuminated by the assumption that the [+Affix] feature in verbs forces particle movement. In verbal complexes consisting of pre-modals and infinitival verbs, infinitival verbs undergo head movement forced by the [+Affix] feature in pre-modals. Although pre-modals in Old English exhibit both lexical and modal properties, infinitival complements below them are supposed to have a clausal status of TP whose head is defective. The above assumptions explain all possible ordering patterns of verbal complexes, since defective T cannot prevent any element except for PRO from

⁴⁷ Strictly speaking, Pintzuk's analysis is not uniformly TP-V2, since she admits that a finite verb appears in C when a sentence begins with *wh*-phrases, negative particles, and a certain type of adverbs.

moving out of an infinitival clause. The analysis correctly excludes the ordering pattern of infinitival verb–complement of an infinitival verb–pre-modal verb. Once an infinitival verb undergoes head movement into a pre-modal, they form a cluster of heads, which cannot be split by XP movement of a complement of the infinitival verb.

Post-verbal nominative arguments in subordinate V-2 constructions no longer raise empirical and conceptual issues under the minimalist analysis based on the head-initial hypothesis. Following Chomsky's (2000) proposals on quirky arguments, oblique arguments can have a structural Case feature and therefore become subject to movement into a specifier of TP for deletion of their Case feature and the EPP features in T. Agreement features of T, on the other hand, are default or become deleted by Agree. His ideas can be applied to subordinate V-2 in Old English whose occurrences are restricted to unaccusative predicate constructions. When T is merged above an unaccusative predicate, two possible options can be considered to delete its EPP features. When an expletive element is available from the numeration, it should be merged to a specifier of TP without a costly operation of movement. Otherwise, any argument within an unaccusative predicate can move as long as it has a structural Case, since V-to-*v* movement makes internal arguments equidistant from a higher head.

The minimalist analysis suggested here denies the assumption that finite verbs invariably move into C (or T) in Old English main clauses. In case a sentence begins with a subject, a finite verb can reach T at best. Further movement to C can be triggered only if C with the [+Affix] feature is merged above T. The analysis also rejects the idea that the V-2 constraint should be a comprehensive phonological constraint in Old English. It is assumed that the V-2 pattern with subject-verb inversion is forced only if C carries both the EPP and the [+Affix] feature. The functional head C responsible for topicalization, however, is optionally merged with [+Affix] feature in Old English, which causes inconsistency in subject-verb inversion in topicalized sentences. Unless C is merged with the [+Affix] feature, the presence of the [+Affix] feature in T determines structural positions for finite verbs. The above analysis implies that a string of subject-finite verb in main clauses is irrelevant to V-to-C movement or a phonological constraint of V-2. Evidence from the relative order between finite verbs and adverbs or between finite verbs and raised objects testifies that, just as in subordinate clauses, finite verbs undergo movement to T as long as T is merged with the [+Affix] feature.

Chapter 7. Scrambling in Old English

7.1. Introduction

The head-initial analysis presupposes that leftward operations are responsible for every pre-verbal complement in Old English. To put it in other words, the pre-verbal positions of complements represent derived rather than base ones. In terms of the minimalist assumption that only the requirements for feature checking or deletion can implement movement at syntax, the occurrences of pre-verbal complements should be associated with a feature-driven operation to displace them across finite verbs. Otherwise, their displacement becomes susceptible to stylistic or phonological rules after syntax proper whose application is independent of syntactic principles.

Two principal conditions should be met for the triggering force of pre-verbal complements to be eligible for syntactic accounts under the minimalist framework. First, it should be related to an operation to delete uninterpretable features, typically morphological ones. Presence of uninterpretable features always causes a derivation to crash at the interface LF since they are not legitimate objects for interpretation (Chomsky, MI:94-98). If an operation exclusively resorts to interpretable features, it fails to be compatible with the minimalist assumption that movement is the last option to make a derivation legible at the interface by deleting uninterpretable features. Second, every operation to delete uninterpretable features should be carried out in an optimal way (Chomsky, MI:110-112).¹ Therefore, a derivation can be legitimate as long as it not only dispenses with uninterpretable features but also obeys the principles of economy during its computation.

The main purpose of this chapter focuses on providing an account of pre-verbal complements in Old English within the minimalist framework. In 7.2, the argument is made against the traditional demarcation between scrambling and object shift, each of which conventionally refers to the leftward extraction of complements out of the boundary of VP. In 7.3, the previous minimalist proposals, which regard both

¹ Chomsky suggests that the issues on an optimal derivation including computational complexity should be rooted from conceptual necessities rather than from technical considerations.

scrambling and object shift as strictly case-driven operations, are critically reviewed and some empirical and conceptual issues are raised undermining their plausibility. In 7.4, an alternative is made under the minimalist framework by Chomsky (MI) to illuminate various aspects of scrambling in Old English. The analysis denies the assumption that scrambling in Old English is motivated by the Case-requirements or information structure. Instead, it argues that a complement with an uninterpretable Case feature is subject to (short-distance) scrambling forced by the EPP features in the functional head v associated with uninterpretable agreement features. It is also suggested that scrambling in Old English should represent an optimal way to delete relevant uninterpretable features.

7.2. Scrambling and object shift

7.2.1. General descriptions

It has been traditionally assumed that in putative head-final languages scrambling is responsible for the extraction of a complement out of VP. The effect of scrambling can be confirmed in two alternative positions for an object as exemplified below.²

- (1) a. ...daß Hans oft *das Buch* gelesen hat (German)
... that Hans often the book read has
b. ...daß Hans *das Buch* oft gelesen hat

Considering its clausal scope, the adverb *oft* in (1) is assumed to occupy a structural position at least above VP. The post-adverbial position of the object *das Buch* in (1a), therefore, indicates that the object remains in its base position within VP (under the head-final analysis) or moves at most into a position below the adverb (under the head-initial analysis). In contrast, the pre-adverbial position of the object in (1b) testifies that both head-final and head-initial analysis require a leftward operation of scrambling to extract the object across the adverb.

² The role of focus in scrambling is ignored here. Scrambled elements such as *das Buch* in (1b) tend to be defocalized (Zubizarreta, 1998:172 fn.15).

Scandinavian languages, which are indisputably head-initial, exhibit a similar operation of object shift to prepose complements out of VP. Just as scrambling, the effects of object shift can be found in the relative order between objects and adverbs as shown below.³

- (2) a. Jag känner inte *honom* (Swedish)
 I know not him
 b. Jag känner *honom* inte

Given that the negative adverb *inte* in Swedish marks the left-periphery of VP, the distributional contrast of the object *honom* in (2) depends on the application of object shift. In (2a), the object remains within VP and follows the negative adverb. In (2b), it is shifted out of VP to precede the negative adverb.

It is, however, likely that as far as verb movement is concerned scrambling is distinguished from object shift. Let us compare the positions of scrambled and shifted objects within subordinate clauses. As seen in (1b), scrambled objects within subordinate clauses can be separated from verbs by an intervening adverb. In contrast, shifted objects within subordinate clauses should be adjacent to verbs as shown in (3).⁴

- (3) a. *...att jag *honom* inte känner
 that I him not know
 b. ...att jag inte känner *honom*

The contrast in (3) has been attributed to Holmberg's generalization requiring the concomitance of verb movement and object shift. Therefore, unmoved verbs such as *känner* in (3) always block the application of object shift.⁵

³ As in case of scrambling, shifted objects are generally devoid of focus (Holmberg, 1999:22-3).

⁴ In contrast with Mainland Scandinavian languages, Icelandic has verb movement out of vP in subordinate as well as main clauses and allows object shift within subordinate clauses as shown below.

(i) ...að Jón las bækurnar ekki
 that John read the-books not

⁵ Holmberg (1986)'s original idea is based on the visibility condition on the Case marking of an object. Following his analysis, object shift is blocked by any lexical element within VP, since its presence makes it impossible for a shifted object to receive Case from a Case-assigning verb.

Old English also has an operation to extract a complement out of VP, which can be confirmed in the distribution of pre-verbal objects within subordinate clauses as exemplified below.⁶

- (4) a. þæt we *symle þone maran gylt* forfleon þurh utfære læssan
 that we always the greater sin escape by departure of(from) (the) lesser (one)
 (CH I, 32:125-6)
- b. þ he sceal þa flæslican lustas gewyldan 7 *his lichaman* to godes þeowdome
 that he must those fleshly desires conquer and his body to god's service
symle gebigean (CH I, 12:110-1)
 always turn

The adverb *symle* precedes the object *þone maran gylt* in (4a) but follows the object *his lichaman* in (4b). Given that the position of the adverb *symle* is fixed above VP, the ordering pattern of (4b) seems to fit into the above-mentioned descriptive generalization on scrambling that a displaced object can be split from a verb.

Old English, however, should be distinguished from Modern German and Modern Dutch, in that it allows unscrambled objects to appear in a post-verbal position within subordinate clauses irrespective of their length as shown below.

- (5) a. Ic secge eow þæt heora englas *symle* geseoð *mines fæder ansyne*
 (CH I, 34:153-4)
 I say to-you that their angels always see my father's face
- b. For ðan þe he tæhte *symle eaðmodnysse* (CH I, 14:88)
 because he taught always modesty

⁶ In earlier texts such as Orosius, the adverb *symle* is used alongside the phrase *on symbel* (*simbel*, *siml*) as shown below.

(i) for þon hie *on symbel* wið Romanum sibbe heoldon (Orosius 99:10-11)
 because they always with Romans peace kept

The occurrence of the phrase *on symbel* is not attested in *Catholic Homilies*, which can reflect the development of sentence adverbs in later Old English. It should be noticed that except for *naefre* Old English seems to have no fixed category of sentence adverbs. For instance, *symle* can modify either clause (meaning *always/ever*) or verb phrase (meaning *continually*). See Mitchell (1985:496) for general difficulties in confirming sentence adverbs in Old English. Yet, those difficulties do not affect the main arguments here.

In contrast, Modern German and Modern Dutch prohibit DP objects from occupying a post-verbal position within subordinate clause even if they remain unscrambled as in (6).

(6) *... daß Hans oft gelesen hat *das Buch*

Evidence from (4) and (5) indicates that Old English permits DP objects at least in three positions (pre-sentence adverb, post-sentence adverb but pre-verbal, and post-verbal) within subordinate clauses.

7.2.2. Syntactic diagnoses for the distinction between scrambling and object shift

In addition to the empirical discrepancy mentioned above, scrambling and object shift have been traditionally regarded as completely different syntactic operations. A main argument for their distinction comes from the conventional bifurcation of syntactic movement within generative grammar, that is, A-movement for argument chains vs. A'-movement for operator chains.⁷ Some distinctive properties of the two types of chains can be summarized as the following (Webelhuth, 1992:180).

(7) Properties of Operator and Argument Chains

	O-Chains	A-Chains
Moves DP	+	+
Moves PP	+	-
Moves into a non-case marked position	+	-
Licenses parasitic gaps	+	-
Strands preposition	+	-

Among the properties mentioned in the table (7), PP movement stands in favor of the idea that only scrambling can form an operator chain as shown below.

⁷ See Chomsky (1986a, 1986b) for an extensive argument on the typology of syntactic movement.

- (8) a. Hij heeft [_{PP} *met Marie*] niet gepraat (Dutch)
 he has with Marie not talked
 b. *Jag tror [_{PP} *på det*] inte (Swedish)
 I believe in it not

Old English also permits PP extraction out of VP as exemplified in (9).

- (9) se ðe [_{PP} *on clænum mæigðhade*] symle wunode (CH I, 30:42)
 one who in clean virginity always remained

The ordering pattern in (9) corresponds to that of scrambling in (8a): the PP *on clænum mæigðhade* precedes both the sentence adverb and the finite verb. Under the traditional notion of structural Case, PPs have no reason to undergo A-movement, since they are supposed to have no Case in themselves. The test of PP movement, therefore, can support the A'-movement property of scrambling and, at the same time, the A-movement property of object shift.⁸

The three remaining criteria in (7) are not so persuasive as to distinguish scrambling from object shift in terms of the typology of movement. First, a landing site cannot determine the type of a chain formed by movement. Even if scrambling can destroy the adjacency between a verb and its complement, their split does not necessarily support the assumption that a scrambled complement occupies a non-Case marked or related position.⁹ Chomsky (CT, MI) suggests the multiple-specifier hypothesis according to which a functional head can have more than one specifier as long as they are syntactically justified. As far as the functional head *v* is concerned, its specifiers include not only an external argument through merge (forced by the requirement of theta structure) but also an internal argument through move (forced by uninterpretable

⁸ Notice that written Swedish has the operation called Adverbial Shift, which displaces adverbial expressions out of VP as the following (Holmes & Hinchliff, 1994:518-520).

- (i) a. Han har stannat hemma [*under de senaste dagarna*]
 he has stayed at-home the last few days
 b. Han har [*under de senaste dagarna*]_i stannat hemma *t_i*

Nevertheless, it remains doubtful whether Adverbial shift can justify PP extraction in object shift in consideration of the fact that the operation is largely limited to light or time adverbials

⁹ Weibelhuth (1992) assumes that the adjunction structure formed by scrambling prevents scrambled DPs from receiving Case.

features).

Following Chomsky's suggestion, vP has the structure in (10) when a complement is extracted after merge of a sentence adverb and a subject.

$$(10) \quad [{}_{vP} \text{ complement}_i [{}_{vP} \text{ subject } [{}_{vP} \text{ sentence adverb } [{}_{v'} v+V_j [{}_{vP} t_j t_i]]]]]$$

Three specifiers are generated for v in (10). The complement is extracted from its base position within VP while the subject and the sentence adverb are both selected from the numeration.¹⁰ Locality is no longer an issue here. Verb movement to the light verb v extends the minimal domain for the complement into a specifier of v .

When the verb in (10) undergoes no further movement to a higher head T, adjacency cannot be expected between the verb and its complement due to the presence of the sentence adverb. Then, the derivation will have the following structure (11) after the subject moves into a specifier of T.

$$(11) \quad [{}_{TP} \text{ subject}_k [{}_{T'} T [{}_{vP} \text{ complement}_i [{}_{vP} t_k [{}_{vP} \text{ sentence adverb } [{}_{v'} v+V_j [{}_{vP} t_j t_i]]]]]]]$$

In case the verb as well as the subject in (10) moves into the functional category headed by T, it becomes contiguous to the object in the specifier of vP as shown in (12).

$$(12) \quad [{}_{TP} \text{ subject}_k [{}_{T'} (v+V_j)_i+T [{}_{vP} \text{ complement}_i [{}_{vP} t_k [{}_{vP} \text{ sentence adverb } [{}_{v'} t_i [{}_{vP} t_j t_i]]]]]]]$$

If the above analysis is correct, verb movement to a higher functional head higher than v disguises the fact that both scrambled and shifted objects occupy the same locus, that is, a specifier of vP .

Second, licensing of parasitic gaps has been attributed to a property of an element in A' -position as the contrast below exemplifies.¹¹

¹⁰ Following Chomsky (MI:104), the analysis of (10) presupposes that merge should precede a more complicate operation of raising. The point of merge of sentence adverbs, however, requires scrutiny. In contrast with subjects in transitive constructions, which are theta-related with the functional head v , they have no theta-relation with functional or lexical heads. The issue will be explored later in this chapter.

¹¹ No occurrences of parasitic gaps are attested in *Catholic Homilies*. Their absence can be accidental but

- (13) a. which book_i did you read t_i before Fred reviewed e_i
 b. *Moby Dick_i was read t_i by Bill before Fred reviewed e_i

The empty elements such as within the adjunct clauses headed by *before* in (13) are assumed to constitute parasitic gaps whose existence and interpretation depend on the presence of null elements in the matrix clause. According to Chomsky (1986:54-68, 1995:75-6), a parasitic gap represents a trace of an empty operator occupying a specifier of CP in an adjunct clause. He furthermore hypothesizes that the chain of the parasitic gap in an adjunct clause should be united with the chain of the real gap in a matrix clause to receive a proper interpretation through a process of so-called chain composition.¹²

Chomsky's analysis implies that parasitic gaps should be variables bound by (empty) operators and therefore subject to Binding Principle (C) for R(eferential)-expressions such as names and variables. Let us consider how Binding Principle (C), which requires R-expressions to be (A-bound) free everywhere, explains the contrast in (13). In (13a), *which book* occupies A'-position after *wh*-movement and licenses the parasitic gap without violating Binding Principle (C). In (13b), *Moby Dick* heads an A-chain in passive construction. Therefore, Binding Principle (C) requires that the parasitic gap, which is defined as a variable, should not form a binding relation with *Moby Dick* in A-position.

Webelhuth (1992:184-5) suggests that parasitic gap constructions can provide evidence in favor of the A'-movement property of scrambling and the A-movement property of object shift as shown below.¹³

- (14) a. ? weil er *den Artikel*_i [ohne PRO vorher e_i zu lesen] t_i ablegte (German)
 because he the article [without first to read] filed

the possibility cannot be ruled out that it is related to systematic factors.

¹² See Nunes (1995) and Hornstein (2001:72-134) for a somewhat radical minimalist interpretation of parasitic gaps. Instead of chain composition, they propose sideways movement between subtrees in a derivation, which implies that the head of a real gap in a matrix clause starts from the position of a parasitic gap in an adjunct clause. In terms of a derivational perspective, they provide an attractive analysis for parasitic gaps, since chain relations based on a representational concept are replaced with movement. Nevertheless, it remains questionable how a syntactic element can undergo sideways movement skipping the boundary of an adjunct clause.

¹³ The verb-final analysis of (14a) is from Webelhuth.

b. *Jag kastade *den*_i inte *t*_i [innan jag hade läst *e*_i] (Swedish)

I threw it not [before I had read]

If licensing of a parasitic gap is unique to elements in A'-positions, the contrast in (14) seems to receive a straightforward account based on A/A' distinction between scrambling and object shift. It is, however, still arguable whether parasitic gap constructions confirm the A'-movement property of scrambling. The judgement on (14a) testifies that parasitic gaps bound by scrambled elements enjoy less rigid status than those bound by *wh*-phrases as in (13a).¹⁴ Sportiche (1996), moreover, suggests that the status of parasitic gaps can deteriorate when they are bound by scrambled objects with oblique Case as the following.

(15) a. ?*Verzoek *Jan*_i [maar om *e*_i unit] te stapen (Dutch)

ask Jan but to out to step

b. ?dat ik *deze boeken*_i [zonder *e*_i in te kijken] aan Jan doorverkoop

that I these books without in to look to Jan sell

The dative object *Jan* in (15a) is much less eligible to bind the parasitic gap than the accusative object *deze boeken* in (15b). The asymmetry in (15) can hardly be expected if scrambling is purely A'-movement and, consequently, disregards Case distinctions between objects.¹⁵

Let us finally consider whether preposition stranding can provide convincing evidence for the distinction between scrambling and object shift. Following the traditional analysis of generative grammar, an operation is assumed to form an operator chain if it extracts DP out of PP with a preposition left behind. In contrast, an argument chain, which has been typically motivated by Case requirements, cannot be associated with DP immediately embedded under PP. In terms of Case marking, DP can have its

¹⁴ As indicated by Koster (1987), parasitic gap constructions in Dutch and German are generally restricted to infinitival clauses headed by prepositions. Their status becomes more dubious under the head-initial analysis, since both scrambled elements and infinitival clauses including parasitic gaps can occupy specifiers of the same functional head *v*.

¹⁵ Sportiche (1996) proposes a separate functional category for each scrambled element and assumes that the A-property of AgrIOP whose specifier hosts *Jan* is responsible for the unacceptability of (15a).

Case assigned by a preposition. It is therefore suggested that prepositions cannot be stranded by A-movement except when a process is implemented in passive constructions to reanalyze a string of verb and preposition as a single verb. Old English indeed shows no occurrences of preposition stranding even in passive and raising constructions (Denison, 1993:125).

The examples in (16) demonstrate that preposition stranding can distinguish scrambling from object shift.

- (16) a. weil da_i niemend [_{pp} *gegen* t_i] war (German)
 because that nobody against was
- b. Gif δe_i man scotað [_{pp} *to* t_i] (Old English, from CH II, 37:26)
 if you man shoot to
- c. *Jag talade *henne_i* inte [_{pp} *med* t_i] (Swedish)
 I spoke her not with

Scrambling shares preposition stranding with some A'-type operations including *be* relative clauses in Old English as shown below.¹⁶

- (17) a. Se ærra fīxnoð ær cristes ðrowunge getacnode þas andwerdan gelaðunge
 the earlier fishing before Christ's suffering signified the present congregation
ðe we on sindon (CH II, 16:160-2)
 that we in are

Yet it is not always the case that every A'-movement in Old English permits preposition stranding.¹⁷ *Wh*-movement and topicalization, both of which represent typical A'-movement, require pied-piping rather than preposition stranding as shown below.

- (18) a. *On hwilcum dæle* hæfð se man godes anlicnysse on him? (CH I, 20:193-4)
 in which part has the man God's similitude in him

¹⁶ See van Kemenade (1987:145-153) for descriptive generalizations on prepositional stranding of Old English.

¹⁷ As in case of Romance languages in which pied-piping is obligatory (Kayne, 1981), preposition stranding in A'-movement is not so prevalent crosslinguistically.

- b. *ac þurh heora hiw he gebicnode þa gesceadwisan men ðe andgit habbað*
 but through their form he beckoned the rational men who intelligence have
 (CH II, 26:50-2)

Even relative clause constructions except for *þe* relatives force pied-piping as exemplified in (19).¹⁸

(19) a. *se þe* relatives

Drihten þu gegearcodeðt myssan on minre gesihðe togeanes ðam þe me
 Lord you prepared tables in my sight towards which that me
gedræfdon (CH II, 8:103-4)
 drove

b. *se* relatives

þæt hi habbað þa fif yttran andgitu and ða incundan lare ðurh ða
 that they have the five outer meanings and the inner teaching through which
hi asmeagað þone heofenlican wisdom (CH II, 38:66-7)
 they conceive the heavenly wisdom

Moreover, prepositional stranding is at best optional in scrambling as exemplified below.¹⁹

¹⁸ Relative clause constructions in Old English have been a controversial issue to generative grammar. Prior to the minimalist framework, the main proposals for the constraint on prepositional stranding come from the general principle of movement such as the ECP (Kayne, 1981) or Subjacency (van Kemenade, 1987). In addition, van Kemenade suggests that the clitic nature of empty elements in *þe* relatives should make them exempt from the constraint on movement. The minimalist framework can make an alternative account without recourse to the clitic analysis. First, let us suppose that an empty operator in *þe* relatives is defective, in a sense that it lacks a visible Case marking. Consequently, it can move for feature deletion without accompanying a preposition, which satisfies economy considerations requiring minimal material to be affected by the operation. In case lexical elements (demonstrative pronouns) move alone leaving a preposition stranded, the operation violates economy considerations: an extra operation should be implemented to return them to the original positions for deletion of their Case features.

¹⁹ Contrary to van Kemenade (1987:152)'s generalization that preposition stranding is obligatory in *tough* movement constructions in Old English, stranding is, in fact, optional as the following examples testify.

- (i) a. *7 þær wæs micel gæs on ðære stowe: myrige on to sittenne* (CH I, 12:17)
 and there was much grass in the place pleasant on to sit
 b. *seo magdalenisce maria 7 maria iacobes moder bohton deorwyrðe sealfu þe bið geworht to*
 the Maddalena Maria and Maria Jacob's mother bought precious ointment that is made to
smyrigenne manna lic mid (CH I, 15:17-18)
 anoint men's body with

- (20) a. Cristes leorningnihtas *to him* genealæhton and ðam wife *to him*
 Christ's disciples to him approached and the woman to him
 geðingodon (CH II, 8:58-9)
 interceded
- b. Se hælend *him* cwæð *to*; gecnawan hæbbe ge ænige syflinge begyten
 the Saviour him said to; friends have you any food obtained
 (CH II, 16:113-4)

Given that the notion of the ECP or Subjacency is of no linguistic significance under the minimalist framework, preposition stranding is preferable to pied-piping of PP in terms of economy considerations.²⁰ Pied-piping, in principle, should be forced by some independent syntactic principle whose violation can cause a derivation to crash (Chomsky, CT:264). All in all, preposition stranding cannot provide a cogent argument for the identification of movement type. It is true that preposition stranding manifests itself in certain A'-type operations, but it is anything but universal both language-internally and crosslinguistically in spite of its conceptual advantage based on economy considerations.

7.2.3. A-properties of scrambling and its theoretical implications

In addition to the aforementioned problems concerning the validity of the criteria for A-/A'-movement distinction, Binding Principles provide conflicting evidence on the typology of scrambling. Let us consider binding relations in the examples below (Webelhuth, 1992:205-210).

- (21) a. ?Peter hat *die Gäste*_i [ohne e, anzuschauen] dem Pfarrer t_i vorgestellt
 Peter has the guests [without looking-at] (to) the priest introduced
- b. ?Peter hat *die Gäste*_i [ohne e, anzuschauen] einander_i t_i vorgestellt
 Peter has the guests [without looking-at] (to) each other introduced

²⁰ Recall Chomsky's (CT: 262) suggestion that movement should carry along just enough material for convergence.

Following the analysis of parasitic gap constructions made earlier, the A'-movement analysis of scrambling predicts that (21a) should be acceptable. The scrambled object *die Gäste* appears in an A'-position and therefore licenses the parasitic gap without violating Binding Principle (C). If scrambling is uniformly analyzed as A'-movement, Binding Principles expect that (21b) should be much less acceptable than (21a). The scrambled object *die Gäste* fails to A-bind the reciprocal pronoun *einander*, which leads to the violation of Binding Principle (A) requiring that anaphors including reciprocal pronouns should be locally A-bound. Surprisingly, no significant differences can be detected in acceptability between (21a) and (21b).²¹

The property of a scrambled element, moreover, tends to vary depending on its geometry. Scrambling can be divided into three subtypes in terms of extraction distance: short-distance scrambling between VP and T, middle-distance scrambling between nominative subject (in Spec of TP) and C, and long-distance scrambling out of a tensed clause as schematized below.²²

- (22) a. short-distance scrambling
 [_{TP} subject [_T T [scrambled element_i [_{VP} V t_i]]]]
- b. middle-distance scrambling
 ...[scrambled element_i [_{TP} subject [_T T [_{VP} V t_i]]]]
- c. long-distance scrambling
 [scrambled element_i [... [_{CP} [_{TP} subject [_T T [_{VP} V t_i]]]]]]

Not all of the three types in (22) are attested in every language permitting scrambling. Old English dispenses with long-distance scrambling out of a tensed clause. It can extract a complement only from an infinitival clause as in (23).

- (23) gif we *us selfe* nellað fordon mid unþeawum (CH I, 19:181)
 if we ourselves not-wanted destroy with vices

Middle-distance scrambling in Old English is strictly restricted as discussed in chapter 4.

²¹ Notice that Reconstruction cannot rescue the violation of Binding Principle (A) (Chomsky, MP:208).

²² Subject raising is ignored here. Distinctions made in (22) are based on Tada (1993).

It affects pronominal objects only and frequently occurs with indefinite subjects including *man* and *hwa* as in (24a,b).

- (24) a. Ne onhebbe *hine* nan man on his woercum (CH II, 5:175)
Not raise himself no man in his works
b. gif *hine* hwa to goddre drohtnunge tihte (CH I, 35:227)
if him someone to good conduct exhorts

Some languages such as Korean, Japanese, and Hindi exhibit all the types of scrambling enumerated in (22). Furthermore, they reveal a consistent tendency that the more distant an element is extracted the more likely it behaves as an A'-positioned element. Saito (1992) and Tada (1993) convincingly demonstrate that scrambling in Japanese typically represents the tendency as far as binding relations and Weak Crossover effects are concerned. A-movement properties are confirmed only in short-distance scrambling while A'-movement properties are reserved for long-distance scrambling. Interestingly, middle-distance scrambling in Japanese is claimed to have both A- and A'-movement properties.

There have been many suggestions to resolve the seemingly contradictory aspects of scrambling. Mahajan (1990) argues that scrambling in fact comprises A- as well as A'-type operations. He suggests that either type of operations can be involved with the extraction of an object out of VP as long as it violates no grammatical principles. His assumptions correctly predict the A'-properties of a long-scrambled element, since no A-movement can extract an element out of a tensed clause. However, they have difficulties in explaining how A- and A'-movement property can co-exist in middle-distance scrambling in Japanese and short-distance scrambling in German.²³ Welbelhuth (1992), on the other hand, attributes the dual property of scrambling to the adjunction structure formed by a scrambled element. In his assumption, an adjoined position is neither A- nor A'-position, but can have both properties. His accounts could be a partial answer to the occurrences of scrambling with the heterogeneous nature of

²³ Based on the same diagnosis of anaphor binding as Weibelhuth (1992), Grewendorf (1999) claims that in contrast with Japanese counterpart middle-distance scrambling in German unambiguously belongs to A'-movement.

A- and A'-movement. Yet, they cannot explain why scrambling to some specific positions should be uniform with regard to A/A' distinction in spite of the stipulation of the adjunction structure specific to scrambling.

Fundamental problems in the above-mentioned proposals arise from their failure to identify the triggering force to make a complement scrambled out of its base position. Under the minimalist framework, the distinction between A- and A'-movement is no longer determined by a landing site. Rather, it depends on whether it is associated with ϕ -features for the Case-agreement system (A-movement) or with P-features for the peripheral system such as topic, force, and focus (A'-movement) (Chomsky, 2000:108). It is furthermore suggested that heads of a phase, that is, C and v , can optionally select P-features as the following (Chomsky, 2000:109).

(25) The head H of phase may be assigned an EPP-feature.²⁴

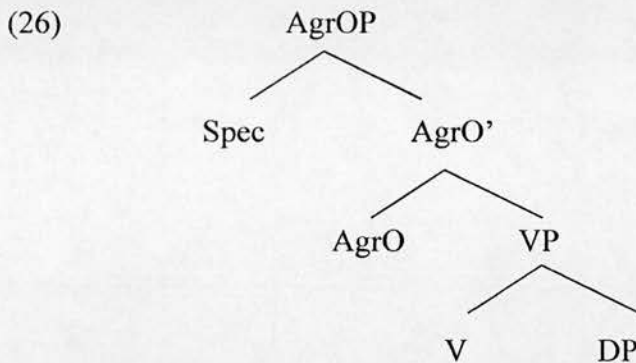
The assumption made in (25) provides a new perspective on the understanding of movement types. The functional head C invariably heads a chain of A'-movement, since it is assumed to have no Case and ϕ -features for agreement. The head v , on the other hand, can have not only P-features as defined in (25) but also Case and ϕ -features for agreement against a complement. If a specifier of v P is construed as a structural position for scrambling, the dual nature of a scrambled object can be expected from the involvement of both P- and Case/agreement features with the operation. In case either of those two types of features is relevant to the operation, scrambled elements come to have a single nature with regard to A/A' distinction (A-positioned property by Case/agreement features and A'-positioned property by P-features). Prior to pursuing this argument, let us first examine how the earlier minimalist proposals have analyzed scrambling in Germanic languages.

7.3. The Case-driven analysis of scrambling

7.3.1. Scrambling and N-features of AgrO

²⁴ Chomsky (MI:109) assumes that the EPP-feature in T can be universal.

After the seminal work of Pollock (1989), there have been many attempts to interpret scrambling as a morphological feature-driven operation (Vanden Wyngaerd (1989), Zwart (1992, 1994), Koster (1994), inter alia).²⁵ They postulate an independent functional category AgrOP for the locus of Case and agreement feature checking between an object and a verb as schematized below.



Following Chomsky (MP:198), the strength of N-features in AgrO is supposed to decide whether an operation for their checking should be overt or covert. In case they are strong as in Modern German and Dutch, they force an object to move overtly to a specifier of AgrOP. In sum, scrambling of DP is understood as an overt reflex of movement into a specifier of AgrOP (Koster, 1994:256).

Their proposal is of significant import in several aspects. First, it is representative of Kayne's (1994) version of universal base hypothesis that every language should have the order of specifier(adjunct)–head–complement. Consequently, scrambling is not so much an idiosyncratic syntactic phenomenon within head-final languages as a part of universal operations motivated for feature checking. Second, the proposal entails the integration of scrambling and object shift. Both operations are implemented by strong N-features in AgrO for overt Case-agreement checking and target the same functional category AgrOP for the locus of checking between a displaced object and a verb.

In spite of the aforementioned conceptual advantages, their proposals carry the

²⁵ As far as I know, Wyngaerd (1989) is the first one that attempts to analyze scrambling as a morphological Case-driven operation even if it sticks to the traditional head-final analysis. In what follows, the Case-driven approach to scrambling refers to the head-initial analysis adopted by Zwart and Koster.

empirical burden to explicate the occurrences of non-scrambled but pre-verbal elements within subordinate clauses in Modern Dutch and German. As mentioned in 7.2.1, non-scrambled DP complements in those languages should appear at least before a finite verb within subordinate clauses as exemplified below.

- (27) a. ...dat hij *het boek* waarschijnlijk kocht (Modern Dutch)
 that he the book probably bought
 b. ...dat hij waarschijnlijk *het boek* kocht
 c. *...dat hij waarschijnlijk kocht *het boek*

The distribution of the object *het boek* in (27) indicates that under the head-initial analysis of Modern Dutch, every DP complement should undergo either scrambling (as in (27a)) or a separate operation to prepose it between sentence adverbs and verbs (as in (27b)).

Zwart (1992) and Koster (1994) suggest that another functional category Pre(dicate)P should project between AgrOP and VP in Modern Dutch and German to host a non-scrambled DP complement as schematized in (28).

- (28) [_{AgrOP} [_{AgrO'} AgrO [_{PredP} (Adjunct) [_{PredP} [_{Pred'} Pred [_{VP} V DP]]]]]]]

Postulation of PredP is justified within their framework by a process of so-called predicate incorporation, which makes a certain group of elements within VP form a close semantic unit with a verb. Such elements as weak NPs, stranded prepositions, small clause predicates, and non-argument PPs are supposed to have predicate properties and become susceptible to the semantic coalescence of predicate incorporation into verbs. Syntactically speaking, predicate incorporation is realized by movement into a specifier of PredP in tandem with verb movement to the functional head Pred.

Thus, a semantic distinction between VP-internal elements is required for a legitimate application of predicate incorporation or scrambling as suggested by Koster (1994:267).

(29) A complement of V is either an argument or part of the predicate.

The generalization (29) implies that the semantic type of a complement in fact determines its surface position. An argument complement should move into a specifier of AgrOP to check the strong N-features of AgrO. A predicate complement, on the other hand, targets a specifier of PredP below AgrOP for predicate incorporation. Exceptions to the above generalization are CP and argument PP complements, both of which keep their base position within VP. They are supposed to lack Case features in spite of argument status and therefore become exempt from movement to AgrOP for overt Case checking.

7.3.2. Problems in the Case-driven analysis of scrambling

The core of the analysis reviewed above lies in the assumption that the landing site of a complement is canonically determined by its thematic relation to a verb. The analysis therefore precludes the optional application of scrambling and predicate incorporation. DP complements with the status of an argument should always move into a specifier of AgrOP across PredP. However, their relative positions to sentence adverbs, which are supposed to demarcate the boundary between AgrOP and PredP, indicate that they can appear in a specifier of AgrOP or PredP as exemplified below ((30)=(27a,b)).

- (30) a. ...dat hij *het boek* waarschijnlijk kocht
that he the book probably bought
b. ...dat hij waarschijnlijk *het boek* kocht

Although *het boek* occupies a position not only for argument complements as in (30a) but also for predicate complements as in (30b), no tangible evidence can be found to deny its argument status in (30b).

The assumptions about complement types cannot be easily accommodated in Old English either, since Old English permits both argument and predicate complements to occupy a post-verbal position within subordinate clauses as shown in (31).

- (31) a. þa ða he genealæhte þære ceastre 7 he hi ofseah (CH I, 28:4-5)
 when he approached the town and he it beheld
- b. þonne wite he þ god gesceop to mæran engle þone þe nu is *deoful*
 then know he that God created to great angel who that now is devil
 (CH I, 1:57-8)

Evidence from (30b) and (31a) demonstrates that even argument complements optionally undergo scrambling to undermine the analysis based on the typology of complements. In principle, the Case-driven analysis cannot admit optionality in scrambling. Once the requirements of Case checking are supposed to motivate scrambling, it is reasonable that the operation should be applied to every complement with structural Case. Considering that N-features of a functional head were initially introduced to explain the Case and agreement feature checking of DP (Chomsky, MP:197), their strength should be constant within a language unless there exists morphological evidence to support the coexistence of strong and weak variants.

Scrambled PP complements also raise problems against the Case-based analysis of scrambling. Let us first consider the distribution of PP complements in Old English as exemplified below ((32a)=(9)).²⁶

- (32) a. se ðe on *clænum mæigðhade* symle wunode (CH I, 30:42)
 one who in clean virginity always remained
- b. 7 ic symle on *his gesihðe* wunie (CH I, 34:28-9)
 and I always in his sight remain
- c. for þan ðe he wunode on his life *buton wife* (CH I, 21:216-7)
 because he remained in his life without woman

The Case-driven analysis cannot predict the asymmetry in the distribution of PP complements in (32). They are all selected by the same verb (*ge*)*wunian* and cannot be distinguished by the complement types defined in (29). In particular, the PP complement *on clænum mæigðhade* in (32a) has no reason to move into a specifier of

²⁶ In fact, it is not clear whether post-verbal PPs in (31c) represent their base positions within VP. Verb movement to T can disguise their displacement.

AgrOP, since it has no visible Case and agreement features to be checked by the N-features of AgrO. A similar problem arises against the Case-driven analysis when DP is scrambled out of PP in preposition stranding constructions as shown below ((33)=(20b)).

- (33) Se hælend *him* cwæð *to*; gecnawan hæbbe ge ænige syflinge begyten
 the Saviour him said to; friends have you any food obtained
 (CH II, 16:113-4)

As far as morphological Case is concerned, the preposition *to* is more closely related to the Case feature of the scrambled object *him* than the N-features of the functional head AgrO.

Long-distance scrambling in Old English also undermines the idea that the requirements of Case checking motivate scrambling. A long-distance scrambled complement, in fact, can have its Case and agreement features checked within an infinitival clause without movement into a matrix clause as shown in the following example.

- (34) Hwær is nu on ænigan cristendome betuh *him* selfum þæt mon *him*
 Where is now in any Christian-country between themselves that man them-dat
 þurfe swilc ondrædan þæt hine mon ænigum godum blote (Orosius, 27:15-6)
 needs such (to) dread that him man (to) any gods-dat sacrifice

In (34), the Case and agreement features of the italicized complement *him* is associated with the infinitival verb *ondrædan* rather than the matrix verb *þurfe*.

In addition to the issues of optionality and Case checking, postulation of two separate functional categories (AgrOP and PredP) between TP and VP faces several theory-internal objections. First, they lack sufficient motivations except for providing a locus of displacement. Without any justification by output conditions or by theory-internal arguments, they should be subsumed into a single functional category headed by a light verb *v* (Chomsky, CT:315-6). Technically speaking, the multiple specifier hypothesis makes it unnecessary to introduce as many functional categories as displaced

elements out of VP.²⁷

Second, under the minimalist framework adopting the VP-internal subject hypothesis, the presence of two separate functional categories results in the violation of the locality constraint whenever an external argument moves into a specifier of TP. Consider again the phrase structure proposed in the previous section ((35)=(28)).

(35) [AgrOP [AgrO' AgrO [PredP (Adjunct) [PredP [Pred' Pred [VP DP_{subj} [V' V DP_{obj}]]]]]]]]

The object DP in (35) first moves across the subject DP on its way to a specifier of AgrOP for relevant feature checking. Then, the subject DP should move from a specifier of VP to a specifier of TP (or AgrSP). The scrambled object in a specifier of AgrOP, however, blocks the raising of the nominative subject: the former (= β) is nearer to the functional specifier of T (= K) than the latter (= α) in terms of the distance defined in (36) by Chomsky (CT:356).

(36) β is closer to K (= a head of a target) than α unless β is in the same minimal domain as (a) τ (= the target of raising) or (b) α .

Therefore, economy considerations always rule out subject raising when an object is scrambled into a functional category higher than the one in which a subject is merged. The only way to rescue the derivation (35) is to assume verb movement to T (or AgrS) through Pred and AgrO. The operation has the effect of extending the minimal domain for the subject and consequently makes subject raising legitimate irrespective of intervening elements between VP and TP. The assumption, however, produces the unwanted conclusion that economy considerations should preclude a string of subject-XP*-verb in which subject raising is always blocked by an intervening element.

All in all, the Case-driven approach reviewed in 7.3.1 fails to provide a principled analysis of scrambling in Old English. It cannot predict diverse empirical aspects in Old English scrambling such as optionality, preposition stranding, and PP/long-distance

²⁷ Koster (1994) assumes that a functional head Pred or AgrO can be projected recursively to explain the multiple application of predicate incorporation or scrambling.

extraction. It is moreover assumed that a separate functional category is projected for non-scrambled but pre-verbal complements. Yet, the assumption wrongly predicts the violation of the locality constraint whenever a subject moves into a specifier of TP across pre-verbal elements between VP and TP. If the argument made here is tenable, let us next consider whether the same objections can be raised against the traditionally held assumption that object shift is Case-motivated.

7.3.3. Object shift and the Case-driven analysis

At first glance, object shift is more strictly Case-driven than scrambling as empirical evidence in 7.2.1 and 7.2.2 suggests. Yet, the Case-driven analysis of object shift experiences similar problems raised against that of scrambling. First, just as scrambling, the application of object shift is optional as shown below.

- (37) a. Jón las ekki *bækurnar* (Icelandic)
 John read not the-books
 b. Jón las *bækurnar* ekki

Second, it is not a whole range of DPs but only certain subtypes that are susceptible to object shift (Holmberg, 1999:22). In Icelandic, specific DP complements can undergo the operation but nonspecific/indefinites ones are resistant to it.²⁸ The contrast between two subtypes of DPs is confirmed in (38).²⁹

- (38) a. Í gær máluðu strákamir *húsið* allir rautt (Icelandic)
 yesterday painted the-boys the-house red
 b. ?*Í gær máluðu strákamir *eitthvert hús* allir rautt
 yesterday painted the-boys some house all red

²⁸ It should be noticed that cross-linguistic variation exists on the type of DPs affected by object shift. In Mainland Scandinavian languages, full DP and proper name complements cannot undergo object shift even if Holmberg (1999:4) raises some doubts on the generalization.

²⁹ The examples in (38) are from Collins & Thráinsson (1996:397). The objects in (38) are assumed to appear in shifted positions given that the floating quantifier *allir* represents a base position for subjects.

Although object pronouns are most likely to undergo object shift, their shift is restrained by some constraint. Only unstressed pronouns are subject to the operation as shown in (39) (Holmes & Hinchliffe, 1994:520-1).

(39) Jag känner *honom*/**hónom* inte (Swedish)

I know him not

If the requirements on Case and agreement feature checking trigger object shift, the distributional discrepancy cannot be expected between the objects in (37), (38) and (39). In terms of morphological Case features, those objects share the accusative Case and show no discernible differences.

Another drawback against the Case-driven analysis lies in the fact that object shift can affect not only accusative but also oblique/nominative DPs.³⁰ Following the traditional dichotomy of structural and inherent Case, the operation relevant to Case checking is restricted to structural Case: typically, raising of nominative DPs to a specifier of ArgSP (TP) and raising of accusative DPs to a specifier of AgrOP (vP).³¹ However, object shift can displace dative as well as accusative objects as exemplified in (40).

(40) a. Ég lána *Maríu* ekki *bækumar* (Icelandic)

I lend Maria not the-books

b. Ég lána *Maríu* *bækumar* ekki

(from Collins & Thráinsson (1996:404))

In (40a), the dative object *Maríu* is shifted while the accusative object *bækumar* remains within VP. On the other hand, both objects are displaced out of VP in (40b).

Object shift in Icelandic can displace even nominative DPs in ergative, passive, and

³⁰ Considering that scrambling affects DPs irrespective of their Case markings, the same argument can be made against the Case-based analysis of scrambling.

³¹ Koizumi (1995) proposes that an independent functional category should be projected to check the Case feature of a dative object. Yet, it is questionable whether every shifted object should move into a unique functional projection for Case checking.

psyche-verb constructions as shown in (41) (Holmberg, 1999:24).³²

- (41) Mér likar *hún/tölván* ekki (Icelandic)
me(Dat) likes it/the-computer(Nom) not

If the assumption is to be maintained that Case checking motivates object shift in (40) and (41), a single functional head (under the multiple specifier analysis) or three separate functional heads should be responsible for the checking of three different Case features such as accusative, dative, and nominative.³³

Evidence from oblique/nominative DP shift suggests that object shift cannot be generalized as a simple operation of Case and agreement feature checking for accusative DPs. Consequently, the assumption is needed that irrespective of the differences in Case markings every shifted DP should bear a structural Case feature to be checked or deleted by a functional head (Chomsky, MI:127-8). The assumption still has to answer how structural Case checking can be optional and why it affects only certain subtypes of DPs language-internally and crosslinguistically.

7.4. Proposal: the minimalist analysis of Scrambling in Old English

³² I will leave aside the question where negative adverbs should be merged in Scandinavian languages. They have been generally assumed to occupy a position beyond VP (a specifier of ν P) but Collins & Thráinsson (1996) and Collins (1997) suggest that they should be within ν P based on their distributions in double object constructions.

³³ In contrast with scrambling by which either of dative and accusative object can precede the other, object shift always requires dative objects to precede accusative objects in double object constructions as exemplified below.

- (i) a. Ég lána *Mariú bækumar* ekki
b. *Ég lána *bækumar Mariú* ekki

Notice that two possible options can be considered to derive the fixed order of dative–accusative. First, Collins & Thráinsson (1996) and Collins (1997) assume that under the principle of local economy Case and agreement feature checking for an accusative object is done before a nominative subject is merged. Their assumptions signify that dative Case checking should take place in a functional projection headed by ν after accusative Case checking is done in a lower functional projection.

Alternatively, Richards (1999) supposes that under the multiple specifier hypothesis both dative and accusative objects are attracted by the same functional category ν P. He suggests that their fixed order should derive from the general principle of shortest movement in terms of the distance from an attractor. Following his analysis, the principle forces crossing rather than nesting of multiple specifiers attracted by a single attractor. Suppose that a dative object, which is merged after an accusative object, first moves into a specifier of ν P. Then, the principle of shortest movement requires nesting of specifiers, which makes the accusative object move into a specifier behind the one already occupied by the shifted object.

7.4.1. Case vs. the EPP features

Following Chomsky's (MI) ideas on the minimalist design of language, language is an optimal solution to legibility conditions at the interfaces providing instruction or information accessible to performance systems (PF for sensorimotor systems and LF for systems of thought). He suggests that instead of his earlier speculation of feature strength, legibility conditions should force a derivation to delete all uninterpretable features at the interfaces. Otherwise, the derivation fails to satisfy legibility conditions, since uninterpretable features prevent it from receiving a proper interpretation.

Uninterpretable features including an uninterpretable Case feature in DPs are deleted either overtly or covertly during the computation. A covert option is, of course, preferable in terms of economy considerations, which was originally encapsulated by the principle of Procrastinate as the following (Chomsky, MP:198).

(42) LF (= covert) movement is cheaper than overt movement

An overt operation, in contrast, needs an independent trigger to override a less costly option of a covert counterpart.

The stipulation of feature strength, which has been adopted by the Case-analysis of scrambling and object shift, cannot answer how the strength is decided and why strong features should be overtly deleted. N-features represent interpretable categorial features in themselves and therefore require neither overt nor covert operation for their deletion. Chomsky (CT:341-2) suggests that in place of N-features the EPP features in a functional head should attract DP to delete relevant uninterpretable features. The EPP features, which are assumed to be nonsemantic and uninterpretable, are deleted by the categorial feature [D] in a raised DP. Uninterpretable Case features in DP also become deleted as free-riders to the operation to delete the EPP features. In case a functional head carries no EPP features, deletion of uninterpretable Case features in DP should be covert to satisfy economy considerations.

The EPP features are still indispensable to motivate DP movement in Chomsky (MI), even if feature matching replaces the notion of attraction by a functional head. An operation for feature matching is defined as Agree by which uninterpretable features

(agreement features in a functional head and a Case feature in DP) are both deleted at the same time. If it were not for the EPP features, Agree should always pre-empt a complicated and costly operation of Move. Following Chomsky's feature matching, (short-distance) scrambling or object shift is forced by the EPP features in v associated with uninterpretable agreement features. Moreover, their selection by v can vary language-internally as well as crosslinguistically as mentioned earlier ((43)=(25)).

(43) The head H of phase may be assigned an EPP-feature.

The generalization (43) attributes optionality in object shift and scrambling to the optional selection of the EPP features by v . However, notice that once they are selected from the numeration they necessarily force an operation of movement. Otherwise, they remain undeleted and their uninterpretable nature makes a derivation violate legibility conditions at the interface LF. The analysis based on feature matching, therefore, can claim superiority over the Case-based one at least concerning optionality in object shift and scrambling.

7.4.2. Scrambling and suicidal greed

The EPP feature-related analysis of scrambling has yet to answer the question why complements undergo raising for the benefit of the functional head T. Their uninterpretable Case feature, if any, can be deleted through a simple operation of Agree instead of a costly option of movement. The issue is raised by the principle of greed, which Chomsky (CT:261) defines as in (44).

(44) Move raises α only if morphological properties of α itself would not otherwise be satisfied in the derivation.

However, the original version of greed in (44) is too strong to consider an option of Move for deletion of uninterpretable features through feature matching. DP raising always violates the principle of greed, since uninterpretable Case features in DP should

be deleted through Agree rather than Move in terms of economy considerations.³⁴ To resolve the conflict between greed and movement, Chomsky (MI:127) suggests that the principle of greed in (44) should be weakened as suicidal greed in a sense that DPs can undergo a costly operation of Move for the sake of deletion of uninterpretable features in associated functional heads. Suicidal greed, of course, preconditions the presence of uninterpretable features in DPs to make them active for an operation as is represented by the continued use of the term greed.

If Chomsky's (MI) notion of feature matching is fully employed, a complement becomes a candidate for scrambling as long as it has its own uninterpretable features. It is therefore hypothesized that oblique DP and PP complements, both of which have been conventionally claimed to lack structural Case, can have uninterpretable Case features.³⁵ The hypothesis is analogous to the quirky argument analysis suggested in 6.4 for subordinate V-2 constructions as exemplified below.

- (45) a. gif him bið oftogen *his bigleofa* (CH I, 19:113)
 if him-dat is withdrawn his food-nom
- b. Men geseoð oft þæt *of anum lytlum cyrnele* cymð micel treow
 (CH I, 16:120-1)
 Men see often that from one little seed comes large tree-nom

According to the quirky analysis, the dative complement *him* in (44) and the PP complement *of anum lytlum cyrnele* are supposed to have (abstract) uninterpretable Case features and therefore undergo movement into a specifier of TP forced by the EPP features in T.³⁶

In spite of the hypothesis that the quirky analysis holds for scrambling as well as subordinate V-2, some explanation is required for the distributional asymmetry of two operations. Scrambling affects oblique DP and PP complements in Old English irrespective of predicate types as shown in (46) ((46b)=(4b)).

³⁴ Chomsky (MI:119) denies a covert option of Move, that is, feature movement at LF.

³⁵ Grimshaw (1990) also suggests the possibility that PP complements can have (abstract) Case.

³⁶ The assumption made here is different from Collins (1997). He argues that the categorial feature D carried by DP makes PP attracted by the EPP features of T.

- (46) a. *se þe ne bið hire næfre ætbroden* (CH II, 29:17)
 one that not is (to) her-dat never taken-away
- b. *þ he sceal þa flæslican lustas gewyldan 7 his lichaman to godes þeowdome*
 that he must those fleshly desires conquer and his body to god's service
symle gebigean (CH I, 12:110-1)
 always turn

In (46), scrambling is responsible for both *hire* in unaccusative constructions and *to godes þeowdome* in transitive construction. In contrast, oblique DP and PP complements can move into a specifier of TP only when they are selected by an unaccusative predicate as generalized in 6.4.

Under the minimalist framework, the discrepancy between quirky subject constructions and scrambling results from the locality constraint imposed by economy considerations in computation. In unaccusative constructions, internal arguments become located within the same minimal domain after V-to-*v* movement. Once they have an uninterpretable Case feature, they can be forced to move into a specifier of TP (subordinate V-2) or a specifier of *v*P (scrambling) without violating the locality constraint. In transitive constructions where an external argument is first selected in a specifier of *v*P, movement of internal arguments into an outer specifier of *v*P still meets locality due to V-to-*v* movement. Yet, their movement into a specifier of TP cannot be a legitimate operation as far as locality is concerned. The external argument whose uninterpretable Case feature remains intact occupies a structurally higher position and blocks the operation. Even if internal arguments are assumed to undergo intermediate movement into a specifier of *v*P, their movement into a specifier of TP cannot be justified. They have their Case features deleted in the first operation, which implies that they are no longer active for further movement.

Conceptually speaking, the relative paucity of subordinate V-2 can be related to the contrast between agreement features of T and *v* in Old English. Under Chomsky's (MI) feature matching based on the bilateral and asymmetric presence of uninterpretable features in a probe and a goal, the functional heads T and *v* are claimed to have uninterpretable agreement features. When those features are associated with the EPP features, they are deleted through movement of DP into its specifier. Otherwise,

economy considerations force an operation of Agree for their deletion. Considering morphological markings for subject-verb agreement in Old English, agreement features in T are mostly deleted against matching features of a nominative argument. In contrast, finite verbs in Old English quirky subject constructions are more often than not marked by 3rd person singular endings. Otherwise, their endings are generally restricted to 3rd person plural. Fixed or restricted agreement markings for finite verbs imply that T in quirky subject constructions carries default or defective agreement features. Therefore, agreement features in T need no DPs or become blind at least to person distinction to be deleted in quirky subject constructions. The above argument indicates that crosslinguistic variation should be allowed for Old English as well as Icelandic to include T carrying default/defective agreement features.³⁷

Given that agreement relations between verbs and complements are not morphologically marked in Old English, let us suppose that the functional head *v* can also have default agreement features. When they are associated with the EPP features, they force scrambling of an internal argument but undergo deletion against any type of scrambled complements. It is furthermore assumed that their default/defective nature makes an interpretable Case feature of the functional head *v* indifferent to the value of the feature.³⁸ The assumptions signify that scrambling of oblique and PP complements produces no mismatching concerning Case/agreement features as long as they carry uninterpretable (abstract) Case features and the operation is forced by the EPP features associated with default agreement features. Thus, the quirky analysis predicts that the dative complement *hire* and the PP complement *on clænum mæigðhade* in (47)((47b)=(9)) have uninterpretable Case features and undergo movement forced by the EPP and default agreement features of the functional head *v*.

- (47) a. se þe ne bið *hire* næfre ætbroden (CH II, 29:17)
 one that not is (to) her-dat never taken-away

³⁷ Considering that Modern English prohibits default agreement between subjects and finite verbs, locative inversion in Modern English as shown in (i) can be a vestige of quirky argument constructions in Old English.

(i) Down the hill rolled John.

³⁸ The assumption is supported by the general absence of Exceptional Case Marking constructions in Old English (Denison, 172-177).

- b. se ðe *on clænum mæigðhade* symle wunode (CH I, 30:42)
 one who in clean virginity always remained

Nominative arguments in unaccusative constructions also undergo scrambling and consequently occupy a position between quirky subjects in a specifier of TP and finite verbs in *v* as shown in (48).³⁹

- (48) Gif ure ænigum *sum ungelimp* becume (CH II, 30:234-5)
 if (to) any of us-dat some misfortune-nom happen

On the other hand, the functional head *v* cannot force an operation of movement without the EPP features, which results in post-verbal complements in subordinate clauses as in (49) ((49b)=(32c)).

- (49) a. þ se hælend gename onsundran *his twelfleorningchintas* (CH I, 10:4-5)
 that the Savior called separately his twelve disciples
 b. for þan ðe he wunode on his life *buton wife* (CH I, 21:216-7)
 because he remained in his life without woman
 c. þæt him ne gelimpe *se egeslica cwyde* (CH II, 34:122-3)
 that (to) him-dat not befall the terrifying discourse-nom

The quirky analysis accounts for multiple scrambling in which more than one complement are scrambled as exemplified in (50)=(9b)).

- (50) þ he sceal þa flæslican lustas gewyldan 7 *his lichaman to godes þeowdome*
 that he must those fleshly desires conquer and his body to god's service
 symle gebigean (CH I, 12:110-1)
 always turn

³⁹ The same analysis also holds for the shift of nominative arguments in Icelandic unaccusative constructions mentioned earlier (i)=(41)).

(i) Mér líkar *hún/tölvan ekki* (Icelandic)
 me(Dat) likes it/the-computer(Nom) not

In (50), both *his lichaman* and *to godes þeowdome* undergo scrambling into a specifier of *vP* to precede the frequency adverb *symle*. If the functional head *v* here is supposed to have default agreement features associated with the EPP features generating multiple specifiers, both complements are subject to the operation as long as they carry uninterpretable Case features.

7.4.3. Short-distance scrambling and information structure

The effects of the EPP features on a derivation are not restricted to the generation of extra specifiers for feature matching. In many cases, they seem to be related to semantic or discourse-related information. When the functional head *C* with the EPP features forces the raising of an appropriate syntactic object, the resultant structure represents an operator-variable relation. The structures forced by the EPP features in *T* can provide information for theme-rheme structure for systems of thought.⁴⁰ Pursuing these ideas, the EPP features in the functional head *v* can also be closely associated with information for the proper interpretation of a derivation.

Deising (1992) and Holmberg (1999) propose that the requirements on information structure should be largely responsible for scrambling and object shift. Although their assumptions disagree on where those operations apply in a grammar, they share the idea that scrambling and object shift are motivated to extract syntactic elements with presuppositional reading out of *VP*.⁴¹ In terms of the minimalist framework, their assumptions make inevitable introduction of the features related to the displacement of presuppositional elements. At first glance, empirical evidence looks supportive as the examples below testify ((51a)=(1a), (51b)=(39)).

- (51) a. daß Hans *das Buch* (**das Búch*) oft gelesen hat (German)
 that Hans the book often read has
 b. Jag känner *honom*/**hónom* inte (Swedish)

⁴⁰ Yet see Martin (1999) for an argument against a semantic or a functional approach to the EPP features of *T*.

⁴¹ Diesing (1992) attributes scrambling and object shift as a syntactic operation of presupposition accommodation, that is, an overt counterpart of QR to represent information structure. Holmberg (1999), in contrast, regards them as stylistic rules at PF after insertion of phonological features.

I know him not

In (51), focused elements resist both scrambling (in (51a)) and object shift (in (51b)). Considering that focus is generally understood as a nonpresupposed part of a sentence (Zubizarreta, 1998), the contrast in (51a,b) demonstrates that scrambling and object shift can only affect presupposed elements.⁴²

The above explanation is applicable to the asymmetric application of scrambling and object shift depending on the subtypes of DP (Holmberg, 1999). As mentioned in 7.3.2, pronouns and strong DPs are most likely to undergo those operations while weak DPs resist them. If the assumption is accepted that scrambling and object shift are both motivated to represent information structure, the asymmetry can be attributed to the presuppositional nature of pronouns and strong DPs. In particular, pronouns are the most suitable candidate for the operations due to their inherent referential nature. It is therefore expected that their distributions in Old English should be restricted to pre-verbal positions resulting from scrambling as exemplified below unless finite verbs move into a higher position than *v*.

- (52) Nu wundrað gehwa hu se deoful dorste genealæcan to ðam hælende þ he *hine*
now wonders everyone how the devil dares approach to the Saviour that he him
costnode (CH I, 11:28-9)
(might) try

Rare occurrences of non-scrambled pronouns such as the italicized *me* (53) are supposed to carry focus, which makes them resist the operation and remain within VP.⁴³

- (53) Swa swa min fæder sende *me* swa sende ic eow (CH I, 14: 46-7)
Just as my father sent me so send I you

⁴² Zubizarreta (1998:159, fn.2) argues that the grammatical notion of focus is rooted in the discourse notion of presupposition and should be distinguished from the purely discourse notion of new/old information.

⁴³ In fact, the ordering pattern of (53) is not enough to prove whether the personal pronoun *me* undergoes scrambling or not, since verb movement to T can disguise the operation. It seems however possible that the contrast between the two pronouns *me* and *eow* makes both of them carry contrastive focus (Zubizarreta, 1998:6-7).

Following the information-based analysis, DP complements in Old English are predicted to undergo scrambling only if they include presuppositional information. Let us consider the positions of the italicized DPs in the following example.

- (54) Mid þam þe se apostol iohannes stop into ðære byrig efesum þa ber man him
 When the apostle John went into the town Ephesus then carried man him
 togeanes *anre wydewan lic* to byrgenne...7 þa ðearfan þe heo mid cystigum
 towards one widow's body to bury...and the poor-men that she with generous
 mode eallunga afedde mid wope *þam lice* folgodon (CH I, 4:38-42)
 mind entirely fed wid weep the body followed

The pre-verbal position of the object *þam lice* can be explained by the fact that it carries a presuppositional meaning: the preceding phrase *anre wydewan lic* has already introduced the information for its interpretation.

The information-based analysis, however, expose some problems both empirical and conceptual in explaining scrambling in Old English. Empirically speaking, it cannot readily accommodate all the occurrences of pre-verbal complements in Old English. For instance, the analysis fails to explain the pre-verbal complement *husel* in (55).

- (55) ...and his gastlica lichama ðe we *husel* hatað ... (CH II, 15:133)
 and his spiritual body that we Eucharist call

Following Jackendoff (1972) and Chomsky (1976), the *wh*-question/answer test can identify how a clause is split in terms of focus and presupposition. The result of the test demonstrates that *husel* in (55) can be focused. It can substitute for the *wh*-phrase in the context question (*what do we call his spiritual body*) and the indefinite expression in the answer (*we call his spiritual body something*). In contrast, the test cannot prove that *husel* carries a presuppositional reading and becomes subject to scrambling, since no pair of *wh*-question/answer can be made to include *husel*.

The assumption that a landing site for nonpresuppositional elements is a specifier of PredP rather than AgrOP cannot save the information-based analysis. Aside from its conceptual problems mentioned earlier, the assumption cannot provide principled

accounts for the contrast in the distribution of PPs in (56) (= (32a,b)).

- (56) a. *se ðe on clænum mæigðhade symle wunode* (CH I, 30:42)
one who in clean virginity always remained
- b. *7 ic symle on his gesihðe wunie* (CH I, 34:28-9)
and I always in his sight remain

Suppose the sentence adverb *symle* marks the boundary between *vP* (AgrOP) and PredP in (56). The ordering patterns testify that the PP *on clænum mæigðhade* in (56a) undergoes scrambling while the PP *on his gesihðe* in (56b) moves into a specifier of PredP. Nevertheless, it is unlikely that any substantial discrepancy exists between the two PPs in terms of information they carry even if we have no access to the intuition of native speakers of Old English. Considering the context in which both sentences in (56) appear, no visible evidence is found to testify that the information relevant to the PPs is already mentioned. Of course, the possibility cannot be dismissed that the information is extra-contextual in a sense that it is related to the knowledge tacitly shared by the speaker and the hearer. It is however arguable how the possibility is conceptualized to explain the syntactic distribution of scrambling in Old English with the access to the native judgement impossible.⁴⁴

If it is hypothesized that information structure is comprehensively encoded within syntax, the information relative to the focus/nonfocus contrast should be included in the lexical entry and kept intact at the interfaces to receive a proper interpretation. The hypothesis, in fact, makes a derivation unnecessarily complex, since it should include a feature whose presence largely depends on the levels after syntax. In spite of a certain degree of relationship between short-distance scrambling and information structure, no

⁴⁴ The argument leads to the assumption that the pre-verbal PPs in (56) should occupy the same position at syntax, that is, a specifier of *vP* irrespective of their relative orders to the adverb *symle*. Then, two possible accounts can be considered for the conflicting distribution of the adverb. First, the point of merge can be different (VP in (56a) and *vP* in (56b)). The analysis presupposes that the adverb should have a different scope for modification (VP-adverb in (56a) and sentence-adverb in (56b)). The first account, however, cannot be justified, since the intended meaning of the VP-adverb *symle*, that is, *continually* cannot be compatible with the stative predicate *wunian*. Alternatively, the adverb can be permitted to be merged into *vP* either before scrambling (in (56a)) or after scrambling (in (56b)). The idea is not contradictory to the minimalist assumption that merge pre-empts movement in terms of the fact that sentence adverbs are not selected by a functional head *v* and therefore has no theta-relation to it.

syntactic motivation can be established in Old English to consider the latter as a trigger for the former. It would rather be appropriate to suppose that short-distance scrambling, which is syntactically motivated by uninterpretable features, partly contributes to the interpretation of a derivation relevant to information structure. A comprehensive interpretation of information structure should resort to some level beyond syntax proper in terms of the minimalist framework in which syntactic operations are confined to the deletion of uninterpretable features.

7.4.4. Scrambling and optimal derivation

The remaining issue concerning the minimalist analysis of scrambling is to prove that scrambling in Old English is an optimal way to satisfy the legibility conditions. The issue is related to economy considerations during computation, which Chomsky (MI:99) refers to as operative complexity. Thus, in spite of different landing sites, scrambling in Old English should be an optimal operation to delete the EPP features of a functional head. Let us first consider short-distance scrambling, which moves a DP/PP complement into a specifier of *v*P as exemplified below.

- (57) a. Nu ic oncneow þæt ðu *god* ondrædst (CH II, 4:147)
 now I know that you God dread
- b. ...and wurdon astyrede cweðende þæt hit *sum gedwimor* wære and hrymdon
 and became stirred-up saying that it some ghost was and cried-out
 swiðe afyrhte (CH II, 24:67-8)
 greatly frightened

No special problems are found for a derivation of (57a) to reach the following stage before T is merged.

- (58) [_{vP} god_j [_{vP} ðu [_v ondrædst_i+v [_{vP} t_i t_j]]]]

In (58), the EPP and agreement features of *v* force the displacement of the complement *god* for their deletion. The operation satisfies the locality condition. V-to-*v* movement

extends the minimal domain for scrambling, which makes both internal and external argument equidistant to a specifier of ν P.

To explain scrambling of *sum gedwimor* in (57b), the assumption is needed that the functional head ν can be merged above unaccusative predicates in spite of the absence of an external argument (Collins, 1997:15). With the postulation of ν and subsequent V-to- ν movement, internal arguments selected by an unaccusative predicate become equidistant to a specifier of ν P. The assumption implies that as long as the functional head ν has the EPP features it can displace any internal argument as the following analysis of (57b) demonstrates.⁴⁵

(59) $[_{\nu P} \text{ sum gedwimor}_j [_{\nu} \text{ wære}_i +\nu [_{\nu P} \text{ hit} [_{\nu} t_i t_j]]]]$

The above analysis can be extended to the ordering patterns between oblique DPs/PPs and nominative DPs in unaccusative constructions. Consider the following sentences both of which have oblique DPs preceding nominative DPs ((60a)=(45a)).

- (60) a. gif *him* bið oftogen *his bigleofa* (CH I, 19:113)
 if (to) him-dat is withdrawn his food-nom
- b. 7 æfter his þrowunge *helwarum his tocyme* cydde (CH I, 25:221)
 and after his suffering (to) hell-inhabitants-dat Christ's arrival-nom
 made-known

Given that oblique DPs in (60) are merged into a higher place than nominative DPs, the ordering of (60a) reflects the order of merge between internal arguments. The dative complement *him* moves into a specifier of TP to delete the EPP features in T. Locality is not an issue here, since the dative complement *him* c-commands the nominative complement *his bigleofa* irrespective of verb movement.

In contrast, the surface order of (60b) indicates that the nominative complement *his tocyme* should undergo movement across the finite verb *cydde*. Following the analysis made in (59), the nominative argument undergoes movement into a specifier of ν P

⁴⁵ After T is merged above ν P in (56), *hit* undergoes raising for the deletion of the EPP and agreement features of T.

forced by the EPP features in *v*. The dative complement *helwarum*, in turn, moves into a specifier of TP forced by the EPP features in T, which results in the ordering of Dat–Nom–verb as schematized below.⁴⁶

(61) $[_{TP} \textit{helwarum}_k [_T \cdot T [_{VP} \textit{his tocyme}_j [_v \cdot \textit{cydde}_i +v [_{VP} t_k [_v \cdot t_i t_j]]]]]]$

The above analysis argues that in Old English unaccusative constructions nominative complements can undergo short-distance scrambling into a specifier of *vP* and consequently precede finite verbs.

Let us now examine how the minimalist analysis explains long-distance scrambling in Old English, which extracts DP/PP complements out of an infinitival clause as shown below ((62a)=(23)).⁴⁷

- (62) a. gif we *us selfe* nellað fordon mid unpeawum (CH I, 19:181)
 if we ourselves not-wanted destroy with vices
- b. Ða wearð se dry hermogenes mid graman afylled and geband þone philetum
 then became the sorcery H. with anger filled and bound the P.
 swa þæt he *hine* bewendan ne mihte and cwæð...(CH II, 27:29-31)
 so that he himself turn not could and said...

Following the analysis of pre-modal verb constructions made in the previous chapter, the italicized complements in (62a,b) occupy the positions derived by leftward

⁴⁶ Alternatively, the nominative complement can undergo subject raising to a specifier of TP to delete the EPP and agreement features in T. The dative complement, then, moves into a specifier of the same head T (middle-distance scrambling) as schematized below.

(i) $[_{TP} \textit{helwarum}_i [_{TP} \textit{his tocyme}_k [_T \cdot (\textit{cydde}_i +v)_j] +T [_{VP} t_k [_{VP} t_j [_v \cdot t_i t_i]]]]]]$

The analysis presupposes that the functional head T here attracts more than one DPs under the multiple subject hypothesis by Chomsky (CT:342-4). Decision between the two analyses is tricky, but the scrambling analysis of the nominative complement is preferable in terms of both empirical and conceptual evidence. As mentioned in the previous chapter, dative complements in unaccusative constructions exhibit subjecthood. The economy considerations also favors the scrambling analysis over the subject-raising one: the nominative complement moves shorter in (64) than in (i).

⁴⁷ Scrambling can be done within an infinitival clause as shown below.

(i) þæt he wolde *manna bearn on þissere tide* geneosian (CH I, 22:197-8)
 that he wanted man's offspring in this time visit

The same accounts made for scrambling in (57) can be applied for the analysis of (i) without any significant modification.

movement from an infinitival clause. The only difference between (62a) and (62b) lies in infinitival verb movement: the infinitival verb *fordon* in (62a) remains within a infinitival clause while the infinitival verb *bewendan* in (62b) undergoes head movement into the matrix pre-modal verb *mihte*.

Derivations for (62a,b) will reach the stage as shown in (63) after merge of the matrix v and an external argument if the pre-modal verbs here are assumed to have a property of lexical verbs rather than auxiliaries.

(63) $[_{VP} \text{subject}_k [_v v [_{VP} \text{pre-modal} [_{TP} \text{PRO}_k [_T T [_{VP} \text{object}_j [_{VP} t_k [_v V_i+v [_{VP} t_i t_j]]]]]]]]]]...$

In (63), the DP complement of the infinitival verb first moves into a specifier of the lower vP forced by the EPP features of the lower v . The empty pronominal PRO also undergoes raising forced by the EPP features of the lower T. Both operations are A-movement, since in addition to the EPP features relevant Case and agreement features are matched and deleted.

The matrix v in (63) is merged with the EPP features as well as agreement features, which force the displacement of an element from a lower clause for their deletion. Yet, notice that unlike short-distance scrambling the operation cannot constitute A-movement. Uninterpretable Case features in a moving element, if any, are already deleted through the operation (short-distance scrambling or subject-raising) within an infinitival clause. The remaining possibility is that the operation is purely A'-movement triggered by the EPP features associated with peripheral features rather than Case and agreement features. First, suppose that PRO moves into a specifier of the matrix vP as in (64).

(64) $[_{VP} \text{PRO}_k [_{VP} \text{subject}_k [_v \text{pre-modal}_{I+v} [_{VP} t_i [_{TP} t_k [_T T [_{VP} \text{object}_j [_{VP} t_k [_v V_i+v [_{VP} t_i t_j]]]]]]]]]]...$

If PRO movement in (64) were legitimate, the empty pronominal PRO should occupy an A'-position binding its trace in an A-position. In other words, it becomes an empty operator with its trace as a variable. The assumption is, however, contradictory to its nature: PRO is a pronominal element whose null case should be deleted by defective T

(Chomsky, MI:105).

Alternatively, the object can be raised from a specifier of the infinitival ν P as schematized below.

(65) $[_{\nu P} \text{object}_j [_{\nu P} \text{subject}_k [_{\nu'} \text{pre-modal}_{i+v} [_{\nu P} t_i [_{TP} \text{PRO}_k [_{T'} T [_{\nu P} t_j [_{\nu P} t_k [_{\nu'} V_{i+v}$
 $[_{\nu P} t_i t_j]]]]]]]]]]] \dots]$

The objection made against PRO is not applicable here: the object can be an operator as long as it is forced to move by A'-type operation. The issue of locality does not arise here in spite of the seemingly long distance of movement. Following Chomsky (MI:107-8), A'-movement targets the edge of every phase, that is, ν P and CP. Given that long-distance scrambling is A'-movement triggered by the EPP features associated with a peripheral feature, the object in a specifier of the infinitival ν P can move into the edge of the matrix ν P in (65). No intervening phase exists between ν Ps, since a functional head C is not selected after a defective T. Finally, the subject in a specifier of the matrix ν P undergoes raising to a specifier of the matrix TP, which produces the order of subject–scrambled object–pre-modal verb–infinitival verb as in (62a). If the derivation has an additional operation of infinitival verb movement to the pre-modal verb, the ordering will be subject–scrambled object–infinitival verb–pre-modal verb as in (62b).

The arguments in this section support the assumption that scrambling in Old English not only deletes relevant uninterpretable features but also satisfies economy considerations for an optimal derivation. Whether or not the operation is related to the deletion of Case and agreement features, empirical and conceptual evidence suggests that it should be the only legitimate way to delete relevant uninterpretable features and meet legibility conditions at the interface.

7.5. Conclusion

The head-initial analysis of Old English presupposes that pre-verbal complements result from a leftward syntactic operation to extract them out of VP. The presupposition implies that scrambling can be fundamentally equated with object shift to challenge the

traditional dichotomy based on the typology of movement (A'-movement for scrambling vs. A-movement for object shift). Empirical evidence also indicates that scrambling cannot be classified as a typical A'-movement. It is true that scrambling permits PP-extraction and preposition stranding both of which have been conventionally claimed to represent A'-movement properties, but at the same time the operation exhibits A-movement properties concerning Binding Principle (A). The complicated nature of scrambling is furthermore confirmed by the general trend that the more distant an element is scrambled the more it has A'-movement properties.

With the development of the minimalist framework in which every syntactic operation is implemented for morphological feature checking, scrambling as well as object shift is understood as a Case-driven operation to delete the strong N-features in a functional head AgrO. Kayne's (1994) version of universal base hypothesis supports the integration of scrambling and object shift such that scrambling is not so much an idiosyncratic syntactic phenomenon restricted to putative head-final languages as a part of universal operations for feature checking.

In spite of the above-mentioned conceptual advantages, the Case-based analysis suffers serious problems in explaining various aspects of scrambling in Old English. They include oblique DP/PP scrambling, multiple scrambling, and long-distance extraction, all of which resist the accounts based on the morphological requirements of Case checking. On the other hand, the analysis cannot predict that DP complements in Old English occupy a post-verbal position within subordinate clauses, since it provides no syntactic accounts for their exemption from the Case-driven operation. It moreover introduces a separate functional category PredP for non-scrambled but pre-verbal complements. The postulation of PredP, however, leads to the violation of locality whenever an external argument moves into a specifier of TP across intervening functional categories (AgrOP and PreP). The Case-based analysis of object shift also fails to answer how the operation for case checking can be optional and why it affects only certain subtypes of DPs language-internally and crosslinguistically.

Following Chomsky's (MI) assumption that a language is an optimal solution on legibility conditions, uninterpretable features should be deleted at syntax for a derivation to receive a proper interpretation at the interfaces. Concerning the deletion of uninterpretable features, he suggests the notion of feature matching under which Agree

should always pre-empt a costly operation of Move. His suggestion signifies that movement can be implemented only when uninterpretable features in a functional head are associated with the EPP features. If the idea of feature matching is applied to short-distance scrambling in Old English, the operation is assumed to be forced by the EPP features in the functional head v associated uninterpretable agreement features.

In terms of the principle of economy based on greed, feature matching presupposes the presence of uninterpretable features in a moving element (goal) as well as a functional head (probe). If the requirements are applied to short-distance scrambling in Old English, it is assumed that a complement including oblique DP and PP should carry an uninterpretable Case feature to become subject to the operation. The assumption is analogous to the one made for quirky subject constructions in Old English, in that the functional head has agreement features whose nature are default/defective and consequently becomes blind to the value of a Case feature. It is therefore suggested that short-distance scrambling in Old English should represent movement of an internal argument into a specifier of vP . The operation can be a legitimate operation only if the internal argument has an (abstract) uninterpretable Case feature and its movement is forced by the EPP features of the functional head v associated with default/defective agreement features.

The minimalist analysis of short-distance scrambling suggested here can claim some empirical and conceptual advantages over the Case-based approach or the analysis based on information structure. Empirically speaking, it can explain diverse aspects of scrambling in Old English. It predicts optionality of the operation, since it presupposes the optional presence of the EPP features in the functional head v . It also permits scrambling of any internal complement including oblique DP, PP, and even nominative DP selected by an unaccusative predicate as long as it has an uninterpretable Case feature. Conceptually speaking, the analysis supports the idea that scrambling is a syntactic operation motivated by the requirements of uninterpretable feature deletion. Moreover, it shows scrambling in Old English is implemented in an optimal way satisfying economy considerations in computation.

8. Conclusion

Following the minimalist framework suggested in Chomsky (1995,2000), major ordering patterns of Old English other than the base one reflect uninterpretable feature-driven operations and economy considerations. Among possible options for deleting uninterpretable features through feature matching, economy considerations of the minimalist framework always favor a simple operation of Agree. A complex and costly operation of movement can override Agree only if pied-piping of a syntactic element is forced by an additional uninterpretable feature associated with an inherent uninterpretable feature of a functional head. Those optional features indispensable to displacement are generalized here depending on the type of movement: the [+Affix] feature for head movement and the EPP features for XP movement.

Concerning the distribution of X^0 elements, this work introduces the uninterpretable [+Affix] feature forcing affixation to explain various head movement-type operations in Old English such as V-to-T movement, V-to-C movement, infinitival verb movement, and particle movement. It is assumed that in contrast with inherent uninterpretable features, the optional nature of the [+Affix] feature in a derivation makes its selection by a head vary language-internally as well as crosslinguistically. The assumption correctly predicts optionality of the aforementioned operations in Old English. On the other hand, it undermines the traditional argument founded on the fixed position of finite verbs both in main and subordinate clauses.

The minimalist analysis of head movement has some significant theoretical and empirical implications for the explanation of the distribution of X^0 elements in Old English. First, it proposes a unified account of head movement, which contrasts with the traditional head-final accounts postulating a group of heterogeneous operations such as verb movement, verb (projection) raising, and rightward particle movement. Second, the introduction of the [+Affix] feature permits optionality in head movement in Old English and, consequently, dispenses with the assumptions that lack substantial conceptual and empirical motivations. Those assumptions include the clitic analysis of personal pronouns based on head movement, string-vacuous verb movement, and various types of extraposition. Third, the minimalist analysis of head movement

provides a principled account for some ordering patterns that resist to the head-final hypothesis. The analysis explains diverse positions of finite verbs in main and subordinate clauses, the distribution of verb-particle constructions, and all the ordering patterns in verbal complexes. Moreover it correctly excludes the unattested order of *infinitival verb-complement-pre-modal, in which the complement with an XP status illegitimately intervenes in a complex of heads formed by infinitival verb movement to a pre-modal.

The minimalist analysis hypothesizes that the EPP features, which generate an extra specifier of a functional head, force XP movement for deletion of uninterpretable features. Without the EPP features, economy considerations always prefer a simple operation of Agree or merge to a complex option of movement in deleting uninterpretable features through feature matching. In addition to such straightforward XP operations as nominative subject raising, *wh*-movement, and topicalization, the above assumptions provide insightful clues for the analysis of several controversial constructions in Old English, which are relevant to the distribution of XP elements.

First, ordering patterns within Old English DPs can be illuminated by the minimalist accounts. It is assumed that the functional head D in Old English can carry the uninterpretable [+R] feature associated with the EPP features. The assumption implies that an XP expression with referring nature should appear in a specifier of DP for deletion of those features as well as its own genitive Case feature. Deletion of relevant uninterpretable features can be done by merge of a demonstrative from the numeration or movement of a possessive/a genitive with a proper-name property out of NP. Whenever both types of expression are available in a derivation, economy considerations choose a simple operation of merge over movement. Even if the double EPP features force both movement and merge, economy considerations determine the order of application: merge always precedes movement to produce the ordering pattern of possessive-demonstrative or genitive-demonstrative.

Second, the minimalist assumptions account for quirky subject constructions in Old English. Adopting Chomsky's (2000) analysis, the functional head T in quirky constructions is assumed to have default agreement features as well as the EPP features and delete an uninterpretable abstract Case feature. On the other hand, quirky arguments

are supposed to carry an abstract Case feature, which makes them subject to movement into a specifier of TP. His analysis is extended to quirky constructions in Old English with the assumption that PPs as well as oblique DPs can have an abstract Case feature. The descriptive generalization is deducible from economy considerations that quirky subjects occur with unaccusative predicates such as impersonal and passive ones. In transitive constructions where an external argument is merged as a specifier of *vP*, economy considerations of locality always rule out Case/agreement-related movement of an internal argument into a specifier of TP due to the intervening external argument. In contrast, unaccusative predicates have no external argument, which, after V-to-*v* movement, makes all the internal arguments equidistant from the functional head T. The quirky analysis is also compatible with van Kemenade's (1997) observation that embedded V-2 is restricted to unaccusative constructions. The analysis interprets embedded V-2 as quirky subject constructions with oblique DP/PP in a specifier of TP rather than topicalization into a specifier of CP.

Third, short-distance scrambling in Old English as well as object shift in Scandinavian languages represents an uninterpretable feature-driven syntactic operation to move internal arguments into a specifier of *vP*. They are forced to move by the EPP features of the functional head *v* associated with uninterpretable agreement features, even if the optional selection of the EPP features leads to optionality in both operations. It is suggested that the quirky subject analysis can be applicable to short-distance scrambling in Old English. Thus, the functional head *v* in Old English is assumed to have default or defective agreement features and, consequently, delete a Case feature irrespective of its value. The assumption of default agreement features in *v* receives support from the absence of morphological markings for verb-object agreement and indigenous Exceptional Case marking constructions. Any internal argument including oblique DPs and PPs undergoes short-distance scrambling as long as it is merged with an uninterpretable Case feature and the operation is forced by the EPP features of the functional head *v*. Besides oblique DP and PP scrambling, the above analysis also predicts scrambling of nominative DPs in unaccusative constructions, which yields an ordering of quirky subject(=oblique DP/PP)–nominative DP–finite verb. Multiple scrambling, which displaces more than one internal argument, is attributed to the multiple EPP features and the blindness of a Case feature in *v*. However, middle-

distance and long-distance scrambling in Old English should be distinguished from short-distance scrambling. They constitute A'-type syntactic operations, which are still forced by the EPP features in a functional head but irrelevant to Case/agreement relations.

This thesis leaves further work to be done. First, more Old English data would help confirm the plausibility of the analysis suggested here. Although the *Ælfric's Catholic Homilies I, II* and the other Old English texts mentioned in the thesis constitute substantial corpora, an electronic Old English corpus with tagging can be of great use to overcome the absence of negative evidence in the study of Old English. Second, the head-initial analysis of Old English arouses a special interest in Old Scandinavian languages which comparative study of Old English under the parameters-and-principles approach has paid less attention than Dutch or German. In fact, Old Scandinavian languages share many syntactic patterns with Old English. For instance, OV and VO ordering patterns coexist not only in Old English but also in Old Swedish (Delsing, 2000) and Old Icelandic (Hróarsdóttir, 2000).¹ Unlike object shift in modern Scandinavian languages, a pre-verbal position in subordinate clauses is permitted for PP complements in above languages. In terms of the minimalist analysis, the optional nature of the EPP features in a derivation predicts the coexistence of OV and VO. Interestingly, diachronic change makes a linear ordering of OV, that is, complement movement into a specifier of *vP* either disappear (in English) or become severely constrained (in Swedish and Icelandic). Thus, a question remains how optionality comes to vanish or diminish in a process of language change.

¹ Delsing (2000:256) reports that like Old English counterparts, finite verbs in Old Swedish can undergo V-to-T movement within subordinate clauses.

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