

平成 26 年度名古屋大学文学研究科
学位（課程博士）申請論文

**A Synchronic and Diachronic Study of Gerundive and Participial
Constructions in English**

（英語における動名詞と現在分詞に関する構文の共時的、通時的研究）

名古屋大学大学院文学研究科
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平成 26 年 12 月

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by

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Dissertation Submitted to the Graduate School of Letters, Nagoya University

in Partial Fulfillment of the Requirement for the Degree of

DOCTOR OF LITERATURE

at Nagoya University

December 2014

Acknowledgements

This thesis owes a great deal to numerous people who helped and supported me at the Graduate School of Nagoya University for six years. First and foremost, I would like to express the deepest appreciation to my supervisors, Takeshi Omuro and Tomoyuki Tanaka, who have supported and encouraged me since I entered the Graduate School. Their intelligent lectures and thoughtful words inspired me greatly. Takeshi Omuro always treated me very kindly. His warm suggestions in colloquiums were very encouraging. His lectures on Jackendoff helped me develop my idea on linguistic from a broader point of view. Tomoyuki Tanaka was always generous with his time. Whenever I asked him to read a paper I wrote, he was always willing to spare his time for reading it and giving me insightful comments and suggestions. I will never forget their generous consideration for me.

I am grateful to Tomohiro Yanagi, who gave me constructive suggestions to my oral presentation at colloquiums. In addition, thanks to his lectures on the history of English, I got interested in diachronic aspects of language change. He also helped me make preparations for studying at University of York in 2013.

I am indebted to Hiroyuki Nawata and Satoshi Nakagawa, who took the trouble to read my thesis and give me informative and helpful comments. Without them, I could not have completed my thesis. I would like to express my special gratitude to Hiroyuki Nawata. He spent enormous time reading the whole thesis and identified problems with it precisely. I will never forget his broad-mindedness. I will also remember that he also did the same thing when I wrote up the master thesis. All remaining errors and inadequacies are of course my

own.

My sincere thanks also go to Hirozo Nakano, Masayuki Ohkado, Kozo Kato, Kazuhisa Ishikawa, Mitsuhiro Omura, and Shinichi Nimura. Hirozo Nakano gave me a highly critical opinion to my first oral presentation at colloquiums when I was in the master course. I was ignorant of linguistics at that time, but his severe words made me develop as a linguist. Masayuki Ohkado, Kozo Kato, Kazuhisa Ishikawa and Shinichi Nimura gave me constructive comments to my earlier version of this thesis and also offered some practical advice about writing a paper.

I would like to express my gratitude to Shigeru Miyagawa, Zane Goebel, Eiko Mizuno, Naoshi Nakagawa, Yasuaki Ishizaki, Yosuke Fukuomoto, Azusa Yokogoshi, Michio Hosaka, and Fujio Nakamura for a good education and suggestions. I am very grateful to Peter Sells, Susan Pintzuk, Anthony Warner, Ann Taylor, Caitlin Light and Norman Yeo for their kindness at University of York. I am looking forward to seeing you at a conference some day. I will keep making efforts to improve my English skills and conduct research so that I could make a presentation at a conference in Europe. I am also grateful to other graduates from Nagoya University, particularly, Hiroki Maezawa, Seishiro Ibaraki, Yusuke Kume, Shuto Yamamura, Song Wei, Yosuke Matsumoto, Shoko Honda, Yuki Yoshimura, Keita Tanikake, Takahiro Tamada, Feng Suang, Noriyuki Tanaka, Yuichi Mori, Ryoichi Kondo, Chigochi Bai, Takayuki Seki, Di Yang, Ami Sawano, Koji Koike, Xing Sheng, Siyang Xia, Saki Tachibana, Shoichi Yano, Yuta Tanaka and Takanori Kojima. Thanks to their help and friendship, I had a good time at Nagoya University.

Last but not least, I would like to express my deepest gratitude to my family, especially my parents Hirokazu Sugiura, Sachiko Sugiura, and my grandmother Tsujiko Sugiura for their everlasting support and encouragement.

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Abstract

This thesis deals with four types of constructions with the *-ing* suffix in English: retroactive gerunds, participial relatives (reduced relatives), *with*-augmented ACs and Participle Preposing. They are illustrated in (1a-d), respectively.

- (1) a. This issue is worth considering further. (Safir (1991: 100))
b. a chill air surrounding those who are down in the world
(Niwa (1990: 56))
c. With population increasing everywhere, improvements in agriculture are

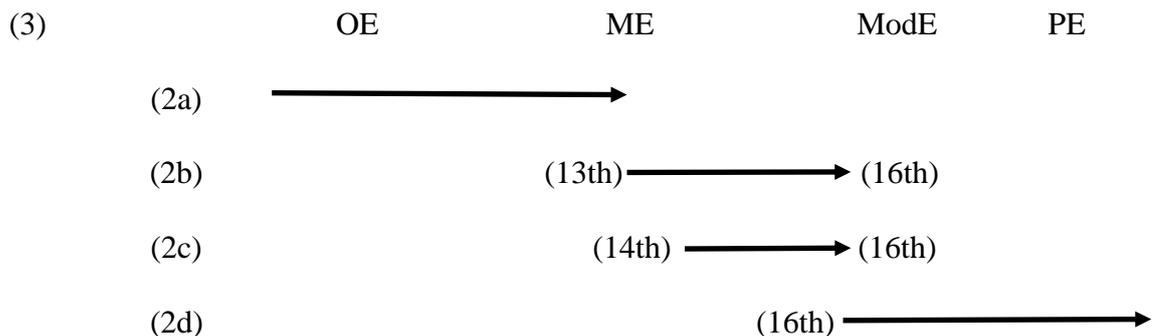
an absolute necessity. (Sakakibara (1982: 88))

- d. Jutting down from his long, graying locks were his ever-present giant
sideburns, each shaped like the state of Idaho. (Samko (2014a: 371))

Chapter 1 outlines the thesis and describes the gist of generative grammar. Chapter 2 proposes that the gerundive complement of *Worth* Type in (1a) in Present-day English is v^*P , and that they involve A'-movement of the null operator to the outer specifier position of v^*P , which serves to establish the retroactive construal. The gerundive complement of *Need* Type is DP and there is no A-movement involved in the derivation of *Need* Type. The retroactive construal in *Need* Type is produced by thematic linking and established without recourse to movement. Regarding the historical development of *worth* with retroactive gerunds, I demonstrate that its complement was originally a nominal gerund, but it was reanalyzed as a verbal gerund during the seventeenth century.

Chapter 3 reveals the whole path of the historical development of participial relatives exemplified in (1b). It is summarized as in (2) and (3).

- (2) a. [DP D [AP V-ende] [NP NP]] (OE~early ME)
 b. [DP D [VP Subj [v' [V-ende/-ing] [PP P DP]]]] (13th~16th)
 c. [DP D [vP Subj [v' v [VP V-ende/-ing DP]]]] (14th~16th)
 d. [DP D [AspP Subj_i [Asp -ing [vP t_i [v' v [VP V DP]]]]]] (16th~PE)



-Ende participles in OE were adjectives and therefore there was no participial relative in OE. In early ME, *-ende* participles were reanalyzed from adjectives into intransitive verbs in the thirteenth century and into transitive verbs in the fourteenth century. The syntactic structure of participial relatives from the thirteenth to sixteenth century is shown in (2b, c), respectively. Then participial relatives with the structure of (2b, c) were reanalyzed into those with (2d) in the end of the sixteenth century due to analogy with the progressive with the structure of (4). The participial relative has the structure of (2d) since the end of the sixteenth century.

(4) [TP Subj_i [T' T [AspP [Asp *be-ing* [_vP t_i [_{v'} v VP]]]]]]

Chapter 4 proposes that *with* in *with*-augmented ACs such as (1c) was grammaticalized in the twentieth century. The increased frequency of *with*-augmented ACs such as (1) in the twentieth century promoted the diversification of semantics of *with*, and then the meaning of *with* was bleached. As a result, *with* was reanalysed from a lexical item denoting manner or attendant circumstances to a functional item in the twentieth century.

Chapter 5 proposes that in Participle Preposing, progressive AspP or *v*P undergoes A'-movement to the specifier of Topic and the canonical subject undergoes HNPS to the adjunct position of TP. Based on the assumption that only phases are subject to movement and that ellipsis sites in VPE correspond not only to the phasal complement but also to the full phase, I claim that the preposed phrase in Participle Preposing is a phase and therefore progressive AspP as well as *v*P is a phase. This claim is supported by the fact that the site deleted obligatorily in VPE moves obligatorily in Participle Preposing, VP fronting and pseudo-cleft.

Abbreviation

The following abbreviations are used in this thesis:

Acc	accusative case
Adj	adjective
Adv(P)	adverb (phrase)
Asp	aspect
AspP	aspect phrase
CLMET	The Corpus of Late Modern English Texts
Collins	The Collins Wordbanks Online
C(P)	complementizer (phrase)
Dat	dative case
D(P)	determiner (phrase)
EModE	early Modern English
EPP	Extended Projection Principle
LModE	late Modern English
ME	Middle English
N(P)	noun (phrase)
Nom	nominative case
OE	Old English
OED	Oxford English dictionary
PL	plural
PPCEME	The Penn-Helsinki Parsed Corpus of Early Modern English

PPCMBE	The Penn Parsed Corpus of Modern British English
PPCME2	The Second Edition of The Penn-Helsinki Parsed Corpus of Middle English
Spec	specifier
SG	singular
Top(P)	topic (phrase)
V(P)	verb (phrase)
v(P)	light/small verb phrase
YCOE	The York-Tronto-Helsinki Parsed Corpus of Old English

Chapter 1

Introduction

1.1. Introduction

There have been a small number of works in the generative literature that deal with gerunds and present participles comprehensively. This thesis discusses four types of constructions that have the *-ing* suffix: retroactive gerunds, participial relatives (reduced relatives), *with*-augmented ACs and Participle Preposing.¹ They are illustrated in (1a-d), respectively.

- (1) a. This issue is worth considering further. (Safir (1991: 100))
b. a chill air surrounding those who are down in the world
(Niwa (1990: 56))
c. With population increasing everywhere, improvements in agriculture are
an absolute necessity. (Sakakibara (1982: 88))
d. Jutting down from his long, graying locks were his ever-present giant
sideburns, each shaped like the state of Idaho. (Samko (2014a: 371))

The four types of constructions are analyzed within the framework of the generative grammar. The first three are also analyzed in terms of the historical development. In this chapter, I will outline the generative grammar and then point out a problem with it.

1.2. The Overview and the History of Generative Grammar

1.2.1. Overview

The generative grammar is a school of grammar advocated by Chomsky (1957), and it has been a mainstream in the grammatical theory.² The generative grammar of a particular language is defined in Chomsky (1986a: 3) as “a theory that is concerned with the form and meaning of expressions of the language.”³ Since his early work, the form and meaning of language has been assumed to be determined by “language faculty,” which is considered to be a particular component of the human mind. The genetically determined language faculty features “universal grammar” (UG). Chomsky (1986a: 3, 4) regards the language faculty, that is, UG, as “‘language acquisition device,’ an innate component of the human mind that yields a particular language through interaction with presented experience.” UG is defined as “a theory of the ‘initial state’ of the language faculty, prior to any linguistic experience.”

The central concern of the generative grammar is to clarify the essence of language by thinking carefully about what knowledge of language is. The generative approach to language would be significant in that it brought about “a shift of focus from behavior or the products of behavior to states of the mind/brain that enter into behavior” (Chomsky (1986a: 3)). The generative grammar is concerned with the three points.

- (2) a. What constitutes knowledge of language?
- b. How is knowledge of language acquired?
- c. How is knowledge of language put to use? (Chomsky (1986a: 3))

Chomsky (1986a: 3) assumes that the answer to the first question is to construct a particular generative grammar. The generative grammar assumes that knowledge of language is the knowledge about sound, meaning, words, word formation and syntactic

structure and it consists of several components that describe each knowledge: knowledge of sound is described in a phonological component, meaning in a semantic component, words in lexicon, word formation in a morphological component, and syntactic structure in syntax. Thus in order to clarify what knowledge of language is, one would have to elucidate what knowledge of sound, meaning, words, word formation and syntactic structure is.

The second question is paraphrased as follows: regardless of their race or nationality, how do infants acquire languages without any difficulty as long as they are non-handicapped? Chomsky (1986a: 3) answers that knowledge of language is provided by “a specification of UG in the way its principle interacts with experience to yield a particular language.” The generative grammar assumes that human beings are endowed with UG, a grammar that is universal among languages. Thanks to UG, infants can acquire a particular language only by learning rules and words peculiar to the language. Thus, if we succeed in clarifying UG, it means that the way we acquire knowledge of language is also elucidated. In this sense, the attempt to solve the second problem is significant.

The third question concerns in what way linguistic knowledge is used in an appropriate context. Chomsky (1986a: 4) states that the answer to the third question would be “a theory of how the knowledge of language attained enters into the expression of thought and the understanding of presented specimens of language, and derivationally, into communication and other special use of language.” I suppose that he intends to distinguish *performance* from *competence*: the former is defined as “the actual use of language in concrete situation,” and the latter is defined as “the speaker-hearer’s knowledge of his language” (Chomsky (1965: 4)).

The generative approach is revolutionary in that it focuses on the human capability to create language or its mechanism. It is also innovative because it introduced the method of research in natural science into linguistics: he has attempted to investigate linguistics from

both the theoretical and empirical point of view. Note that prior to Chomsky, structural linguists were largely concerned about observing and describing languages phenomena, as represented by the immediate constituent analysis.⁴

1.2.2. History

Although the generative grammar has undergone several theoretical changes since Chomsky (1957), the fundamental spirit is coherent; it has been attempting to solve the above three problems. The theoretical development of the generative grammar is roughly divided into three periods: (i) the Primary Theory and the Standard Theory (1957-1981), (ii) the Principles and Parameters Approach (1981-1995), and (iii) the Minimalist Program (1995-).

In the Primary Theory, Chomsky (1957) assumes that sentences are derived through phrase structure rules and transformation rules. He was concerned with describing rules that derive particular constructions. In the Standard Theory, a lot of transformation rules were proposed to account for more constructions. Some major achievements in this period include the following. Ross (1967) illustrated that there are nodes like an island in languages which blocks the extraction of an element. Chomsky (1973, 1977) developed the descriptive generalization given by Ross and other scholars and pursued the explanative adequacy. Several generalizations such as the subjacency condition, the superiority condition and so on were presented (Chomsky (1973)). Movement phenomena in questions, relatives, cleft sentences, *tough* constructions and comparatives were shown to be explained by a single rule, *wh*-movement. It is a type of operator movement in which a *wh*-phrase or an empty operator equivalent to a *wh*-phrase is assumed to be moved to the front of the clause (Chomsky (1977)).

In the Principles and Parameters Approach, the Government-Binding Theory (henceforth, the GB Theory) in Chomsky (1981) *Lectures on Government and Binding*

(henceforth, LGB) would be one of the most prominent and significant theories. It differs from the (Extended) Standard Theory in that it centers its main concern on subprinciples or subtheories; the previous generative grammar focused on descriptive aspects: rules such as the phrase structural rules and transformational rules and so on. As described in the previous subsection, the generative grammar pursues the three problems in (2), especially aiming at giving a clear picture of UG. Nevertheless, the Primary Theory and the Standard Theory only laid emphasis on a descriptive aspect of language and did not pay particular attention to clarification of the whole picture of UG. As a result, a clear picture of UG was not unraveled under the Primary Theory and the Standard Theory.

In contrast, the GB Theory gives priority to elucidation of UG. It is different from the Primary Theory and the Standard Theory in two points: (i) a top-down approach and (ii) the modularity and the system of Principles and Parameters. Firstly, the GB Theory emphasized UG of human beings, although it also focuses on the study of particular grammars. Especially important are the second because it features the GB Theory prominently. The grammar of modularity represents that a language is yielded as a result of interaction of various modules. Chomsky (1981: 5, 135) assumes that UG consists of four subcomponents of the rule system (i.e. lexicon, syntax, the PF component, and the LF component) and six subsystems of principles (i.e. the bounding theory, the government theory, the θ -theory, the binding theory, the Case theory and the control theory). They are interacted with each other, as a result of which languages are produced. Chomsky (1981: 135) states that the system of the GB Theory is “highly modular, in the sense that the full complexity of observed phenomena is traced to the interaction of partially independent subtheories.”

The model of the grammar in LGB is roughly schematized as Figure 1.

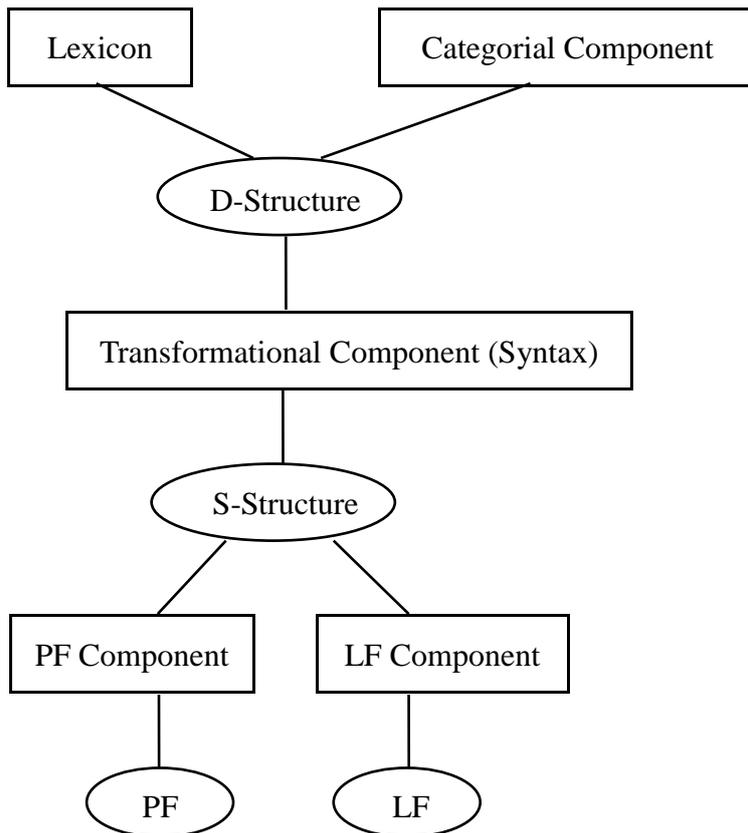


Figure 1: The Model of the Grammar in the GB Theory

Under the system of the Principles and Parameters Approach, seven subtheories and one principle are assumed to comprise UG. The X bar theory is applied in D-structure. The theta theory is applied in D-structure, S-structure and LF, according to Projection Principle. The Case theory is applied in S-structure. The government theory, the binding theory and the control theory are applied in both S-structure and LF. The bounding theory, which consists of the subjacency condition, is applied only in movement operation (Move α) in Syntax. Lastly, the projection principle requires that “representations at each level (i.e. LF, and D- and S- structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items” (Chomsky (1981: 29)). Under the GB Theory, these seven subtheories and one principle are assumed to be common among languages, whereas each language has different values of parameters built into these subtheories.

The GB Theory contributes markedly to the linguistic theory in that it succeeded in accounting for UG as well as particular languages or particular constructions. That is, the GB Theory enabled linguists to analyze various languages under the single framework. Huang (1982) demonstrated convincingly that Chinese can also be analyzed within the framework of the GB Theory in the same way as English, which led to the increase of the generative study of Asian languages, including Japanese, Korean and so on. It is worth noting that there have remained many notions and generalizations presented in the GB Theory: extended projection principles, Burzio's Generalization (Burzio (1986)), relativized minimality (Rizzi (1990)) and so on. This indicates that these notions and generalizations proposed during the GB era are universally valuable and relevant.

In the 1990s the generative grammar enters into a new phase, the Minimalist Program advocated by Chomsky (1995). While it is based on the fundamental notion of the GB Theory, the Minimalist Program aims at simplifying the grammar and assumes that the grammar should be as simple as possible. The modification of the theory was made as a reaction to the excessively complicated constraints or principles in the GB Theory. For example, the Minimalist Program has abandoned D-structure and S-structure simply because they are just a theoretical construction, whereby such subtheories as the Theta theory, the Case theory, the Control theory and so on also became unavailable since they were applied in D-structure and/or S-structure.

The model of the grammar in the Minimalist Program is schematized in Figure 2. The grammar consists of lexicon and a computational system that consists of the operation Merge and Move.

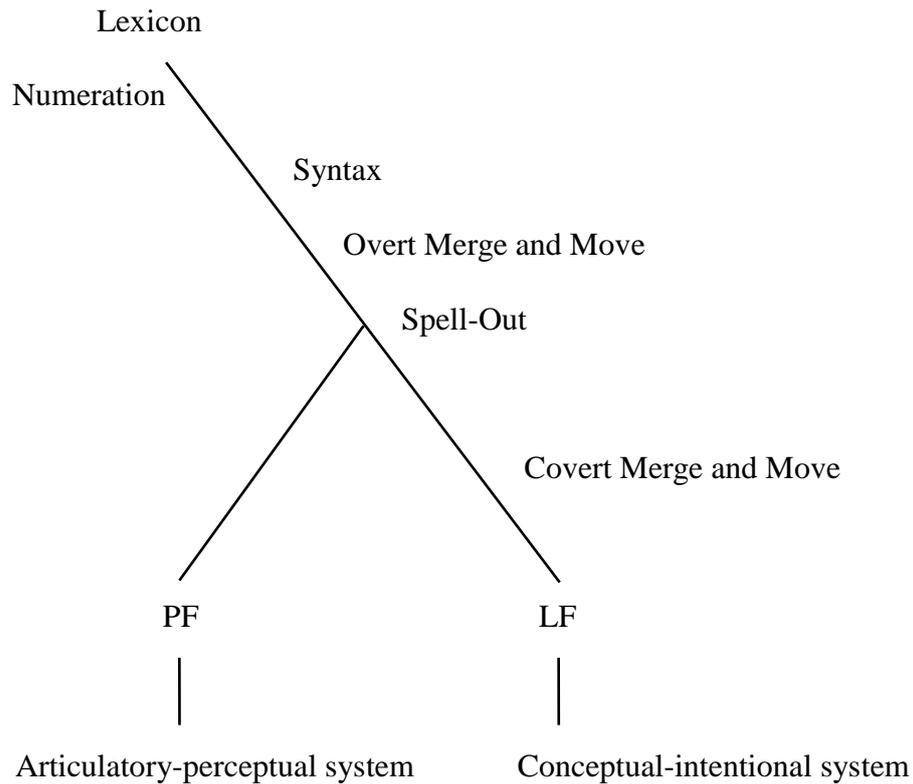


Figure 2: The Model of the Grammar in the Minimalist Program

In the minimalist assumption, in order to derive a sentence, we first select words that are necessary out of Lexicon. The words chosen are combined in the computational component of Syntax and thereby a syntactic structure is yielded. Then it is mapped into LF (Logical Form) representation and PF (Phonetic Form) representation. This operation is called Spell-Out. LF interfaces with the Conceptual-intentional system (i.e. systems of thought), and PF interfaces with the Articulatory-perceptual system (i.e. systems of speech). If Merge and Move are applied before Spell-Out, the operation is called Overt Merge and Move since it induces a phonetic effect, while if Merge and Move are applied after Spell-Out, the operation is called Covert Merge and Move since the operation does not have a phonetic effect.

The Minimalist Program, unlike the GB Theory, assumes that sentences are produced in a bottom-up way. It was in the middle of 1990s that the bottom-up structure building was strongly supported, which was motivated by the notion of Merge proposed by Chomsky

(1995). In Chomsky (1995: 226), Merge is defined as the following operation: “the simplest such operation takes a pair of syntactic objects (SO_i, SO_j) and replaces them by a new combined syntactic object SO_{ij} .” Merge is “an operation by which two constituents are combined together to form a single larger constituent” (Radford (2009: 393)).

Apart from Merge, what is relevant in the recent Minimalist Program is Agree and Phase. The notion of Agree can be partly traced to the principle of Full Interpretation (Chomsky (1995: 27)), which requires that “there can be no superfluous symbols in representations.” This means that every constituent must be interpretable by the time of the final representation and contribute to interpretation in sound and/or meaning. It is assumed in the Minimalist Program that nominals have formal features as well as phonetic and semantic features. For instance, a proper noun *John* has interpretable person, number and gender features and an uninterpretable Case feature. The principle of Full Interpretation requires that uninterpretable features must be deleted by Spell-Out; otherwise the derivation of the sentence would be crashed. Based on this assumption and the notion of Case Checking, Chomsky (2000, 2001) proposes that the feature checking is conducted under Agree, independently of Merge and Move. Chomsky (2001: 3, 4) states that a relation Agree holds between a probe and a goal, where a probe has interpretable inflectional features and a goal has uninterpretable ones which delete under Agree. While Merge is the operation that exists in any language-like system, Agree is the language-specific operation (Chomsky (2000: 101)). This statement implies that Agree is a unique system to human beings.⁵

Chomsky (2000: 99) implies that the notion of Phase is derived from “least effort” conditions, which “seeks to eliminate anything unnecessary.” In an attempt to reduce operative complexity, Chomsky (2000: 106) assumes that “a lexical array should determine a natural syntactic object SO that is relatively independent in terms of interface properties.” He takes vP and CP to be independent in the meaning side and the sound side and therefore

calls them phase. In the meaning side, vP is a verbal phrase in which all theta roles are assigned; CP is a full clause that have tense and force. In the sound side, they are both movable (e.g., fronting, extraposition, pseudoclefting and so on). Based on his (2001: 11) assumption that “the derivation of Ex(pression) proceeds by *phase*,” Chomsky proposes the Phase Impenetrability Condition (PIC), as shown in (3).⁶

- (3) a. The domain of H is not accessible to operations outside HP; only H and its *edge* are accessible to such operations.
- b. $[_{ZP} Z \dots [_{HP} \alpha [H YP]]]$ (Chomsky (2001: 13))

PIC requires that once phases are constructed, the domain (the complement) of the phase head be transferred to the PF component and the LF component and becomes impenetrable (inaccessible) to the further operation.

1.2.3. A Problem with Generative Grammar

We have observed the theoretical change of the generative grammar in the past about fifty years. Each theory or a program has been given rise to as a consequence of an attempt to pursue the answer to the question in (2). It would be certain that the generative grammar is the most influential and convincing theory in linguistics, but we have to remember that there remains many language phenomena that cannot be explained by the generative grammar. In addition, given that linguistics is also empirical science, we are not allowed to focus only on a conceptual aspect; instead we must also keep emphasizing an empirical aspect such as particular language phenomena.⁷ With this in mind, I will briefly show a problem with the recent Minimalist Program in this subsection.

The problem concerns the feature inheritance model advanced by Chomsky (2007,

2008)), where only T selected by C with finite Tense properties is assumed to license a nominative subject.⁸ Within the framework of the generative grammar, this model is supposed to be universal among human languages. However, we find counterevidence against the feature inheritance model about the license of a nominative subject very easily; Arabic participial relatives do not have finite T and are not dominated by C but a nominative subject, nevertheless, can appear inside them, as exemplified in (4).

- (4) a. raʔaytu al-marʔat-a [PRC al-jaalis-a walad-u-haa].
*see.ISG.PST the-woman-ACC the-sitting-ACC **child-NOM-her***
 ‘I **saw** the woman whose child **was** sitting.’
- b. ʔaraa al-marʔat-a [PRC al-jaalis-a walad-u-haa].
*see.ISG.PRSNT the-woman-ACC the-sitting-ACC **child-NOM-her***
 ‘I **see** the woman whose child **is** sitting.’
- c. saʔaraa al-marʔat-a [PRC al-jaalis-a walad-u-haa].
*see.ISG.FTR the-woman-ACC the-sitting-ACC **child-NOM-her***
 ‘I **will** see the woman whose child **will** be sitting.’

(cf. Belikova (2008: 6))

In (4), the subjects *walad-u-haa* in a participial relative clause (PRC) bear a nominative Case although the present participles do not have a tense independent of the matrix clause and are not dominated by C. The feature inheritance model would wrongly predict that Arabic participial relatives do not have a nominative subject. However, this is not the case. Therefore the license of a nominative subject in Arabic participial relatives is not correctly accounted for under the current feature inheritance model. In order to account for the license of a nominative subject in Arabic participial relatives, another assumption would be required.⁹

1.3. The Organization of This Thesis

The body of this thesis is organized as follows: chapter 2 deals with retroactive gerunds, paying a special attention to *worth* constructions like (5a) and showing the whole path of its historical development. Chapter 3 discusses participial relatives. I will clarify the whole path of the historical development of present participles postmodifying nouns such as (5b) and provide a syntactic account of it within the generative grammar. Chapter 4 deals with the historical development of *with*-augmented ACs, focusing mainly on those like (5c) that include a noun and a verb with an *-ing* predicate. I argue that *with* in *with*-augmented ACs was grammaticalized in the twentieth century. Chapter 5 discusses the derivation of Participle Preposing such as (5d) within the framework of the generative grammar.¹⁰ Chapter 6 concludes this thesis.¹¹

- (5) a. This issue is worth considering further. (Safir (1991: 100))
- b. a chill air surrounding those who are down in the world
(Niwa (1990: 56))
- c. With population increasing everywhere, improvements in agriculture are
an absolute necessity. (Sakakibara (1982: 88))
- d. Jutting down from his long, graying locks were his ever-present giant
sideburns, each shaped like the state of Idaho. (Samko (2014a: 371))

NOTES to Chapter 1

- 1 The title of the thesis includes “participial constructions,” which represent constructions with a verb with an *-ing* form: for example, present participles, progressive, free adjuncts, absolute adjuncts, gerunds and so on.
- 2 The discussion in section 1.2 is partly based on Nakamura, Kaneko and Kikuchi (2001), Kitagawa and Ueyama (2004) and Radford (2009).
- 3 “Generative” in generative grammar means “explicit” (Chomsky (1986a: 3)). In Chomsky (1965), the word “generative” is employed as meaning “explicit” or “well-defined,” as shown in (i).
- (i) a. A grammar of a language purports to be a description of the ideal speaker-hearer’s intrinsic competence. If the grammar is, furthermore, perfectly explicit — in other words, if it does not rely on the intelligence of the understanding reader but rather provides an explicit analysis of his contribution — we may (somewhat) redundantly call it a *generative grammar*. (Chomsky (1965: 4))
- b., by a generative grammar I mean simply a system of rules that in some explicit and well-defined way assigns structural descriptions to sentences. (Chomsky (1965: 8))
- 4 The immediate constituent analysis was proposed by American structural linguistics in the 1920s. They were concerned with American Indian languages that were disappearing at that time. The immediate constituent analysis was devised for the purpose of analyzing them and developed into phrase structural rules used in the early generative grammar.
- 5 Displacement (i.e. Move) is implemented under Agree (Chomsky (2001: 4)).
- 6 Chomsky (2000: 108) proposed the first version of PIC as (i), where β expresses a

complement (domain) of H and α expresses a specifier (edge) of H.

(i) a. In phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

b. [α [H β]] (Chomsky (2000: 108))

7 Kitagawa and Ueyama (2004: 135) also point out that the recent minimalist program seems to put too much priority on a conceptual aspect and make light of an empirical aspect.

8 For theoretical evidence for feature inheritance, see Richards (2007), whose argument is based on the assumption that valuation and transfer happen simultaneously. For empirical evidence, see the discussion of Radford (2009: 340, 341) on the agreement between a complementizer and a subject in West Flemish. With respect to the empirical evidence, Chomsky (2008: 159) only implies the morphological realization of φ features on C in West Flemish.

9 For the issue about the outer specifier of vP , I refer the reader to Hasegawa (2003: 278), who casts doubt on the current assumption that the outer specifier of vP is the intermediate landing site for successive cyclic *wh*-movement. He claims that the outer specifier of vP is exactly identical with a VP adjunct position assumed for the successive cyclic *wh*-movement in Chomsky (1986b) and thus there is no independent evidence for that position.

10 Chapter 2, 3, 4 and 5 are a revised and extended version of Sugiura (2011, 2013b), Sugiura (2014a, b), Sugiura (2013a) and Sugiura (to appear), respectively.

11 Here are the historical periods of English standardly assumed: Old English (OE: 450-1100), Middle English (ME: 1100-1500), Early Modern English (EModE: 1500-1700), Late Modern English (LModE: 1700-1900) and Present-day English (1900-).

Chapter 2

Diachronic and Synchronic Aspects of Retroactive Gerunds:

With Special Reference to *Worth*

2.1. Introduction

This chapter aims to clarify the syntactic structure of retroactive gerunds, especially the gerundive complement of *worth*, and its historical development.¹ In examples like (1), the object of a gerundive complement is interpreted by retroacting to (i.e. referring back to) the matrix subject, and such a gerundive complement is therefore called retroactive gerund.²

- (1) a. This issue is worth considering further.
b. This student needs (some careful) looking after. (Safir (1991: 100))

As we will see below, the gerundive complement of evaluative predicates like *worth* as in (1a) behaves quite differently from that of requirement predicates like *need* as in (1b), so the terms *Worth Type* and *Need Type* are used in the thesis to distinguish the two types of predicates with retroactive gerunds. *Worth Type* consists of evaluative predicates like *worth*, *merit*, *repay*, *deserve*, *bear*, and *warrant*, and *Need Type* consists of requirement predicates like *need*, *want*, and *could use* (cf. Safir (1991: 102-105)). This chapter only presents the data and analyses of *worth* and *need* as representatives of each type, because the above members of *Worth Type* and *Need Type* generally pattern with *worth* and *need*, respectively.

This chapter is organized as follows. Section 2.2 discusses the syntactic structure of

the gerundive complement of *Worth* Type in Present-day English. Section 2.3 deals with the historical development of the gerundive complement of *worth*, and shows that it was reanalyzed from a nominal to a verbal gerund during the seventeenth century. Section 2.4 focuses on the gerundive complement of *Need* Type and presents the mechanism of its retroactive construal. Section 2.5 offers concluding remarks.

2.2. The Syntactic Structure of the Gerundive Complement of *Worth*

This section aims at clarifying the syntactic structure of the gerundive complement of *worth*. Section 2.2.1 overviews previous studies of retroactive gerunds. Section 2.2.2 discusses previous analyses of the syntactic structure of gerunds. We will investigate five kinds of analyses: Stowell (1982), Nakajima (1991), Bošković (1997), Abney (1987) and Pires (2001, 2006, 2007). Section 2.2.3 adopts the ν P analysis of the gerundive complement of *Worth* Type. Section 2.2.4 and 2.2.5 considers the position of PRO and a null operator, respectively. Finally, section 2.2.6 gives an answer to a problem with Case.

2.2.1. Overview of Previous Analyses

There have been several studies on retroactive gerunds within the framework of generative grammar: Hantson (1984), Safir (1991), Miller (2002), and Arimura (2005) among others. They claim that the gerundive complement of *Worth* Type involves A'-movement, but not A-movement, mainly based on examples like the ones shown below. As shown in (2), the gerundive complement of *Worth* Type does not allow modification by a *by*-phrase, which is typically associated with A-movement (passivization). On the other hand, the examples in (3) and (4) indicate that preposition stranding and parasitic gaps, which are diagnoses for A'-movement, are observed in the gerundive complement of *Worth* Type.³

- (2) *This issue is worth considering by experts.
- (3) The men thought Gary was worth giving a chance to.
- (4) This report is worth reading *t* before filing *e*. (Safir (1991: 101, 102))

Safir (1991: 102, 103) indicates that the gerundive complement of the other members of *Worth* Type shows almost the same properties as that of *worth*; it is incompatible with a *by*-phrase, as in (5), while it allows preposition stranding, as in (6) and parasitic gaps, as in (7).^{4,5}

- (5)
 - a. These proposals do not merit working on (*by the doctors).
 - b. ? This essay repays talking about (*by writers).
 - c. That idea doesn't deserve looking into (*by scholars).
 - d. This player bears keeping track of (*by scouts).
 - e. ? These possibilities warrant looking at (*by the experts).
- (6)
 - a. This students does not merit giving a chance to.
 - b. ?? This recidivist will not repay giving a chance to.
 - c. ? Guys like that don't deserve crying your eyes out for.
 - d. This player bears keeping an eye on.
 - e. These students warrant going to some trouble for.
- (7)
 - a. These proposals merit reading before filing.
 - b. ? This essay repays talking about after reading.
 - c. ? That idea deserves looking into before rejecting.
 - d. ?? This player bears watching before deciding about.
 - e. ?? These possibilities warrant considering before acting upon.

(cf. Safir (1991: 102, 103))

These sorts of examples have led most previous analyses to assume that the gerundive complement of *Worth* Type is derived through A'-movement of a null operator, but there has been little discussion where it is located.⁶ It is generally assumed that a null operator occupies the specifier position of CP; however, Safir (1991), for example, does not touch upon the issue whether gerunds project CP, TP, or DP, nor does he discuss where the null operator is located in the gerundive complement of *Worth* Type if it does not project CP.

To overcome this problem, the remainder of this section discusses the syntactic structure of gerunds and proposes that the gerundive complement of *Worth* Type is v^*P and the null operator occupies the outer specifier position of v^*P .

2.2.2. The Syntactic Structure of Gerunds

There is a good deal of discussion in the literature as to whether gerunds project TP or DP, but there is little agreement concerning their categorial status: Stowell (1982), Nakajima (1991), and Bošković (1997) claim that gerunds are TP; Pires (2001, 2006, 2007) assumes that they are vP or TP depending on their matrix verbs, but on the other hand, Abney (1987) advocates the DP analysis.

2.2.2.1. Stowell (1982)

Stowell (1982) argues that gerunds, unlike tensed clauses and infinitives, lack COMP position entirely and therefore no complementizer parallel to *for* or *that* appears in gerunds, nor does *wh*-movement apply inside gerunds. He presents two pieces of evidence for the lack of COMP. Firstly, *wh*-movement is allowed within tensed clauses and infinitives when they are governed by a verb or a preposition, but it is not allowed within gerund, as

exemplified in (8)-(10).

- (8) a. I don't remember who we should visit.
b. I wonder where he went.
c. We talked about what we ought to do.
- (9) a. I don't remember who to visit.
b. I wonder where to go.
c. We talked about what to do.
- (10) a. * I don't remember who (our) visiting.
b. * I wonder where (his) going.
c. * We talked about what doing. (Stowell (1982: 561))

Secondly, (11) expresses that *wh*-movement in the relative clause is possible within tensed clauses and infinitives, but is impossible within gerunds.

- (11) a. The table on which you should put your coat is in the next room.
b. The table on which to put your coat is in the next room.
c. * The table on which putting your coat is in the next room. (Stowell (1982: 562))

These data leads him to conclude that gerunds lack a COMP position. However, his argument would not necessarily be sufficient under the current theoretical framework because he only discusses whether there is a COMP position in gerunds. It would be necessary to examine whether they are TP, *v*P, DP or others.

2.2.2.2. Nakajima (1991)

Nakajima (1991) discusses the syntactic structure of ECM complements, small clauses, acc(usative)-*ing* and poss(esive)-*ing*, and distinguishes small clauses and poss-*ing* from ECM complements and acc-*ing* in that the former is analyzed as AgrP, while the latter is analyzed as TP in the sense of Pollock (1989).⁷

To begin with, let us consider the difference of the syntactic behavior between ECM complements and small clauses. First, extraposition from the subject within ECM complements is possible but not within small clauses, as illustrated in (12).⁸

- (12) a. ? I found [[people *t*] to be fascinating [who had tons of money]] when I was still a child.
- b. ?* I found [[people *t*] fascinating [who had tons of money]] when I was still a child. (Nakajima (1991: 40))

Second, sentence adverbs can occur in ECM complements, but cannot occur in small clauses, as exemplified in (13). Since the adverb *certainly* appearing after the dash is a sentence adverb, the adverb *probably* in ECM complements and small clauses is also a sentence adverb.

- (13) a. John considers [Mary *probably* to be scared of snakes] ——— *certainly*, she is scared of snakes.
- b. ?* John considers [Mary *probably* scared of snakes] ——— *certainly*, she is scared of snakes. (Nakajima (1991: 40))

Third, subject-oriented secondary predicates are compatible with ECM complements,

but incompatible with small clauses, as shown in (14).

- (14) a. I expect [many members to be present sober.]
b. ?* I expect [many members present sober.] (Nakajima (1991: 40))

Fourth, *there*-insertion is allowed in ECM complements, but is not allowed in small clauses, as indicated in (15).

- (15) a. I consider [there to be no mistake in the text].
b. * I consider [there no mistake in the text]. (Nakajima (1991: 40))

These instances suggest that there are syntactic differences between ECM complements and small clauses.

Nakajima follows Pollock (1989) in assuming that IP is divided into TP and AgrP (the former corresponding to the traditional IP and the latter embedded under TP). Given that ECM complements show properties particular to IP, he claims that they are TP; on the other hand, since small clauses are composed of smaller clausal constituents than TP, he claims that they are AgrP.

Nakajima claims that this distinction is applicable to two types of gerunds, i.e. *acc-ing* and *poss-ing*. The sentences in (16)-(19) reveal that *acc-ing* has the same TP properties as ECM complements but *poss-ing* shows none of them.

- (16) a. [A man *t*] trying to register [who was wearing no undergarments] was most upsetting, most.

- b. ?* [A man *t*]'s trying to register [who was wearing no undergarments] was most upsetting, most.
- (17) a. I remember John certainly having agreed.
 b. ?* I remember John's certainly having agreed.
- (18) I regret John having driven a car drunk.
 ?* I regret John's having driven a car drunk.
- (19) a. He regrets there being so many mistakes in the text.
 b. * He regrets there's being so many mistakes in the text.

(Nakajima (1991: 42))

Nakajima (1991: 43) concludes that *acc-ing* consists of, or includes as its part, TP and *poss-ing* consists of, or includes as its part, AgrP.⁹

2.2.2.3. Bošković (1997)

Bošković (1997: 189) suggests in terms of the Minimal Structure Principle (MSP) that gerunds are IP. The MSP is explained as follows: “provided that lexical requirements of relevant elements are satisfied, if two representations have the same lexical structure and serve the same function, then the representation that has fewer projections is to be chosen as the syntactic representation serving that function” (Bošković (1997: 25)). He does not have any detailed discussion or provide empirical data about the syntactic structure of gerunds. He only assumes that “every functional projection should be motivated by the satisfaction of lexical requirements; that is, structures can contain only as many functional projections as are needed to satisfy lexical requirements” (Bošković (1997: 25)).¹⁰

2.2.2.4. Abney (1987)

Lastly, let us turn to the DP analysis by Abney (1987). First of all, there is a big problem with the TP analysis of *acc-ing*: why does *acc-ing* occur in Case positions if it is TP? One might object that *acc-ing* is not a clausal projection such as TP or *vP* but DP instead. Therefore let us consider the DP analysis. We will review Abney (1987), who claims the DP analysis of *acc-ing* as well as *poss-ing*.

Before proceeding to the details of Abney's (1987) analysis, it would be instructive to glance at Case. In the first place, *acc-ing* appears in the Case position, as exemplified in (20). All the gerundive phrases receive an accusative Case from a verb or a preposition in (20a-c) and a nominative Case from a finite T in (20d).

- (20) a. Many favored [Bill taking care of her land].
b. Susan worried about [Mark being late for dinner].
c. Sylvia wants to find a new house without [Anna helping her].
d. [Sue showing up at the game] was a surprise to everybody.

(Pires (2007: 169))

On the other hand, *acc-ing* does not receive Case in the complement of passivized verbs, as illustrated in (21).

- (21) a. * It was expected [Frank reading this novel].
b. * Frank was expected [reading this novel].

(Pires (2007: 169))

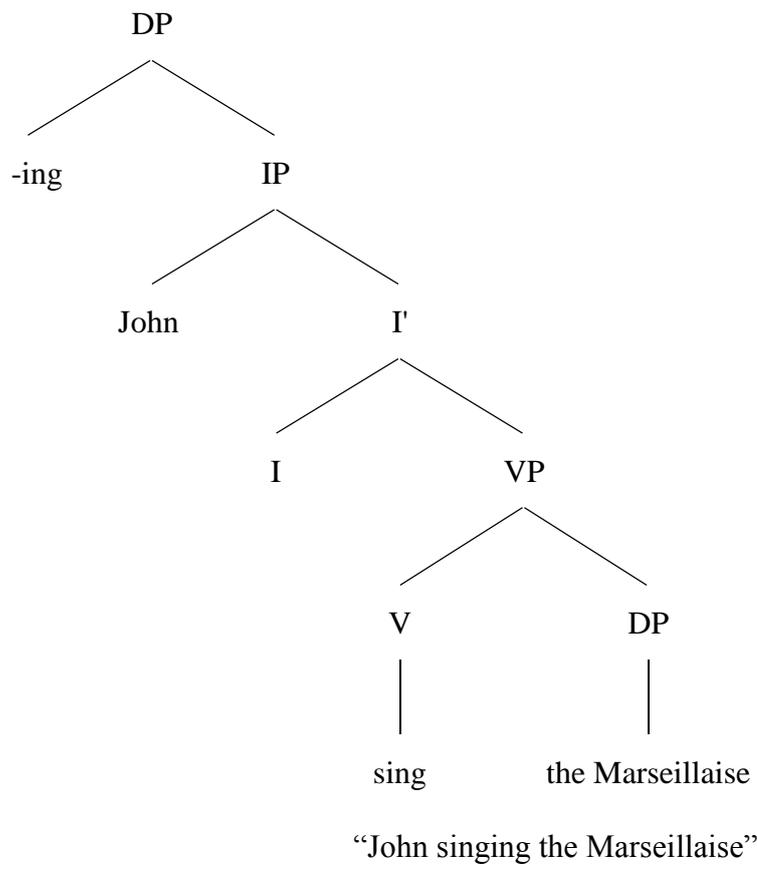
The following examples indicate the similarity between *acc-ing* and *poss-ing*/DP in that they all appear in the Case position.

- (22) a. Mary talked about [John moving out].
b. Mary talked about [John's moving out/John's move]. (Pires (2007: 169))

Indeed, *acc-ing* is likely to project a TP, as shown in (17)-(19), (or project *vP*, as will be argued for later), but nonetheless it shows the nominal property, as shown in (20, 22a). In order to cope with this dilemma, I would like to review Abney (1987), who discusses *acc-ing* and *poss-ing* in detail and claims the DP analysis of gerunds.

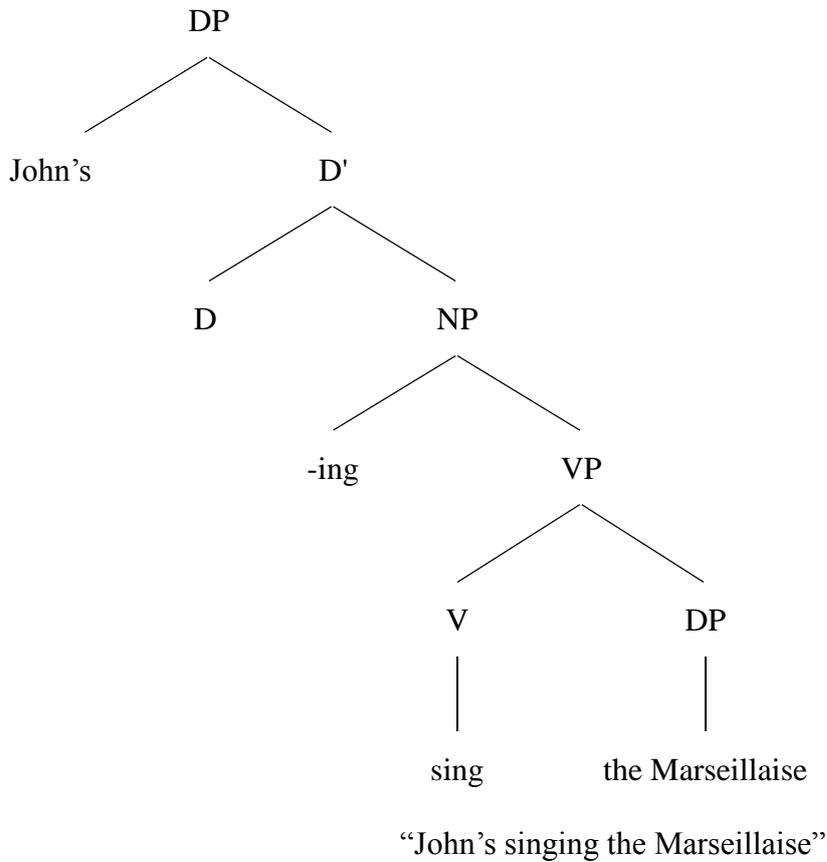
According to him, gerunds are grouped into five different types: the present participle, *acc-ing*, *PRO-ing*, *poss-ing*, *Ing-of*. Among them, he presents the syntactic structures of *acc-ing*, *poss-ing*, and *Ing-of*. Here, we focus on the configurations of *acc-ing* and *poss-ing*. Consider (23) and (24).

(23) *acc-ing*



(Abney (1987: 141))

(24) *poss-ing*



(Abney (1987: 142))

Abney posits DP on the top of the tree in both *acc-ing* and *poss-ing*. It seems that he attempts to solve the dilemma by positing DP above IP in *acc-ing* and positing DP and NP above VP in *poss-ing*, as schematized in (23) and (24), respectively. He argues that the suffix *-ing* can convert a verbal projection into a nominal category. In (23), the verbal projection IP is converted into DP, and in (24), VP is also converted into NP. Note also that there is no D or D' between DP and IP in (23).

Now let us consider one advantage and three disadvantages of the DP analysis. First, we will look at its advantage. Consider (25a, b).

- (25) a. John coming so often and Mary leaving so often bothers/*bother me.
 b. John' coming so often and Mary' leaving so often *bothers/bother me.
 (vs.: John and Mary *bothers/bother me) (cf. Abney (1987: 144))

Examples in (25a, b) indicate that conjoined *acc-ing* phrases in the subject position do not cause plural agreement, but conjoined *poss-ing* phrases cause plural agreement. Abney assumes that this difference is concerned with phi features. He states that “in *Poss-ing*, but not in *Acc-ing*, there is a D, hence, Phi-features ... conjoined *Poss-ing*'s trigger plural agreement, like other plural noun phrases” (Abney (1987: 144)). Given this assumption, the grammatical difference in (25) is accounted for as follows. Since *acc-ing* does not have D, as shown in (23), it does not assume phi-features either, and therefore even if *acc-ing* phrases are conjoined, plural agreement is not caused; on the other hand, since *poss-ing* has D, as shown in (24), plural agreement is caused when *poss-ing* phrases are conjoined.

Let us now turn to the three drawbacks of the DP analysis. The DP analysis by Abney apparently gets over the dilemma with *acc-ing*. However, his analysis bears problems and therefore it will end up being inadequate after all.

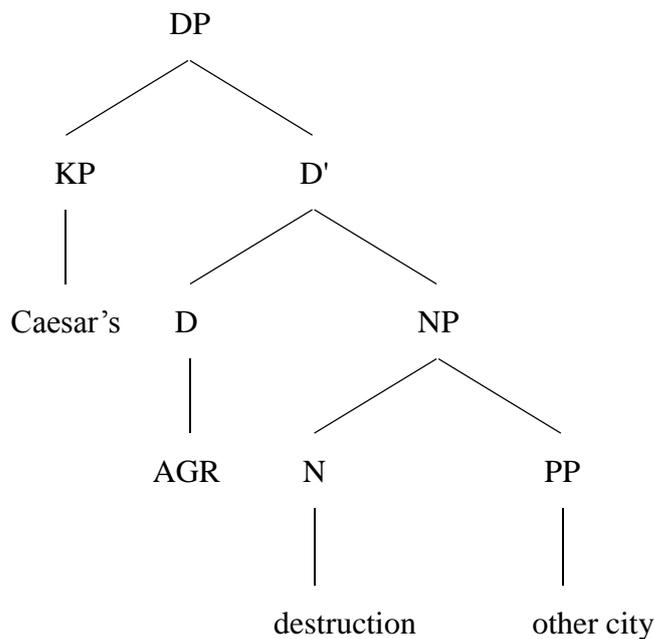
First, it is very doubtful whether the inflectional suffix *-ing* converts one category into another. Abney (1987) assumes that the inflectional suffix *-ing* converts IP and VP into DP and NP in the narrow syntax, as shown in (23) and (24), respectively. However, his argument is stipulative because it is not based on any concrete evidence. In this connection, Pires (2007: 170) argues that “it is unclear how a process of conversion of a syntactic projection from category X to category Y can take place in narrow syntax, if one wants to distinguish derivational processes of the kind found in derivational morphology from operations that apply in narrow syntax.” That is, he assumes that the derivational suffix should be distinguished from the inflectional suffix in that the former is concerned with the

operation in the lexicon, but the latter with the operation in the narrow syntax and that the categorial conversion takes place in the lexicon.¹¹ Moreover, he adds that “especially considering the Bare Phrase structure approach to syntactic structure (Chomsky (1995, 2000)), one can in fact argue that it is simply not possible to have a DP projecting from the TP” (Pires (2007: 171)).

Second, in (23) DP is posited at the topmost of the tree without the head of DP, but this structure is impossible in terms of endocentricity of X'-projection. Abney does not clarify how the syntactic structure without the head of DP is compatible with the X'-theoretic approach.

Third, since Abney does not put D and D' in (23), the structure does not include a specifier of DP, so that the subject of DP is located in the specifier of IP. However, this assumption is inconsistent with the standard DP hypothesis, where the subject of DP is assumed to occupy its specifier position, as shown in (26), where KP represents the specifier of DP.

(26)



(Abney (1987: 71))

We have observed the DP analysis and discussed a strong point and three weak points. As already pointed out, there has been no consensus of opinion up to now as regards the syntactic structure of gerunds, especially *acc-ing*. Although the problem with Case assignment remains to be solved, we will explore the TP analysis of *acc-ing* because it is the most dominant and persuasive analysis in the literature.¹² In the next subsection, we will consider the TP/vP analysis by Pires (2001, 2006, 2007).

2.2.2.5. Pires (2001, 2006, 2007)

This subsection reviews recent work by Pires (2001, 2006, 2007). Pires (2006, 2007) distinguishes both *acc-ing* and *PRO-ing* from *poss-ing*, and calls the former clausal gerund, because they show clausal properties like modification by sentence adverbs and expletive insertion, as illustrated in (27) and (28), respectively. This will support the presence of TP in clausal gerunds, since it is generally assumed that sentence adverbs occur in

the TP domain they modify and expletives are inserted in the specifier position of TP to satisfy the EPP feature of T.

- (27) a. Mary(*'s) probably being responsible for the accident was considered by the DA. (Pires (2006: 18))
b. I remember John certainly having agreed. (Nakajima (1991: 42))
c. I remember certainly having agreed.
- (28) You may count on there(*'s) being a lot of trouble tonight.
(Pires (2007: 168))

On the other hand, the examples in (29)-(31) will indicate that clausal gerunds do not project CP, because they cannot contain complementizers or *wh*-phrases, which is assumed to occur in the CP domain.

- (29) a. Ann wants very much [for Mike to work at home].
b. Ann wants very much [(**for*) Mike working at home].
- (30) a. Mark prefers [that Mary travel with him].
b. Mark prefers [(**that*) Mary/PRO traveling with him].
- (31) a. Sue didn't remember [buying groceries].
b. * Sue didn't remember [what buying *t*]. (cf. Pires (2007: 173))

On the other hand, Pires (2001, 2006) assumes that gerunds are *vP* or TP depending on their matrix verbs. He distinguishes two classes of verbs taking clausal gerunds. The first class (which I will call Class I) includes most of the verbs taking gerunds as their complements such as *count (on)*, *remember*, *worry (about)*, *favor*, *prefer* and so on, and the

second class (which I will call Class II) includes a small number of verbs like *avoid, try, start, stop, continue, finish* and so forth. Based on the differences described below, he argues that the gerundive complement of Class I is TP, while the gerundive complement of Class II is *v*P.

Firstly, the gerundive complement of Class I, but not that of Class II, allows temporal adverbials which have a tense specification independent of that of the matrix clause, as illustrated in (32). On the plausible assumption that temporal adverbials are adjoined to TP, it will follow that the gerundive complement of Class I projects TP, whereas that of Class II does not.

- (32) a. Mary worried (yesterday) about coming to dinner (tonight).
b. * Bill tried today talking to his boss tomorrow. (cf. Pires (2001: 390))

Secondly, the perfective *have* can appear in the gerundive complement of Class I, but not in that of Class II, as illustrated in (33). Pires assumes that perfective morphology belongs to the TP domain, so this difference will suggest the presence of TP in the gerundive complement of Class I, as well as its absence in that of Class II.

- (33) a. John will remember having talked to Mary.
b. * John will avoid having talked to Mary. (cf. Pires (2001: 390))

Third, expletives can appear only in the gerundive complement of Class I, as illustrated in (34). Given that expletives are inserted to satisfy the EPP feature of T, this fact will show that TP is projected in the gerundive complement of Class I, but not in that of Class II.

- (34) a. Paul insists on there being many people interested in his inventions.
 b. * Mary avoided there being too many people in the park.

(cf. Pires (2001: 390))

2.2.3. The *vP* Analysis of the Gerundive Complement of *Worth* Type

With the Pires's (2001, 2006) analysis in mind, let us turn to discuss the syntactic structure of the gerundive complement of *Worth* Type.¹³ As shown in (35), it does not exhibit the above three properties associated with TP: temporal adverbials (35a), perfective morphology (35b), and expletives (35c). Moreover, the example in (36) indicates that it does not allow modification by sentence adverbs that are assumed to appear in the TP domain. All these provide evidence that the gerundive complement of *Worth* Type does not project TP.

- (35) a. * This issue was worth considering tomorrow.
 b. * This issue is worth having considered for a long time.
 c. * This village is worth there existing.
- (36) . * This issue is worth probably considering.

On the other hand, the grammaticality of (37) shows that the gerundive complement of *Worth* Type is verbal and hence projects *vP*/VP, because it allows modification by *vP*/VP adverbs. (37b) is obtained from *Corpus of Contemporary American English* (henceforth, COCA), and (37c) is from *Corpus of Historical American English* (henceforth, COHA).

- (37) a. This issue is worth (seriously/ *serious) considering.

(Miller (2002: 302))

- b. That discussion is worth briefly reviewing, ...

(COCA, ACAC, Public Interest)

- c. and incidents not worth formally recording.

(1883, COHA, MAG, Atlantic)

The gerundive complement of *Worth* Type has a PRO subject that is arbitrary in reference and functions as its external argument. In addition, it also involves an empty object that functions as its internal argument, which is generally assumed to be (the trace of) a null operator bound by the matrix subject. Therefore, it will follow that the gerundive complement of *Worth* Type is v^*P with a full argument structure. The following two subsections discuss the positions of the PRO subject and the null operator within the gerundive complement of *Worth* Type, respectively.

2.2.4. The Position of PRO

As for the position and licensing of PRO, I follow Baltin (1995) and Nakagawa (2001) in assuming that it is licensed in its base position, namely in the specifier position of v^*P . They argue that the PRO subject of infinitives remains in its base position rather than moves to the specifier position of TP, based on the phenomenon of *wanna*-contraction.

- (38) a. I wanna (want +to) visit Sally.
b. I want [_{TP} to [_{vP} PRO [_{v'} visit Sally]]]

According to them, if PRO were to appear in the specifier position of TP, it would intervene to block contraction between *want* and *to* (cliticization of *to* onto *want*), contrary to fact. This has led the two authors to assume that the PRO subject of infinitives does not move to the

specifier position of TP, but remains in its base position, as shown in (38b). If this assumption is applied to the PRO subject of gerunds (which would be desirable to achieve a unified analysis of PRO), the partial structure of the gerundive complement of *Worth* Type will be as in (39), where the PRO subject occupies the specifier position of v^*P .

- (39) This issue is worth [v^*P PRO [v^* considering]].

A theoretical problem would arise concerning the licensing of PRO in the gerundive complement of *Worth* Type, or nonfinite clauses in general, given the standard analysis in the minimalist program whereby PRO is licensed through null Case assignment by nonfinite T (Chomsky and Lasnik (1993)). If the above discussion is correct, the null Case analysis cannot be tenable and an alternative analysis of PRO must be pursued. One possibility would be to assume with Baltin (1995) that PRO is licensed in its base position, where it is assigned [-actualized] Case to be visible for θ -marking. It might also be possible to argue that PRO needs no licensing including Case assignment, because it appears in configurations where the other types of DP (lexical DP, *wh*-trace, and DP-trace), all of which have to be licensed in some way or another, cannot appear; see Amano (2000) for such an analysis.

2.2.5. The Position of the Null Operator

This section addresses the issue where the null operator is located in the gerundive complement of *Worth* Type, which was pointed out in section 2.2.1. This may be a kind of challenge for the v^*P analysis adopted in this chapter, since it is generally assumed that a null operator occupies the specifier position of CP.

Recent minimalist assumptions provide a way to overcome this problem. According to Chomsky (2008), a derivation proceeds by phase, namely CP and v^*P , the latter being vP

with a full argument structure. Once a derivation constructs a phase, the complement of the phase head (TP or VP) is transferred to the phonological component. Therefore, A'-movement to the specifier position of CP must proceed through the specifier position of v^*P to avoid being transferred as part of VP in the v^*P phase; otherwise, A'-movement could never be overt, with all the elements pronounced within the phases where they are merged. Chomsky assumes that a phase head has an edge-feature to induce A'-movement: in typical examples of *wh*-movement like *I wonder what John bought*, the edge feature of v^* first attracts *what* to the outer specifier position of v^*P , and then the edge feature of C attracts it to the specifier position of CP. Under this system, A'-positions are specifier positions associated with an edge-feature, while A-positions are specifier positions associated with ϕ -features, as well as positions where arguments are first merged.

If this is correct, the outer specifier position of v^*P will count as an A'-position and hence provide a landing site of the null operator in the gerundive complement of *Worth* Type, as shown in (40).

(40) This issue_i is worth [_{v^*P} Op_i [_{v^*} PRO [_{v^*} considering t_i]]].

In (40), the null operator moves from the complement position of *considering* to the outer specifier position of v^*P . This movement is triggered by the edge-feature of v^* . The null operator binds the variable t_i , yielding an operator-variable construction. It is in turn bound by the matrix subject *this issue*_i; therefore, we can identify the object of the gerundive complement by retroacting to the matrix subject, resulting in the retroactive construal.¹⁴

2.2.6. A Problem with Case

There remains one problem with Case: why does *acc-ing* occur in Case position if it is

v^*P or TP ? As is already stated in note 2, we are not concerned about what category *worth* belongs to, so it does not matter whether it is a preposition or an adjective. Therefore, we will not discuss whether or not *worth* assigns Case to its gerundive complement. This subsection concentrates on the problem with Case of *acc-ing* in general. Recall also the discussion in section 2.2.2.4.

It is generally assumed within the framework of the minimalist program that a DP has interpretable phi features and an uninterpretable Case feature, the latter of which needs to be valued and deleted under Agree, and thereby the DP is assigned Case and licensed properly. *Acc-ing* is nominal in that it appears in Case position. Therefore, I assume that *acc-ing* also has interpretable phi features and an uninterpretable Case feature that are carried by the suffix *-ing*.

This assumption is supported in terms of the historical development of gerunds and present participles. As will be discussed in chapter 3 again, gerunds were originally nouns in OE and they were produced through attachment of a derivational suffix *-ing* or *-ung* to a verbal stem. Therefore it would be possible to suppose that the nominal property of gerunds in OE is ascribed to the suffix *-ing* or *-ung*, which carried interpretable phi features and an uninterpretable Case feature. Gerunds have kept the suffix *-ing* after its phonological assimilation with the present participle suffix *-ende* or *-ind(e)* in late ME, and have held phi features and a Case feature till Present-day English. Hence gerunds, including *acc-ing*, appear in the Case position, as shown in (41), where *acc-ing* is assigned accusative Case under Agree with the matrix v^* and licensed adequately.¹⁵

- (41) Many favored Bill taking care of her land.

2.3. The Historical Development of the Gerundive Complement of *Worth*

This section deals with the historical development of the gerundive complement of *worth*. Section 2.3.1 reviews the history of gerunds, with special reference to the triggers for the reanalysis of gerunds from a nominal category to a verbal category. Section 2.3.2 examines how the gerundive complement of *worth* has changed in the history of English.

2.3.1. The Rise of Verbal Features

Fanego (2004) argues that gerunds were abstract action nouns in Old English, but they were reanalyzed as a verbal category and acquired verbal properties in Middle English. From around 1200 they began to be modified by adverbials that only appear with verbs (e.g., *my quietly leaving before anyone noticed*); from around 1300 they began to govern an object (e.g., *their following the child into England*) and a predicative complement (e.g., *I don't like being ill*); other features, including the distinctions of voice (e.g., *the necessity of being loved*) and tense (e.g., *of having done it*) as well as the negative *not* (e.g., *my not having*), began to be found from the end of Middle English to Early Modern English.

Fanego goes on to suggest that ambiguous properties of gerunds in Old and Middle English played an important role in their reanalysis from a nominal to a verbal category. First, gerunds could appear without determiners, which are typically associated with nouns. Moreover, they could take complement clauses (e.g., *asking why he was telling such lies*) and be modified by prepositional phrases (e.g., *walking in the street*) and some kinds of adverbs (e.g., *at his coming there*). Such properties were compatible with either a nominal category or a verbal category, leading to the possibility of more than one analysis for the structure of gerunds. This ambiguity served as a trigger for their reanalysis; consequently, their verbal properties mentioned above emerged in Middle and Early Modern English.

2.3.2. A Corpus-Based Investigation of *Worth* Taking Retroactive Gerunds

This section investigates the development of *worth* taking retroactive gerunds in the history of English by employing *The Oxford English Dictionary*, Second Edition (henceforth, OED) and the following two historical corpora: *The Penn-Helsinki Parsed Corpus of Early Modern English* (henceforth, PPCEME) and *The Corpus of Late Modern English Texts* (henceforth, CLMET). Table 1 and Table 2, which are based on the data from these two corpora, represent respectively the tokens and the frequency of *worth* taking retroactive gerunds that appears in the two configurations: (i) *worth the -ing*, which involves a nominal gerund and (ii) *worth -ing*, which involves either a nominal or a verbal gerund. Figure 1 graphically represents the rates of the two configurations with *worth* based on Table 2. It should be noticed that the rate of (ii) *worth -ing* increased rapidly in the seventeenth century; this would be due to the reanalysis of the gerundive complement of *worth* from a nominal to a verbal category, yielding the new option of a verbal gerund.¹⁶

Table 1: Tokens of (i) *worth the -ing* and (ii) *worth -ing* in EModE and LModE

	1500- 1570	1570- 1640	1640- 1710	1710- 1780	1780- 1850	1850- 1920
(i) <i>worth the -ing</i>	1	8	2	10	10	6
(ii) <i>worth -ing</i>	0	1	9	83	84	181

Table 2: Frequencies of (i) *worth the -ing* and (ii) *worth -ing* per 100,000 words in EModE and LModE

	1500- 1570	1570- 1640	1640- 1710	1710- 1780	1780- 1850	1850- 1920
(i) <i>worth the -ing</i>	0.2	1.3	0.4	0.5	0.3	0.2
(ii) <i>worth -ing</i>	0.0	0.2	1.7	4.0	2.2	4.5

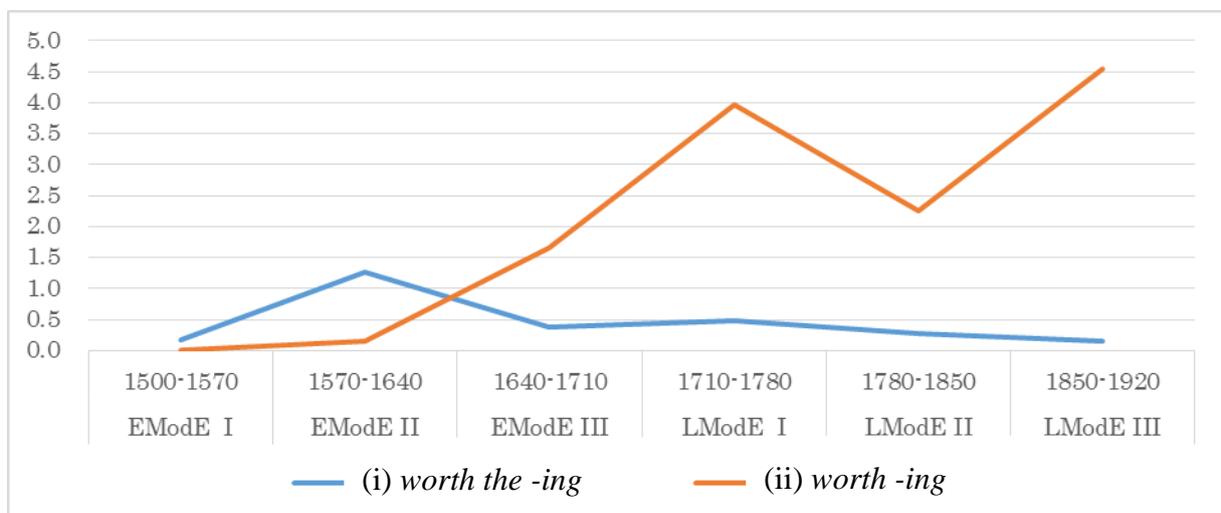


Figure 1 : The rates of (i) *worth the -ing* and (ii) *worth -ing* per 100,000 words in EModE to LModE

In order to verify this conjecture, let us consider in more detail the data relevant for the reanalysis from a nominal to a verbal category. First, (42) is the earliest instance of the gerundive complement of *worth*, which involves the article *the* and hence instantiates a nominal gerund ((i) *worth the -ing*). Next, (43) is the earliest instance where the gerundive complement does not involve a determiner ((ii) *worth -ing*); note also that it is modified by the prepositional phrase. Such a gerundive complement is ambiguous between a nominal category and a verbal category, as we saw in the previous subsection. Soon after the appearance of ambiguous cases, preposition stranding began to be observed in the gerundive

complement of *worth*, as shown in (44a), which is the earliest example of the relevant kind in PPCEME. (44b) is also the earliest example of the relevant kind in OED. Given that preposition stranding is a diagnosis for A'-movement that requires at least ν^*P to create an operator-variable construction (see section 2.2.5), it follows that the gerundive complement in (44) is unambiguously a verbal category.

(42) My corne ... was not worth the cuttyng downe.
(1540) (OED: Acolastus IV. Vii. Xijb)

(43) Viewing round about all what was worth seeing in so famous a place.
(1638) (OED: Paint. Ancients 28)

(44) a. And for the other, I can assure you, there's not a Man in Town who has a better Interest with the Women, that are worth having an Interest with.
(1664) (PPCEME: VANBR-E3-P1,43.126: e3)

b. I could not meet with any thing worth taking notice of all over the Hall but their Sheitan, or (as they themselves call'd it) their God.
(1698) (OED: tr. A. Brand Jrnl. Embassy from Muscovy 41)

If the above arguments are on the right track, the reanalysis of the gerundive complement of *worth* can be accounted for along the lines suggested for that of gerunds in general in the previous subsection. The syntactic structures of the gerundive complements in (42)-(44a) are represented in (45)-(47), respectively.

(45) My corne ... was not worth [_{DP} the cuttyng downe].

(46) a. what was worth [_{DP} seeing in so famous a place].

- b. what_i was worth [_{v*P} *Op*_i [_{v*} PRO [_{v*} seeing *t*_i in so famous a place]]]
- (47) the Women, that_i are worth [_{v*P} *Op*_i [_{v*} PRO [_{v*} having an Interest with *t*_i]]]

Especially relevant for the present discussion is the ambiguous case in (43), which can be assigned the two structural analyses in (46), i.e. DP and *v*P*. It seems plausible to suppose that once examples like (43) began to be attested, their ambiguity led to the reanalysis of the gerundive complement of *worth* from a nominal to a verbal category during the seventeenth century. Namely, it would be possible that when a child heard sentences like (43), he/she assigned them the structure in (46b), instead of the one in (46a) generated by the adult's grammar. The structural change to (46b) under reanalysis seems to be well-motivated: when the gerundive complement of *worth* was reanalyzed as a verbal category, namely *v*P* with a full argument structure, its external argument and internal argument came to be realized as the specific kinds of empty categories, i.e., PRO and a null operator respectively, as argued in section 2.2.5.¹⁷ Once this happened, examples like (44) became available in which gerundive complements are unambiguously verbal.

So far, this section has revealed the development of the gerundive complement of *worth* in the history of English.¹⁸ One remaining question concerns nominal gerunds as complements of *worth* like (42): given that they are DP, how is their retroactive construal derived in the absence of *v*P* and the null operator associated with the matrix subject? This will be discussed in the next section.

2.4. *Need* Type and Its Retroactive Construal

This section discusses the syntactic structure of the gerundive complement of *Need* Type, and presents the mechanism of its retroactive construal, based on Williams' (1985)

proposal on the linking between the thematic role of a verb and that of its argument. Section 2.4.1 shows the nominal property of the gerundive complement of *Need* Type and section 2.4.2 makes clear the mechanism of the retroactive construal of *Need* Type.

2.4.1. The Syntactic Structure of the Gerundive Complement of *Need* Type

Let us consider the instances of *Need* Type shown in (48)-(50), compared with those of *Worth* Type in (2)-(4), which are repeated as (51)-(53). As shown in (48), the gerundive complement of *Need* Type allows modification by a *by*-phrase, which is typically associated with A-movement (passivization). On the other hand, the instances in (49) and (50) indicate that preposition stranding and parasitic gaps are not observed in the gerundive complement of *Need* Type.¹⁹

- (48) The student needs looking after by a caring parent. (Safir (1991: 105))
- (49) *This student needs giving a chance to.
- (50) *This student needs talking to *t* without insulting *e*.
(cf. Safir (1991: 105))
- (51) *This issue is worth considering by experts.
- (52) The men thought Gary was worth giving a chance to.
- (53) This report is worth reading *t* before filing *e*. (Safir (1991: 101, 102))

Based on these sorts of examples, Hantson (1984), Safir (1991), Miller (2002), and Arimura (2005) argue that the gerundive complement of *Need* Type involves A-movement, but it would be a rash conclusion because the absence of A'-properties like preposition stranding and parasitic gaps does not necessarily lead to the A-movement analysis.

In order to evaluate the validity of the A-movement analysis of *Need* Type, it is

necessary to consider the syntactic structure of its gerundive complement and to determine whether it is a nominal or verbal gerund. First, as shown in (54), the gerundive complement of *Need* Type allows adjectival modification, but not adverbial modification, unlike that of *Worth* Type (see (37)).

- (54) This house needs (*seriously/ serious) cleaning. (Miller (2002: 302))

Moreover, the examples in (55) show that the gerundive complement of *Need* Type may occur with quantifiers, and its gerundive head may be pluralized according to their number properties.

- (55) a. This house needs at least one good cleaning.
b. This house needs several good cleanings. (Miller (2002: 302))

Therefore, it is obvious that the gerundive complement of *Need* Type is nominal unlike that of *Worth* Type. It is thus reasonable to assume that its category is DP.

- (56) This student needs [_{DP} (some careful) looking after].

With these facts in mind, let us turn to the possibility of extraction from nominals. A-movement is usually banned except when it occurs from idiomatic expressions such as *take advantage of* and picture noun phrases, as illustrated in (57) and (58), respectively.

- (57) a. We took advantage of the students.

- b. The students were taken advantage of. (Akimoto (2002: 103))
- (58) a. If someone told lies about me I'd be pretty mad.
- b. If I were told lies about I'd be pretty mad. (cf. Bolinger (1975: 61))

As is obvious, this fact poses a serious problem for the A-movement analysis of *Need* Type advocated by the previous studies mentioned above. For example, Arimura (2005) assumes that the subject of *Need* Type originates in the object position of its gerundive complement and undergoes A-movement to the matrix subject position, which occurs under dethematization by the suffix *-ing*, like passivization.

- (59) The article needs [[some [checking] Δ]]
- ↑ _____ |
- (Arimura (2005: 60))

However, this analysis should be abandoned because the complement of *Need* Type is a nominal gerund from which A-movement is generally impossible. (Witness the fact that the derivation in (59) proposed by Arimura involves the quantifier *some* in the gerundive complement.) On the other hand, if there is no A-movement involved in the derivation of *Need* Type, a problem will arise what mechanism ensures the retroactive construal. The next subsection is devoted to solving this problem.

2.4.2. Thematic Linking

We are now in a position to present the mechanism of the retroactive construal of *Need* Type along the lines of Williams (1985). Consider the following examples.

(60) a. John_i took a picture.

(Agent_i, Event) (Maker_i, Subject)

b. John_i underwent an operation.

(Experiencer_i, Event) (Actor, Patient_i) (cf. Williams (1985: 300, 301))

According to Williams, a verb can specify association between its arguments and their argument structures. In (60a), for example, the Agent role of *take*, which is realized as the matrix subject *John*, is associated with the implicit Maker role of *picture*, which is not syntactically realized. On the other hand, (60b) is construed retroactively because the Experiencer role of *undergo*, which is realized as the matrix subject *John*, is associated with the implicit Patient role of *operation*. Thus, based on the assumption that a nominal may have its argument(s) syntactically unrealized, Williams (1985) succeeds in accounting for the retroactive construal without recourse to any kinds of movement.

Applying this mechanism to *Need* Type, consider (61), where it is assumed that its subject has a Location role.²⁰

(61)=(1b) This student_i needs [_{DP} (some careful) looking after].

(Location_i, Event)

(Actor, Patient_i)

In (61), the Location role of *need*, which is realized as the matrix subject, is associated with the implicit Patient role of *looking after*, yielding the retroactive construal.²¹ The same analysis holds of nominal gerundive complements of *Worth* Type like (42) and (43) (the latter with the analysis in (46a)) that were attested in Modern English, with the only difference being that the subject of *Worth* Type has a Theme role as shown in (62) and (63).²² Thus, the retroactive construal with a nominal gerund can be accounted for without recourse to

movement by linking its object role with the subject role of the matrix verb. Note that this mechanism is not available for the verbal gerundive complement of *Worth* Type, because a verb must have its argument(s) syntactically realized: instead, the object argument of the verbal gerund is realized as a null operator, which moves to the outer specifier position of v^*P and serves to establish the retroactive construal by being bound by the matrix subject, as discussed in section 2.2.5.^{23, 24}

(62) My corne_i ... was not worth [_{DP} the cuttyng downe].

(Theme_i, Event) (Actor, Patient_i)

(63) Viewing round about all what_i was worth [_{DP} seeing in so famous a place].

(Theme_i, Event) (Actor, Theme_i)

This mechanism also holds of nominal gerundive complements of *Worth* Type such as (64a) where the gerundive complement is modified by *a lot of*. When it involves a modifier such as *a lot of*, the gerundive complement of *Worth* Type shows the same syntactic properties as that of *Need* Type. In (64b), the parasitic gap cannot be licensed, which means that there is no A'-movement (see (50) and (53)).

(64) a. Picasso's later paintings are worth a lot of looking at.

b. * Picasso's later paintings are worth a lot of looking at *t* before criticizing *e*.

(cf. Safir (1991: 103))

The gerundive complement of the other members of *Worth* Type also shows the same properties as that of *Need* Type when it has a modifier like *some*, *any*, *a good* and so on. In (65), a *by*-phrase is allowed, while in (66) preposition stranding is not allowed (see also (48),

(49), (51) and (52)). Thus, the gerundive complement of (65) and (66) is a nominal.

- (65) a. These proposals merit some working on by experts.
b. ? This essay would repay some careful analyzing by lawyers.
c. That idea doesn't deserve any talking about by serious scholars.
d. ? This player doesn't bear any keeping track of by scouts.
e. ? This evidence warrants a good looking at by the experts.
- (66) a. * This student does not merit some giving a chance to.
b. * This recidivist will not repay any giving a chance to.
c. * Such politicians don't deserve any giving the time of day to.
d. * This player bears a lot of keeping an eye on.
e. * These students warrant a great deal of going to some trouble for.

(Safir (1991: 104))

Hence the retroactive construal in (64a) and (65) can also be accounted for without recourse to movement by linking its object role of the nominal gerund with the subject role of the matrix verb.

(67) Picasso's later paintings_i are worth [_{DP} a lot of looking at].

(Theme_i, Event) (Actor, Patient_i)

2.5. Concluding Remarks

This chapter has discussed the syntactic structure of retroactive gerunds, especially the gerundive complement of *worth*, and revealed the historical development of *worth* with retroactive gerunds.

It was proposed that the gerundive complement of *Worth* Type in Present-day English is v^*P , and that there is A'-movement of the null operator to the outer specifier position of v^*P , which serves to establish the retroactive construal. I proposed that the syntactic structure of the gerundive complement of *Worth* Type is (68).

(68) This issue_i is worth [v^*P Op_i [$v^{*'} PRO$ [$v^{*'} considering t_i$]]].

In (68), the edge-feature of v^* triggers A'-movement of the null operator from the complement position of *considering* to the outer specifier position of v^*P . The null operator binds the variable t_i , and thereby an operator-variable construction is yielded. It is in turn bound by the matrix subject *this issue*, so that we can identify the object of the gerundive complement by retroacting to the matrix subject, resulting in the retroactive construal.

On the other hand, it was claimed that the gerundive complement of *Need* Type is DP and there is no A-movement involved in the derivation of *Need* Type because the extraction from nominal is usually impossible. I proposed that the retroactive construal is yielded by thematic linking along the lines of Williams (1985) and established without recourse to movement.

(69) This student_i needs [_{DP} (some careful) looking after].

(Location_i, Event)

(Actor, Patient_i)

In (69), the Location role of *need*, which is realized as the matrix subject, is associated with the implicit Patient role of *looking after*, giving rise to the retroactive construal. This analysis also holds of nominal gerundive complements of *Worth* Type.

- (70) Picasso's later paintings_i are worth [_{DP} a lot of looking at].
 (Theme_i, Event) (Actor, Patient_i)

In (70), the retroactive interpretation is yielded by linking its object role of the nominal gerund with the subject role of the matrix verb.

As for the historical development of *worth* taking retroactive gerunds, it was shown that its complement was originally a nominal gerund, but it was reanalyzed as a verbal gerund during the seventeenth century. Especially relevant was the ambiguous sentence in (71), which can be assigned the two structural analyses to the gerundive complement: DP or *v**P. When a child heard sentences like (71), he or she assigned them the structure in (72b) instead of (72a) generated by the adult's grammar, leading to the reanalysis of a nominal gerund into a verbal gerund.

- (71) Viewing round about all what was worth seeing in so famous a place.
 (1638) (OED: Paint. Ancients 28)
- (72) a. what was worth [_{DP} seeing in so famous a place].
 b. what_i was worth [_{*v**P} *Op*_i [_{*v**'} PRO [_{*v**'} seeing *t*_i in so famous a place]]]

NOTES to Chapter 2

- 1 The term “retroactive” is defined in *Longman Advanced Dictionary of Contemporary English* as follows: a law or decision that is retroactive is effective from a particular date in the past. However, this thesis does not use “retroactive” in this meaning. The gerunds in (1) are called retroactive gerund in the sense that we must retroact to the matrix subject in order to seek for the object of the gerund. The term “retroactive” was originally employed by Hantson (1984), who borrows it from Jespersen (1940), although he uses it for infinitives but not for gerunds.
- 2 This chapter will not discuss what category *worth* belongs to, that is to say, whether it is a preposition or an adjective.
- 3 The example in (3) involves the preposition separated from the verb, and such a configuration only allows preposition stranding under A'-movement (Hornstein and Weiberg (1981)).
- 4 The gerundive complement of the other members of *Worth* Type, unlike *worth*, does not permit an expletive *it*, as shown in (i).
 - (i) a. *It merits reading this sort of proposal carefully.
 - b. ?* It repays talking about such proposals.
 - c. *It deserves thinking about this idea.
 - d. ?? It bears keeping this guy in mind.
 - e. *It warrants considering such things carefully. (Safir (1991: 103))

Note also that Miller (2002: 302) points out that *deserve* sometimes patterns with *Need* Type, as shown in the following examples with pseudo-clefting.

- (ii) a. cleaning is what this house needs (could use)
- b. looking after is what this student deserves

- c. *looking after is what this student is worth (Miller (2002: 302))

On the other hand, Safir presents instances in which the gerundive complement of *deserve* sometimes does not permit pseudo-clefting, as shown in (iii). He assumes that the ungrammaticality of (iiia) is due to the *wh*-movement strategy being employed; with appropriate emphasis, the grammaticality of (iiib) is improved because *deserve* in (iiib) permits both *wh*-movement and NP-movement strategies.

- (iii) a. *Crying your eyes out for is not what guys like that deserve.

- b. ?? Looking into is exactly what that idea deserves. (Safir (1991: 126))

This phenomenon is not observed among the other members of *Worth* Type and hence would be treated as the idiosyncratic property of *deserve*.

- 5 The instances below show an interesting property. In (ia), the matrix subject *a life* apparently serves as the object of the gerund *living* and seems to be passivized. *A life* appears to be a cognate object of *living*, but I assume that it is not a true cognate object because cognate objects usually involve a modifier like an adjective and usually disallow passivization, as shown in (ii).

- (i) a. A life is worth living.

- b. My life doesn't seem worth living.

- c. The work makes his life worth living.

- d. John lives a life worth living.

- (ii) a. John died a gruesome death. (Jones (1988: 89))

- b. *A weary sigh was sighed by Bill. (ibid.: 91)

As will be discussed later, in (ia) passivization is not involved; instead A'-movement of a null operator is involved. As for (ib, c, d), I cannot give full explanation, so leave it out for future research.

- 6 Safir (1991: 99) assumes that the implicit argument such as a *wh*-trace (i.e. an empty

operator) or PRO in *Worth Type*, *Need Type*, and retroactive derived nominals such as (i) is probably not syntactically represented at all and argues for an analysis without movement.

- (i) This issue is worth consideration.

As will be cleared later, however, this chapter reveals that the implicit arguments in *Worth Type* are realized syntactically, while those in *Need Type* and retroactive derived nominals are not syntactically realized.

7 *Acc-ing* (accusative-*ing*) is a class of gerund whose “subject can be either a PRO or an overt DP Case-marked with accusative Case,” as illustrated in (ia, b). Another class of gerund is *poss-ing* (possessive-*ing*) in (ic), where “the lexical subject is marked with genitive Case” (Pires (2007: 165, 166)).

- (i) a. Susan preferred PRO being late for dinner.
 b. Susan preferred John/him being late for dinner.
 c. Mary’s winning the contest was a big surprise. (Pires (2007: 165, 166))

8 Nakajima (1991: 40) notes that what is relevant in (12)-(14) is “not the absolute acceptability but the relative acceptability contrast between the paired sentences.” He also notes that the judgments on (12a) and (13a) are subject to idiolectal variation (p. 52).

9 Nakajima mentions the nominal property of *poss-ing* and *acc-ing*. He proposes that *poss-ing* has DP and *acc-ing* has TP as their outermost category, respectively.

- (i) a. [DP John’s [D’ -*ing* [AgrP [Agr’ VP]]]]
 b. [TP John [T’ -*ing*[Nom] [AgrP [Agr’ VP]]] (cf. Nakajima (1991: 43, 44))

In (ia), based on the DP analysis of noun phrases by Abney (1987), he assumes that *poss-ing* is similar to noun phrases and therefore it has DP as its topmost category, under which AgrP is embedded; on the other hand, in (ib), *acc-ing* has a different structure from *poss-ing* in that its outermost category is TP. The head T is occupied by the suffix *-ing*

that “serves to change verbs into nominal” (Nakajima (1991: 44)). AgrP is embedded under TP. This analysis, however, would be insufficient in that it cannot account for the Case problem: why does *acc-ing* as well as *poss-ing* appear in Case positions? For the relevant discussion, see section 2.2.6 and notes 15.

10 Bošković (1997: 189) also suggests that as a consequence of the MSP, “subject-initial verb second (V2) clauses in Germanic V2 languages,” which are generally analyzed as CP, are IPs. He adds that the MSP may support the NP status and dismiss the DP status for (seemingly) unquantified nominals. Again, he does not give empirical data to support the assumption.

11 Hiroyuki Nawata (p.c.) points out that it would be preferable within the framework of distributed morphology to deal with both the derivational and inflectional morphology in the narrow syntax.

12 The problem with Case assignment is discussed in section 2.2.6.

13 As is obvious, the gerundive complement of *Worth* Type does not project CP because it cannot involve *wh*-phrases which are assumed to appear in the CP domain, as shown in (i).

(i) * This book is worth where buying.

14 Nakagawa (2001: 514) proposes a similar structure to (40) for *tough*-constructions in OE, as shown in (i). In (i), PRO, the external argument of the *to*-infinitive, appears in the specifier position of ν P. The null NP (NP_i), which is equivalent to a null operator, moves to the outer specifier position of ν P.

(i) [ν P (NP_i) [ν' PRO [ν [ν *to*-V_j] [ν P t_j t_i]]]]

15 The gerundive suffix *-ing* or *-ung* in OE was a derivational suffix because it changed a part of speech of the stem verb. However, it was reanalyzed into an inflectional suffix in ME when it was assimilated with the present participle suffix *-ende* or *-ind(e)*, which was

also an inflectional suffix after the loss of *-an*, which is a weak adjectival inflection, in the thirteenth century (see section 3.3.2 in chapter 3). Since the gerundive suffix *-ing* in Present-day English is no longer a derivational suffix, gerunds are not DP. I assume that the gerundive suffix *-ing* lies in the head of v^*P under the v^*P analysis of gerunds. Given the assumption in the text that the suffix *-ing* bears interpretable phi features and an uninterpretable Case feature, I tentatively assume that they lie in the head of v^*P . We will not look into the detailed mechanism of the reanalysis of the gerundive suffix into an inflectional suffix because it is beyond our scope. For a similar approach to the nominal property of gerunds, see Nakagawa (2011); for the historical development of gerunds, see Ukaji (2000).

16 In the eighteenth century, the frequency of the two configurations decreased temporarily.

This might be because some factor(s) caused the word *worth* to be used less frequently.

17 Pro is available only in null subject languages. The other kinds of empty categories, PRO and a DP-trace, are not qualified as the internal argument of the gerundive complement of *worth*, because they cannot appear in positions where accusative Case is assigned. Thus, it must be realized as (the trace of) a null operator. Notice also that a null operator is compatible with verbal gerunds, as shown in (i), where the null operator moves out of the gerundive complement of *avoid* in the relative clause. Given that its category is v^*P (see section 2.2.3), this movement proceeds through the outer specifier position of the embedded v^*P on its way to the specifier position of the matrix CP.

(i) That is the person John avoided talking to.

18 The gerundive complements of the other members of *Worth* Type are so infrequent in the corpora employed here that no firm conclusions can be drawn on their historical development. However, the example of (i) with *bear* from Visser (1966: 1886) would suggest that its gerundive complement could still be nominal at the end of the eighteenth

century, and it became unambiguously verbal at some point thereafter.

- (i) My wounds will not bear this perpetual tampering.

(1794 W. Godwin (Caleb Williams II, III))

19 Note that preposition stranding is observed in the gerundive complement of *Need* Type only if the verb and preposition are adjacent, as shown in (1b) and (48). Since such a configuration allows preposition stranding under both A- and A'-movement, it says nothing about the derivation of *Need* Type. Anticipating the conclusion below that the gerundive complement of *Need* Type is a nominal gerund, this chapter assumes that in examples like (1b) and (48), the verb and preposition are reanalyzed as a complex verb, which is in turn nominalized via the suffixation of *-ing* (see (59)).

20 Endo, Kitagawa, and Yoon (1999: 74) claim that some verbs including *need* and *want* are analyzed as involving “null *have*” as one of their semantic components, and their subjects correspond to subject arguments of “null *have*.” Given that *have* assigns a Location role to its subject, which serves to specify the location of its object, it is reasonable to assume that the subject of *Need* Type is also assigned a Location role.

21 Note that the implicit Actor role of *looking after* is not associated with any roles of *need*, so it is interpreted as arbitrary in reference or its reference is contextually determined. The same is true of the implicit Actor roles of the nominal gerundive complements of *Worth* Type in (62) and (63).

22 According to Jackendoff (1972), verbs of measurement such as *cost* and *weigh* assign a Theme role to their subjects (and a Location role to their objects). Given that the thematic relation of *Worth* Type is similar to that of verbs of measurement (e.g., *This book {is worth / costs} five dollars.*), it is reasonable to assume that the subject of *worth* is also assigned a Theme role.

23 One might wonder why the gerundive complement of *Need* Type has not undergone the

same kind of reanalysis as that of *Worth* Type, namely from a nominal to a verbal gerund. Although a detailed investigation of the development of the gerundive complement of *Need* Type is beyond the scope of this thesis, it would be possible to pursue the reason in relation to the fact that *need* also takes an infinitival complement whose passive form corresponds semantically to its gerundive complement. In the corpora employed here, (i) is the earliest instance of *need* with a passive infinitival complement, and (ii) is the earliest instance of *need* with a gerundive complement. The two instances are dated from 1740 and 1817, respectively. Then, it might be conjectured that the presence of infinitival complements, which are verbal/clausal, somehow prevented the reanalysis of gerundive complements: the complementation patterns of *need* were established in the nineteenth century, so that its verbal/clausal complements are realized as infinitival constructions, while its nominal complements are realized as gerundive constructions.

(i) That somebody else had more need to be concerned than the versifier.

(1740, CLMET, Pamela)

(ii) Every reform, however necessary, will by weak minds be carried to an excess, which will itself need reforming.

(1817, CLMET, Biographia Literature)

24 It must be confirmed that the mechanism of thematic linking introduced in this section does not lead to overgeneration of examples like (49) and (50). First, since the internal arguments of the gerundive complement in (49) are syntactically realized as DP and PP, it is verbal and hence is incompatible with *need*, which selects a nominal gerund. Second, the gerundive complement in (50) can be either nominal or verbal. In the former case where *talking to* is formed by reanalysis and nominalization (see note 19), its internal argument remains implicit and hence a parasitic gap cannot be licensed in the absence of A'-movement. The latter case is simply incompatible with the selectional property of

need like (50).

Chapter 3

Diachronic and Synchronic Aspects of Participial Relatives

3.1. Introduction

Present participles can postmodify nouns in Present-day English, as shown in (1).

- (1) a. a chill air surrounding those who are down in the world (Niwa (1990: 56))
b. the boy living in Tokyo

In (1a), a present participle *surrounding* taking an object *those who are down in the world* postmodifies a noun *a chill air*. It is often pointed out in the literature that an instance like (1a) did not exist or were very rare in OE. In (1b), a present participle *living* with a preposition *in* and its object *Tokyo* postmodifies a noun *the boy*. The literature does not mention whether or not there was a postmodification like (1b) in OE.

Present participles such as *attracting*, *fascinating*, *affecting* and so on in Present-day English are also able to premodify the noun like (2). According to Niwa (1990: 55-57), however, instances like (2) were not observed in OE. She indicates that it was not until the end of ME that transitive participles premodifying the noun appeared.

- (2) an attracting gesture (=a gesture which attracts someone)
(Niwa (1990: 56))

On the other hand, intransitive present participles premodified the noun in OE, as exemplified in (3a, b).

- (3) a. byrnende fyr
 ‘burning fire’
 b. þa lifigendan stanas
 ‘the living stones’ (Ono and Nakao (1980: 436))

This chapter aims to clarify the whole path of the development of present participles postmodifying nouns in the history of English and to give it a syntactic account within the framework of the minimalist program. Postmodification by the present participle is divided into two types: one is transitive participial relatives like (1a) that consist of a transitive present participle and its accusative object, and the other is intransitive participial relatives like (1b) that consist of an intransitive present participle, a preposition and its object.^{1,2}

This chapter is organized as follows. Section 3.2 reviews some previous analyses and points out their empirical problems. Section 3.3 makes a new proposal about the historical development of present participles postmodifying nouns. Section 3.4 gives a head raising analysis of participial relatives postmodifying nouns. Section 3.5 offers concluding remarks. In what follows, we will refer to a present participle with the suffix *-ing* or its variant in (1a, b) and a present participle with the suffix *-ende* or its variant in (3a, b) as *-ing* participle and *-ende* participle, respectively.

3.2. Previous Studies and Their Problems

3.2.1. Ono and Nakao (1980)

Ono and Nakao (1980: 437) state that apart from the case where a participle involves

a modifier, postmodification by the participle (a present participle or a past participle) is rare in OE except for a literal translation from Latin or a poem. They do not provide an example of intransitive and transitive participial relatives in OE and only presents the translation from Latin, as exemplified in (4).

- (4) þar wæs an man *forscruncene hand hæbbende*
 there was a man withered hand having
 erat ibi homo *habens manum aridam* [Latin]
 ‘there was a man there having a withered hand’

(Ono and Nakao (1980: 439))

In (4), a transitive participial relative that consists of a present participle *hæbbende* and an object noun *forscruncene hand* postmodifies the noun *an man*. Ono and Nakao call transitive participial relatives in (4) appositive participle which they think is equivalent to an adjectival (relative) clause and assert that all the instances of present participle dominating a direct object in OE is an imitation from Latin (p.441).³ Mitchell (1985: 601) and Callaway (1901) discuss the origin of the appositive participle and affirm that “all present participles with a direct object are due to Latin influence.”⁴

3.2.2. Niwa (1990)

Niwa (1990) attempts to elucidate the problem why transitive participial relatives did not exist in OE, paying attention to a different property of the suffix *-ende* and *-ing*. She attempts to solve the problem by distinguishing the suffix *-ende* from the suffix *-ing* and concentrating on their ability to inherit a thematic role, based on Roeper (1987: 270, 271), who claims that only a particular class of suffixes can inherit thematic roles from the verbal

stem.

Roeper tries to clarify the relation between implicit arguments and affixation within the framework of the Government and Binding Theory. Assuming that affixes hold thematic roles throughout a morphological derivation and the thematic grid of the affix percolates to the new categorial node that it creates, he gives an account of the three kinds of affix, *-able*, *-ing* and *-ful*, as shown in (5).⁵

- (5) a. Affixes that *match* the thematic roles on verbs (*-able*)
b. Affixes that *inherit* the thematic roles on verbs (*-ing*)
c. Affixes that *block* the thematic roles on verbs (*-ful*) (Roeper (1987: 271))

(5a) means that suffixes like *-able* have their own thematic grid, transitive [Agent, Theme], which must *match* the thematic grid of the verb that they attach to. For example, a transitive verb *play* has its thematic grid [Agent, Theme], and therefore *playable* is possible. Thus, the thematic grid of the underlying verb *play* and the suffix *-able* percolates to a new node A(djective), so that an adjective *playable* is yielded. However, **comable* is impossible because the thematic grid of *come* does not match that of *-able*. *Come* is an unaccusative verb and thus does not need an agent. (5b) indicates that the suffix *-ing* is combined with both transitive and intransitive verbs regardless of the number (and the kind) of arguments that the verb require. For instance, expressions like *the putting of Jars on the shelf*, *the coming* and *the pushing of Bill* are all possible. Unlike *-able*, *-ing* simply inherits the thematic grid of the verb and percolates it to a new node. In the case of *the putting of Jars on the shelf*, the suffix *-ing* inherits the three thematic roles of the verb *put* [Agent, Theme, Location] and percolates them to a new node N(oun), with the result that a noun phrase *the putting of Jars on the shelf* is produced. This is true of other nominal gerunds. Lastly, (5c)

shows that suffixes like *-full* do not inherit the thematic grid of the verb they attach to. For example, **playful of games* is not allowed because the suffix *-ful* blocks the thematic grid of the verb *play* [Agent, Theme], which does not percolate to a new node. As a result, PP *of games* is not licensed by a new node.

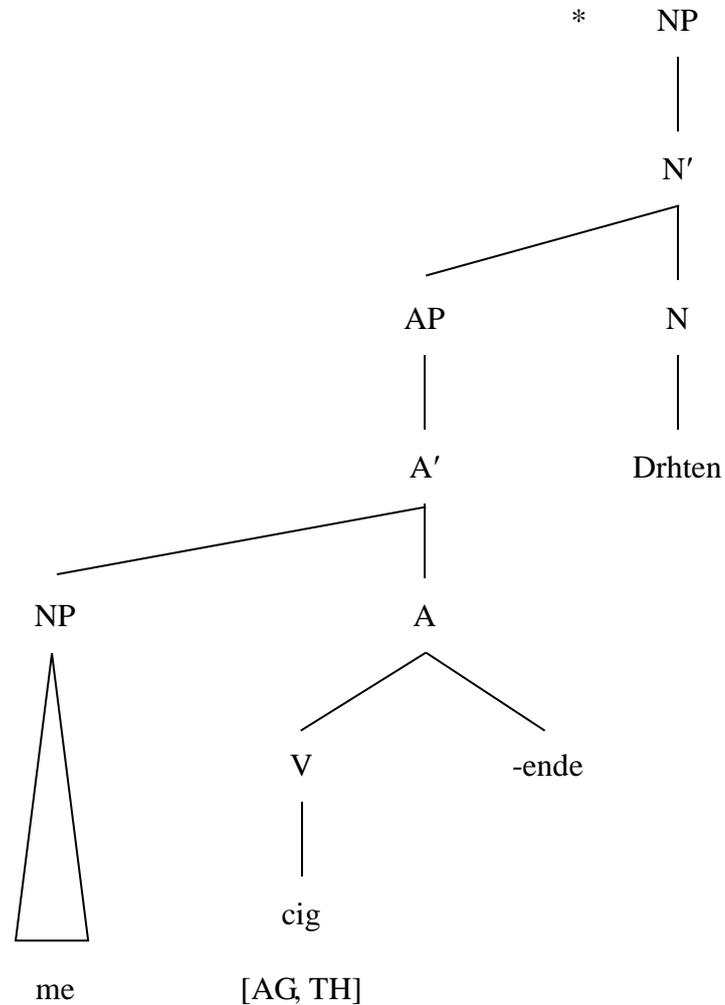
Adopting Roeper's analysis, Niwa attempts to resolve the problem why transitive present participles could not premodify or postmodify the noun in OE, paying attention to the property of the present participle suffix *-ende* in OE. She proposes that the suffix *-ende* blocks the inheritance of thematic grid from the verbal stem, in much the same way as *-full*, so that no theta roles can be assigned to the noun complement, leading to the violation of the theta criterion. Consider an unacceptable instance (6) in OE, where a present participle *cigende* 'calling-upon' takes *me* 'me' as its object and premodifies the noun *Drhten* 'a lord.'

(6) a. * me cigende Drhten.

me calling-upon a lord

‘A lord calling-upon me.’

b.



(cf. Niwa (1990: 62))

In (6b), the verbal stem *cig* has the thematic grid [Agent, Theme], each of which is to be assigned to the subject and the object, respectively. However, the suffix *-ende* blocks the inheritance of the thematic grid from the verbal stem to the higher node. As a result, no theta roles can percolate to the higher node and therefore the noun complement cannot acquire Theme, which leads to the violation of the theta criterion. Hence she claims that instances like (6a) were not allowed in OE.

3.2.3. Problems

This section points out several problems with the previous analysis. Based on empirical evidence from the corpus investigation, I will show a counter-example against Niwa's analysis. The corpora used in the survey are: *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE) and *The Second Edition of the Penn-Helsinki Parsed Corpus of Middle English* (PPCME2).

I investigated the distribution of the transitive participial relative in OE and ME. No example of transitive participial relatives is attested in OE, but one hundred one instances of them can be attested in ME. In particular, it is worth noting the fact that seventy out of one hundred one instances are transitive participial relatives with the suffixes that originates in *-ende*. The rest are transitive participial relatives with the suffixes that are derived from *-ing*. The earliest instances among all the attested examples are provided in (7), where the transitive present participles postmodify the pronoun.⁶

- (7) a. 3if ich hated þe hatend þe, Lord,
 if I hated those hating you, Lord,
 ‘if I hated those hating you, Lord,’ (1350, (CMEARLPS,169.7438))
- b. Iuge, Lord, þe anoiaand me;
 Judge, Lord, those annoying me;
 ‘Lord, judge those annoying me;’ (1350, (CMEARLPS,39.1656))

It is worth noting that the suffixes of the present participles in (7) are variants of *-ende*: *-end* in (7a) and *-and* in (7b). Hence, the present participles in (7) are unambiguously *-ende* participles. A closer investigation of historical corpora reveals that the suffix *-ende* has four

sorts of variant: *-end*, *-ande*, *-and* and *-aund* and that the suffix *-ing* has three kinds of variant: *-inge*, *-ynge* and *-yng*.⁷ The earliest instance of the transitive participial relative with the suffix *-ing* in the corpus investigation is given in (8).

- (8) but 3if þer be som nedful cawse byndyng men þus to hem;
 but if there be some needful cause binding men these to them;
 ‘but if there are some needful cause binding these men to them;’
 (1400, (CMWYCSER,I,358.2349))

The distribution of the transitive participial relative in ME whose suffixes are *-ende*, *-ing* and their variants is expressed in Table 1.

Table 1: The distribution of the transitive participial relative in ME⁸

A group of suffixes that are derived from <i>-ende</i>				A group of suffixes that are derived from <i>-ing</i>			
<i>-end</i>	<i>-ande</i>	<i>-and</i>	<i>-aund</i>	<i>-ing</i>	<i>-inge</i>	<i>-yng</i>	<i>-ynge</i>
1	3	65	1	3	3	10	15

Especially relevant is a group of suffixes that are derived from *-ende* because the existence of the transitive participial relative with them is a counter-example against Niwa’s analysis, according to which *-ende* participles block the percolation of the thematic grid of the stem verb, so that the noun complement cannot be assigned a thematic role, with the result that *-ende* participles were not allowed to have an accusative object. It should be noted for the sake of fairness that Niwa only claims that *-ende* participles in OE block the percolation of the thematic grid of the stem verb, and does not discuss present participles in ME that

originate in *-ende* participles. It may be possible to assume that *-ende* participles in ME, unlike those in OE, do not block the percolation of the thematic grid of the stem verb, in which case, however, the cause of the change must be identified.

In addition, there is a problem with Roeper's analysis. Roeper's view that affixes bear thematic roles is based on the Projection Principle, under which thematic roles should be maintained throughout a morphological derivation. Given that the Projection Principle has been abandoned in the recent Minimalist Program, we cannot retain Roeper's analysis. Thus Niwa's argument based on Roeper would also be untenable.

We have so far observed the previous studies about the transitive participial relative. As described in the beginning of this section, transitive participial relatives are not observed in OE apart from the translation from Latin or a poem. Niwa's approach based on Roeper is that a particular suffix blocks the percolation of the thematic grid of the stem verb to a higher node and therefore a noun complement cannot receive a thematic role, resulting in the violation of theta criterion. I provided a counter-example against Niwa's analysis: transitive participial relatives with the suffixes that derived from *-ende* are found in ME, which indicates that the suffix *-ende* does not really block the percolation of the thematic grid of the stem verb. Moreover, I pointed out one problem with Roeper's analysis. In the next section, I will clarify the historical development of the transitive participial relative in English.

3.3. Proposal

This section offers a proposal for the emergence and the development of the transitive participial relative in the history of English within the framework of the generative grammar. Using the data from the historical corpora and OED, I will work on this topic and show the syntactic structure of each period in the history of English.

3.3.1. OE

It is generally agreed in the literature on the history of English that adjectives in OE, unlike those in PE, had a rich inflectional system and *-ende* participles in OE are adjectives. First, they have a morphological inflection as the comparative and the superlative (e.g., *beornendra* ‘burninger’ and *wæstmberendeste* ‘wastumbearingest’) (Mitchell (1985: 49, 649)).⁹ Visser (1966: 1108) also indicates that *-ende* participles form degrees of comparison by means of the attachment of the endings *-er* and *-est* in OE. Second, *-ende* participles agree in number, gender and Case with their subject when they are used with verbs such as *wesan* ‘be,’ *weorþan* ‘become,’ *cuman* ‘come,’ *licgan* ‘lie,’ *sittan* ‘sit’ and so on, and are declined strong or weak in the same way as adjectives (cf. Mitchell (1985: 16, 410), Ono and Nakao (1980: 226, 227)). Third, *-ende* participles can be attached to by the affix *un-*, like adjectives (e.g., *unawendende* ‘unchanging’). In addition, they allow the suffix *-lice*, which corresponds to the suffix *-ly* in PE, to attach to themselves, thereby forming an adverb (e.g., *lycendlice* ‘pleasingly’).

Given these adjectival properties of *-ende* participles, I argue that *-ende* participles were adjectives in OE and they were created through the attachment of a derivational suffix *-ende* to the verbal stem. The syntactic structure of *-ende* participles in OE such as the one in (10a) obtained from YCOE is shown in (10b).

- (10) a. to his lifigendan fæder
 ‘to his living father’ (cocathom2,+ACHom_II,_15:160.335.3547: o3)
- b. [DP D [AP V-ende] [NP NP]]

Since adjectives cannot assign the accusative Case to its noun complement, it would be

plausible to assume that *-ende* participles does not have the ability to assign the accusative Case to their noun complement, either.¹⁰ Therefore the transitive participial relatives did not exist in OE. In the corpus investigation by YCOE, no example of transitive participial relatives is found.

3.3.2. ME

The rich inflectional morphology of adjectives began to undergo gradual simplification from the end of OE. Hashimoto (2005) argues that all the inflections of adjectives were lost at late OE except for the distinction between singular and plural. Nakao (1972: 144-146) points out that in the thirteenth century, the inflection was largely limited to monosyllable adjectives that end in a consonant, and illustrates that the inflection of adjectives was lost for the most part by LME. See Tables 2 to 4.¹¹ These are part of the paradigms of adjectives with a weak inflection and those with a strong inflection.¹²

Table 2: The paradigm of *gōda* ‘good’ in weak inflection

		OE	EME	LME
Singular, Masculine	Nominative	<i>gōda</i>	<i>goode</i>	<i>goode</i>
	Genitive	<i>gōdan</i>	<i>goode(n)</i>	<i>goode</i>
	Dative	<i>gōdan</i>	<i>goode(n)</i>	<i>goode</i>
	Accusative	<i>gōdan</i>	<i>goode(n)</i>	<i>goode</i>

Table 3: The paradigm of *gōd* ‘good’ (adjectives that end in a consonant) in strong inflection

		OE	EME	LME
Singular, Masculine	Nominative	<i>gōd</i>	<i>good</i>	<i>good</i>
	Genitive	<i>gōdes</i>	<i>godes</i>	<i>good</i>
	Dative	<i>gōdum</i>	<i>goode(n)</i>	<i>good</i>
	Accusative	<i>gōdne</i>	<i>goodne</i>	<i>good</i>

Table 4: The paradigm of *swēte* ‘sweet’ (adjectives that end in *-e*) in strong inflection¹³

		OE	EME	LME
Singular, Masculine	Nominative	<i>swēte</i>	<i>swete</i>	<i>swete</i>
	Genitive	<i>swētes</i>	<i>swetes</i>	<i>swete</i>
	Dative	<i>swētum</i>	<i>swete(n)</i>	<i>swete</i>
	Accusative	<i>swēten</i>	<i>swetne</i>	<i>swete</i>

(cf. Nakao (1972: 145-147))

Notice that the inflectional suffix of adjectives is quite simplified during EME, ending up with {-φ} or {-e} during LME.

Let us now turn to the inflection of the *-ende* participle. It inflected in the same way as adjectives in OE, as already described in the previous section. Part of the paradigms of *giefende* ‘giving’ is exemplified in Tables 5 and 6.

Table 5: The paradigm of *giefende* ‘giving’ in weak inflection

		OE
Singular, Masculine	Nominative	giefenda
	Genitive	giefendan
	Dative	giefendan
	Accusative	giefendan

Table 6: The paradigm of *giefende* ‘giving’ in strong inflection

		OE
Singular, Masculine	Nominative	giefende
	Genitive	giefendes
	Dative	giefendum
	Accusative	giefendne

(cf. Ono and Nakao (1980: 226, 227))

Tables 5 and 6 show that the *giefende* ‘giving’ inflects almost in the same way as the adjectives in Tables 2 and 4, respectively.

We can ascertain from this morphological similarity that *-ende* participles in OE were adjectives. Then it is predicted that *-ende* participles lost their rich inflectional morphemes almost at the same time as adjectives. In order to confirm the prediction, I investigated the distribution of the *-ende* participle and its variants in OE with YCOE. Since transitive participial relatives did not exist in OE, I collected the instance of *-ende* participles premodifying the noun, one of which is illustrated in (10a), repeated as (11).

- (11) a. to his lifigendan fæder
 ‘to his living father’ (cocathom2,+ACHom_II,_15:160.335.3547: o3)

The result of the research is expressed in Table 7.

Table 7: The distribution of present participles with the suffix *-ende* or its variants in OE

<i>-ende</i> and its variant in OE		
<i>-ende</i>	<i>-endan</i>	<i>-ondan</i>
7	6	2

In addition, I investigated the distribution of the intransitive participial relative with the suffix *-ende* or its variants exemplified in (12) in ME so that we can compare the inflection of present participles in OE with that of present participles in ME.

- (12) a. and alle heore teres beoð berninde gleden glidende ouer heore aȝene nebbe
 and all her tears are barning glede gliding over her own neb
 ‘and all her tears are bearing kites gliding over her own neb’
 (1225, (CMLAMBX1,43.554))
- b. in þte wylke þtay moghte well forgaa þe lufe of all creaturs lyfande in erthe
 ‘In the walk they may well forgo the love of all creatures living in earth’
 (1349, (CMROLLTR,8.244))

The result of the investigation into the intransitive participial relative with the suffix *-ende* or its variants is shown on the left side of Table 8, and the right side of Table 8 is the same as the one on the left side of Table 1, which expresses the occurrence of the transitive participial

relative in ME.¹⁴

Table 8: The distribution of the participial relative in ME whose suffixes are *-ende* or its variants

intransitive participial relatives in ME					transitive participial relatives in ME			
<i>-ende</i>	<i>-inde</i>	<i>-ande</i>	<i>-and</i>	<i>-aund</i>	<i>-end</i>	<i>-ande</i>	<i>-and</i>	<i>-aund</i>
2	2	4	31	1	1	3	65	1

Comparing Tables 7 and 8, we can see that *-an*, which is a weak adjectival inflection, was lost from OE to ME. I argue that as a result of its disappearance, the suffix *-ende* was reanalyzed from a derivational suffix into an inflectional suffix, and *-ende* participles were also reanalyzed from adjectives into verbs.

The categorial change occurred in the thirteenth century because the earliest example of the participial relative in PPCME2 is (12). Since (12) is an instance of an intransitive participial relative, it would follow that *-ende* participles were reanalyzed from adjectives into intransitive verbs in the thirteenth century. The syntactic structure of intransitive participial relatives the suffix *-ende* is shown in (13).

$$(13) \quad [_{DP} D [_{VP} \text{Subj} [_{V'} [V\text{-ende}] [_{PP} P DP]]]]$$

In (13), the head noun remains inside VP that is selected by D, while the object DP is assigned the accusative Case by a preposition. The head noun has to merge inside VP

because it needs to get a theta role from the verb. If it were merged outside VP, it could not receive the theta role from the verb.

What we have to consider is that in (13) the verb in *-ende* forms serves to modify a head noun. Given that *-ende* participles modified nouns in OE, as shown in (11), it would be no surprise that those which were reanalyzed into intransitive verbs also modified nouns. That is, verbs in *-ende* forms inherited the ability to modify the noun from *-ende* participles in OE after the reanalysis. It is assumed that this adjectival property was held by the suffix *-ende*, whereas the verbal property like the assignment of the theta role and the ability to select the arguments was carried by the verbal stem.

I assume that the categorial change of the *-ende* participle was brought about by the reanalysis of the suffix *-ende* from a derivational suffix into an inflectional suffix. More specifically, the loss of a weak adjectival inflection *-an* caused a derivational suffix *-ende* to be reanalyzed into an inflectional suffix. This assumption would be plausible because *-an* plays an important role in the weak adjectival inflection in OE. Recall Tables 2 and 5 and notice what they have in common. After the loss of *-an*, even if verbs were attached to by the suffix *-ende*, they did not change into adjectives; instead they maintained the verbal status because the attached suffix *-ende* is no longer a derivational suffix.¹⁵

The earliest example of the transitive participial relative in PPCME2 is (7), repeated here as (14), whose syntactic structure is shown in (15).

- (14) a. 3if ich hated þe hatend þe, Lord,
 if I hated those hating you, Lord,
 ‘if I hated those hating you, Lord,’ (1350, (CMEARLPS,169.7438))
- b. Iuge, Lord, þe anoiaand me;

Judge, Lord, those annoying me;

‘Lord, judge those annoying me;’ (1350, (CMEARLPS,39.1656))

(15) [DP D [_{vP} Subj [_v v [_{VP} V-*ende* DP]]]]

In (15), the head noun remains inside *vP* that is selected by *D*, and the object *DP* is assigned the accusative Case by a light verb, which was introduced in the fourteenth century since the sentence in (14) appeared in the fourteenth century.¹⁶ The head noun must be merged inside *vP* so that it can receive a theta role from the verb.

As noted above, after the loss of a weak adjectival inflection *-an*, even if verbs were attached to by the suffix *-ende*, they sustained the verbal status. Then it would be quite a possible to assume that it attached to transitive verbs as well as intransitive verbs, leading to the occurrence of transitive participial relatives with the structure of (15).

In the late of ME, the suffix *-ende* and its variants fell into decline; instead another present participle suffix *-ing* became dominant. As is already described in notes 15 in chapter 2, it is generally agreed in the historical study that the present participle suffix *-ende*, *-ind(e)* and their variants underwent phonological assimilation into the gerundive suffix *-ing* in late ME (Ukaji (2000)). This is true of participial relatives as well, and is verified in the closer investigation of the corpus data in Table 8 and in another investigation of the distribution of participial relatives in ME with the suffix *-ing* and its variants (see also Table 9). These research reveals that there are very few instances of participial relatives with the suffix *-ende* or its variants after the fifteenth century. In Table 8, only three out of forty intransitive participial relatives were observed in the fifteenth century, and no examples of transitive participial relatives were found in that period. Almost all the participial relatives in Table 8 are in the middle of the fourteenth century.

As opposed to participial relatives with the suffix *-ende* or its variants, almost all the participial relatives with the suffix *-ing* or its variants occur after the end of the fourteenth century. Two of the earliest instances of the intransitive and transitive participial relative with the suffix *-ing* or its variants are illustrated in (16a, b), respectively.

- (16) a. or elles by alle nature servynge to God,
‘or else by all nature serving to God,’ (1380, (CMBOETH,451.C2.475))
- b. yif thou loke the purveaunce ordeynynge the thinges that ...
‘if you look the purveyance ordaining the things that ...’
(1380, (CMBOETH,454.C2.565))

The distribution of the participial relative with the suffix *-ing* or its variants in ME is shown in Table 9. The data on the right side of Table 9 is the same as the data on the right side of Table 1.

Table 9: The distribution of the participial relative in ME whose suffixes are *-ing* or its variants

intransitive participial relatives in ME								transitive participial relatives in ME			
<i>-ing</i>	<i>-inge</i>	<i>-unge</i>	<i>-yeng</i>	<i>-yng</i>	<i>-ynge</i>	<i>-ynges</i>	<i>-yngge</i>	<i>-ing</i>	<i>-inge</i>	<i>-yng</i>	<i>-ynge</i>
5	4	1	3	43	33	1	2	3	3	10	15

No less than ninety one out of ninety two intransitive participial relatives and all thirty one transitive participial relatives are used after the 1380.

As described above, very few instances of participial relatives with the suffix *-ende* or its variants are observed after the fifteenth century. Thus it would be safe to assume that the suffix *-ende* in participial relatives was taken over by an alternative suffix *-ing* in the end of the fourteenth century and had been almost obsolete by the beginning of the fifteenth century. Then the syntactic structure of intransitive and transitive participial relatives in (13) and (15) in ME is partly revised, as shown in (17a, b), respectively.

- (17) a. [DP D [VP Subj [_v [V-*ende/-ing*] [PP P DP]]]] (13th~)
- b. [DP D [_{vP} Subj [_v v [VP V-*ende/-ing* DP]]]] (14th~)

Let me summarize what we have so far discussed. The rich inflectional morpheme of adjectives in OE began to disappear from the end of OE. Most importantly, the loss of *-an*, which is a weak adjectival inflection, caused the reanalysis of the suffix *-ende* from a derivational suffix to an inflectional one. As a result, *-ende* participles, which were adjectives in OE, were also reanalyzed into verbs in the thirteenth century.¹⁷ This is confirmed by the presence of the intransitive participial relatives in (12), where *lyfande* ‘living’ takes a locative phrase as an argument and therefore is unambiguously an intransitive present participle. In the fourteenth century, transitive participial relatives also became available: in (14), *hatend* ‘hating’ and *anoiand* ‘annoying’ take an accusative object as their complement, which shows that they are transitive present participles. This would be because the suffix *-ende* became compatible with transitive verbs. Recall also that adjectives do not take a locative phrase as an argument or an accusative object without a preposition.¹⁸ The syntactic structure of the intransitive and transitive participial relative in ME is expressed as (17a, b), respectively, where the head noun remains inside *vP/VP*. Owing to the phonological assimilation into the gerundive suffix *-ing* in late ME, the suffix *-ende* in

participial relatives was replaced by the gerundive suffix *-ing* in the end of the fourteenth century and was almost obsolete by the beginning of the fifteenth century. In the next subsection, we will consider participial relatives after EModE.

3.3.3. From EModE Onward

Before discussing the participial relative in EModE onward, let us look at their syntactic behavior in Present-day English. To begin with, section 3.3.3.1 discusses the participial relative in Present-day English, and then section 3.3.3.2 examines their historical development from EModE onward.

3.3.3.1. Participial Relatives in PE

Participial relatives in Present-day English allow a floating quantifier in the position between the antecedent and the present participle, as exemplified in (18). (18a) is from Tozawa (2013), and (18b, c) are obtained from *Collins WordBanks Online* (henceforth, Collins).

- (18) a. The boys all playing soccer together will go home soon.
(Tozawa (2013: 40))
- b. At one end, Sir Nobonk on Daz -- at the other, on her broomstick, was the witch attended by her hobgoblins all screaming with her.
(Collins, brbooks, BB-bM022298, culture)
- c. The notion is contradictory since it has things both existing and not existing simultaneously.
(Collins, brbooks, BB-Fm89-726, religion)

Given the standard assumption that a quantifier is stranded by movement of the subject from

the base position to a higher position (Sportiche (1988)), the examples in (18) suggest that participial relatives in Present-day English have a bigger projection than vP .¹⁹

In this connection, Thompson (2001) claims that the participial relative is Asp(ect)P, because it is incompatible with a sentence adverb, and their tense interpretation depends on that of the matrix clause, as illustrated in (19, 20), respectively.²⁰

(19) * The person probably playing the music you heard used to be my roommate.

(Thompson (2001: 297))

(20) a. A passenger waiting (yesterday/*tomorrow) for flight 307 complained to the flight attendant.

b. A passenger waiting (*yesterday/tomorrow) for flight 307 will complain to

the flight attendant. (ibid.: 292)

However, her analysis is insufficient in that she only indicates the absence of a TP domain within participial relatives and does not give a clear evidence for an AspP.

In order to make up for the weakness of Thompson's analysis, I will make a careful examination of the syntactic structure of participial relatives. Adopting Mizuno's (1999) view that adverbs ending in *-ly* (*-ly* adverbs) are licensed by a designated functional categories, I will argue that participial relatives in Present-day English are an AspP. Mizuno classifies *-ly* adverbs into four types in terms of the licenser: manner adverbs (e.g., *carefully*), frequency adverbs (e.g., *frequently*), subject-oriented adverbs (e.g., *carelessly*), speaker-oriented adverbs (e.g., *probably*). Following Cinque (1999), she presents an articulated structure that consists of a lexical category $V-v$ and three functional categories, i.e. $Mod_{epistemic}$, Mod_{root} , and AspP, which function as a licenser of a particular class of *-ly* adverbs. This is shown in (21) and (22).

- (21) [ModP Mod_{epist} [TP T [ModP Mod_{root} [AspP Asp [vp v [VP V]]]]]]]
- (22)
- | | |
|--|--------------------------|
| adverb | licensors |
| manner (e.g., <i>carefully</i>), | V-v |
| frequency (e.g., <i>frequently</i>) | Asp |
| subject-oriented (e.g., <i>carelessly</i>), | Mod _{root} |
| speaker-oriented (e.g., <i>probably</i>). | Mod _{epistemic} |
- (Mizuno (1999: 304))

Speaker-oriented adverbs express epistemic modality, so that they are licensed by a functional head Mod_{epistemic}; subject-oriented adverbs express root modality, and thus they are licensed by Mod_{root}.

It has often been pointed out in the literature that adverbs of the same semantic class cannot co-occur, while adverbs of different semantic classes can, as exemplified in (23).

- (23) a. *Evidently_(speaker-oriented) John probably_(speaker-oriented) left.
(Jackendoff (1972: 87))
- b. *Max cleverly_(subject-oriented) has stealthily_(subject-oriented) been trying to decide whether to climb the walls.
(ibid.: 90))
- c. *John spoke carefully_(manner) to his mother nicely_(manner). (Costa (1997: 607))
- d. John cleverly_(subject-oriented) has carefully_(manner) spoken to his mother.
(ibid.: 61))
- e. Probably_(speaker-oriented) Max has carefully_(manner) been trying to decide whether to climb the walls.
(Jackendoff (1972: 89))

(Mizuno (1999: 313, 314))

Based on these facts, Mizuno (1999: 314) assumes that “a head can license one and only one adverb of the same semantic class.” For instance, the ungrammaticality of (23a) is accounted for as follows: whereas this sentence includes two speaker-oriented adverbs, i.e. *evidently* and *probably*, Mod_{epistemic} can license only one speaker-oriented adverb. Then one of the two speaker-oriented adverbs remains to be licensed. On the other hand, (23d) is grammatical since the subject-oriented adverb *cleverly* and the manner adverb *carefully* are licensed by distinct heads, i.e. Mod_{root} and V-*v*, respectively.

Especially relevant in the present discussion are frequency adverbs and their licenser. Jackendoff (1972) takes *often* and *usually* to be a speaker-oriented adverb, while he takes *frequently* to be a manner adverb. Mizuno indicates that those adverbs belong to the same semantic class.²¹ Firstly, two frequency adverbs such as *often* and *frequently* cannot co-occur, as shown in (24).

(24) * John often has frequently helped out on weekends. (Mizuno (1999: 320))

If *often* and *frequently* belonged to different semantic classes, as stated by Jackendoff, they should co-occur. Given the assumption by Mizuno that a head can license one and only one adverb of the same semantic class, the ungrammaticality of (24) suggests that *often* and *frequently* are licensed by the same head.

Secondly, she points out that frequency adverbs are compatible with speaker-oriented, subject-oriented and manner adverbs.

- (25) a. Probably_(speaker-oriented) Max has often been trying to climb the walls.
 b. Max happily_(subject-oriented) has often been trying to climb the walls.

(Jackendoff (1972: 89))

- c. Fran has often willingly_(manner) helped out on weekend.
 d. Fran frequently has willingly_(manner) helped out on weekend.

(Mizuno (1999: 320, 321))

These sentences suggest that frequency adverbs are licensed by a different head from the ones that license the other three types of adverbs. Mizuno (1999: 321) claims that the licenser of frequency adverbs is an Asp because they “serve as a grammatical means expressing the habitual aspect of the event.” This is based on the argument by Cormie (1976) and others that “aspect expresses the internal temporal structure of the event itself.” Mizuno (1999: 321) states that aspect “tells us whether the event is completed or not, whether it is on-going or not, and whether it is habitual or not.” On the basis of the co-occurrence of frequency adverbs and other types of adverbs in (25) and the structure in (21), she proposes that the structure of (25c) is (26). *Often* is base-generated at the position adjoined to Asp and correctly licensed by Asp.

- (26) [TP T John has_i [AspP *t_{subj}* [Asp' often [Asp' *t_i* [vp *t_{subj}* [*v'* willingly [*v'* helped out on weekends]]]]]]]] (cf. Mizuno (1999: 321))

Let us now extend the analysis by Mizuno (1999) to participial relatives. They allow frequency adverbs between the antecedent and the present participle, as illustrated in (27)-(29).

- (27) a. The dichotomy represented by the Goddess's totem of the adder is reflected in a character frequently appearing in Celtic folk-story :
- (Collins, brbooks, BB-Fx90-763, religion)
- b. His grotesquely amusing account presents the entire family frequently communing with ghosts. (Collins, brbooks, BB-Ym022210, biog)
- (28) a. The depressive position is a developmental phase usually occurring from the age of six months; (Collins, brbooks, BB-Ff91-649, religion)
- b. See also iron. aneurin(e), B q vitamin. angina, full name angina pectoris, characterized by severe pain in the chest usually radiating to shoulder and arm. (Collins, brbooks, BB-Fm89-749, religion)
- (29) a. Next she was an unpaid visiting bush nurse in Queensland, by necessity often acting also as doctor and midwife.
- (Collins, brbooks, BA-Nm012157, medicine)
- b. But many more are known only in a heavily condensed form often consisting of no more than a few lines of text.
- (Collins, brbooks, BB-Bm89-693, culture)

Under Mizuno's analysis, the frequency adverbs in (27)-(29) are licensed by an Asp. The grammaticality of these sentences would support the claim that the participial relative is AspP.

In this connection, we need to consider seriously the fact that there are a large number of participial relatives that co-occur with sentence adverbs, as exemplified in (30)-(34). Examples in (30)-(34) are obtained from Collins.

- (30) a. This will either be by unilateral management decision, by following agreed procedures probably involving members of the group whose jobs are being compared, or by agreement between one set of negotiators ...
(Collins, brbooks, BB-sm919996, business)
- b. The fact that the odd man gets hit by a woman probably acting in self-defence ... (Collins, brbooks, BB-Wf941253, lifesci)
- (31) a. She pulled it out of the pocket and looked at it, then back up at me, her thick lips still contorting in their struggle to contain the giggle evidently bubbling behind them. (Collins, brbooks, BB--F022248, fiction)
- b. In an interview evidently alluding to the controversial Ronconi Ring over which he had presided, he stated that ...
(Collins, brbooks, BB-qF032369, culture)
- (32) But the problem is that you're not going to have European Union citizens frankly accepting an intelligence superstructure for the whole of the E-U.
(Collins, brbooks, SU3--040509, tv_radio)
- (33) Where else is accountability honestly reporting your score more important than gaining an advantage however you can?
(Collins, brbooks, NU1--041001, news)
- (34) The advertisers had tried, as the decade turned, to inject a little fun into the married state, when they sold beer with the picture of a young woman carelessly swigging in her V-necked sweater and slacks on top of the cage in which she kept her bowler-hatted man, under the slogan ...
(Collins, brbooks, BB-Wf87-741, lifesci)

The instances in (30)-(34) show that participial relatives are compatible with sentence adverbs regardless of whether they are speaker-oriented adverbs, as in (30)-(33), (e.g., *probably*, *evidently*, *certainly*, *fortunately*, *frankly*, *honestly*, *confidentially*, *seriously*, and so on) or subject-oriented adverbs, as in (34), (e.g., *carelessly*, *cleverly*, *stupidly*, *willingly*, and so like).²² The grammaticality of (30)-(34) seems to be inconsistent with Thompson's judgment in (19) and implies that the participial relative is TP. However, given the fact in (20) that it does not have a tense interpretation independent of the matrix clause, it is very dubious to assume that it is TP.

It should be noticed that there are two types of sentence adverbs in English; one is those that appear in a TP domain, as shown in (35), and the other is those that appear in a DP domain, as exemplified in (36).

- (35) He would probably be able to find Nick quite quickly and bring him to safety, particularly if he could take half a dozen of the Royal Guard.

(Collins, brbooks, BA-fM012108, fiction)

- (36) a. They brought a probably carnivorous plant to class.
 b. I drank the possibly Chilean wine. (Bogal-Allbritten (2014: 4))
 c. So we scrapped a probably sound idea of imperial airships.

(Collins, brbooks, BB-Tm91-798, culture)

Assuming that the sentence adverbs in (30)-(34) are the same type as the adverbs in (36), I claim that they would appear in a DP domain and thus examples in (30)-(34) do not count as evidence that the participial relative is TP.^{23, 24}

I argue that participial relatives in Present-day English are AspP, and their syntactic structure is (37a), where DP selects AspP, which in turn takes *v*P as its complement. Then

the relevant structure of (27a) is shown as (37b).

- (37) a. [DP D [_{AspP} Subj_i [_{Asp} *-ing* [_{vP} *t_i* [_{v'} *v* [_{VP} V DP]]]]]]]
- b. [DP D [_{AspP} a character_{subj} [_{Asp'} frequently [_{Asp} appearing_i [_{vP} *t_{subj}* [_{v'} *t_i* [_{VP} V in Celtic folk-story]]]]]]]]

The head noun raises from the specifier of *vP* to the specifier of *AspP* in order to be an antecedent and the object noun is assigned the accusative Case by *v* if there is a transitive verb; otherwise it gets the accusative Case from a preposition.²⁵ The inflectional suffix *-ing* is base-generated on the head of *AspP*. The verb is base-generated on the head of *VP* and undergoes movement to the head of *vP* and then to the head of *AspP*, finally combined with the suffix *-ing* to form a present participle. The frequency adverb is base-generated at the position adjoined to *Asp* and licensed there by *Asp*.

The relevant structure of (30)-(34) will be expressed as (38) because the sentence adverbs in (30)-(34) are assumed to appear in a DP domain.²⁶

- (38) by following [_{DP} agreed procedures [_{AP} probably involving members of the group whose jobs are being compared]], or ...

The claim that the participial relative is an *AspP* is reinforced by looking at the syntactic structure of perception verb complements (henceforth, PVCs). Felser (1998) and Tunstall (1994) have argued that PVCs in English are an *AspP*.²⁷ Felser (1998) illustrates that PVCs have a perfective or an ongoing aspect. The bare infinitive complement in (39a) describes a completed event, whereas the participial complement in (39b) depicts an ongoing event. Thus, the difference between the bare infinitive complement and the participial

complement lies in their aspectual specification. This implies the presence of an aspectual layer in PVCs.

- (39) a. *I saw her drown, but I rescued her.
b. I saw her drowning, but I rescued her. (Felser (1998: 355))

PVCs allow a floating quantifier *all*, which means that an embedded subject in PVCs moves to a higher position and as a result, the quantifier is stranded in the specifier of VP, as shown in (40).

- (40) I saw the children_i [_{VP} all *t_i* leave]. (cf. Felser (1998: 357))

In addition, assuming that manner adverbs such as *frequently*, *completely*, *carefully* and so on adjoin AspP or VP (Marantz (1984: 38f)), she claims that there is an overt verb movement to a higher position in PVCs if the embedded verb precedes the manner adverb.²⁸

- (41) We saw him look_i frequently *t_i* at the wall. (Felser (1998: 357))

After pursuing some alternative analyses to the structure of PVCs such as a bare VPs analysis, a full IPs analysis, and an agreement phrases analysis, she proposes that there is a functional category AspP above VP in PVCs and it functions to bear the aspectual feature [\pm prog(ressive)]. The syntactic structure of PVCs in (41) is expressed as (42).²⁹

- (42) We saw him [_{Asp'} [_{Asp} look_i] [_{VP} frequently [_{VP} *t_i* at the wall]]].

(cf. Felser (1998: 361))

In (42), the verb *look* undergoes head movement to AspP. Since the PVC in (41) does not express the progressive aspect, there is not a progressive *-ing* in the head of AspP and therefore, nothing is combined with the verb *look* there. If the embedded verb bears a progressive aspect, the suffix *-ing* is merged in the head of AspP and the verb is combined with it after head movement to AspP. As for (40), it is assumed that the embedded subject *the children* moves into the specifier of AspP.

(43) I saw [_{AspP} the children_i [_{Asp} [_{VP} all *t_i* leave]]].

It would be possible to extend the AspP analysis of PVCs to the participial relative in the following two points. Firstly, floating quantifiers are possible both in the participial relative, as shown in (18), repeated here (44), and in the PVC, as shown in (40).

(44) a. The boys all playing soccer together will go home soon.

(Tozawa (2013: 40))

b. At one end, Sir Nobonk on Daz -- at the other, on her broomstick, was the witch attended by her hobgoblins all screaming with her.

(Collins, brbooks, BB-bM022298, culture)

c. The notion is contradictory since it has things both existing and not existing simultaneously.

(Collins, brbooks, BB-Fm89-726, religion)

Secondly, frequency adverbs also occur both in the participial relative, as shown in (27), (28) and (29), repeated here as (45), (46) and (47) and in the PVC, as shown in (48). These data

would support the proposed structure in (37).

- (45) a. The dichotomy represented by the Goddess's totem of the adder is reflected in a character frequently appearing in Celtic folk-story :
(Collins, brbooks, BB-Fx90-763, religion)
- b. His grotesquely amusing account presents the entire family frequently communing with ghosts. (Collins, brbooks, BB-Ym022210, biog)
- (46) a. The depressive position is a developmental phase usually occurring from the age of six months; (Collins, brbooks, BB-Ff91-649, religion)
- b. See also iron. aneurin(e), B q vitamin. angina, full name angina pectoris, characterized by severe pain in the chest usually radiating to shoulder and arm. (Collins, brbooks, BB-Fm89-749, religion)
- (47) a. Next she was an unpaid visiting bush nurse in Queensland, by necessity often acting also as doctor and midwife.
(Collins, brbooks, BA-Nm012157, medicine)
- b. But many more are known only in a heavily condensed form often consisting of no more than a few lines of text.
(Collins, brbooks, BB-Bm89-693, culture)
- (48) a. We saw him look frequently at the wall. (Felser (1998: 357))
- b. I see him play quite often as they show Scottish games in England and when I see him play, it doesn't look like he's 35 years old.
(Collins, brregnews, NB5--020211, news)
- c. I'd like to see him playing regularly in the Premiership and now he has the chance under Terry Venables. (Collins, sunnow, NBA--020907, news)

We have so far discussed the syntactic structure of participial relatives in Present-day English. Based on the fact that floating quantifiers and frequency adverbs are possible with participial relatives, I argued that a verb moves to the head of AspP in the participial relative, as shown in (37). The absence of a TP domain was accounted for by the lack of a tense interpretation independent of the matrix clause, as shown in (20). Finally I argued that the AspP analysis of the participial relative is reinforced by the AspP analysis of the PVC. In the next subsection, we will examine the historical development of participial relatives from EModE onward.

3.3.3.2. Participial Relatives from EModE Onward

Let us now turn back to participial relatives from EModE onward. Now that we have identified the syntactic structure of participial relatives in Present-day English, we need to consider when and why their syntactic structure changed from (49a, b)-(49c); that is, when and why the functional category AspP occurred in participial relatives.

- (49) a. [DP D [VP Subj [_{v'} [V-*ende/-ing*] [PP P DP]]]] (13th~)
- b. [DP D [_{vP} Subj [_{v'} v [VP V-*ende/-ing* DP]]] (14th~)
- c. [DP D [_{AspP} Subj_i [_{Asp} -*ing* [_{vP} *t_i* [_{v'} v [VP V DP]]]]]] (PE)

One possible approach to the question would be to identify the earliest instance of participial relatives that have a floating quantifier or a frequency adverb because they indicate the presence of an AspP.

In the first place, we can find a participial relative that had a floating quantifier at the end of the sixteenth century, as shown in (50), which is obtained from PPCEME.

- (50) this & many other causes all hangyng on one roote
'this and many other causes all hanging on one root'

((1593, (BOETHEL-E2-H,88.323))

This is the earliest instance of participial relatives in PPCEME that have a floating quantifier, and no instance of participial relatives of this kind was discovered in PPCME2. Hence, the example in (50) suggests that they already had a functional category above ν P in the end of the sixteenth century.³⁰

In the second place, frequency adverbs occurred in participial relatives at the end of the sixteenth century, as shown in (51).

- (51) As in garments so in gouernment continually affecting new fashions.
'As in garments so in government continually affecting new fashions.'

(1589) (OED: T. Nashe Almond for Parrat sig. 15)

I take *continually* to be a member of frequency adverbs because it does not co-occur with other members of frequency adverbs such as *frequently*, *usually* and *often*, whereas it co-occurs with speaker-oriented adverbs, subject-oriented adverbs and manner adverbs, as shown in (52) (see also (25)).

- (52) a. *John often has continually helped out on weekends.
b. Probably, he was continually drowsing off during the lecture.
c. Cleverly, he continually begged me not to leave him.
d. Once the foundation is firmly established, progress can be continually,

carefully and economically promoted.

Given these facts, the syntactic structure of the participial relative in (51) is represented as (53).

(53) [DP [_{AspP} *gouernment*_{subj} [_{Asp'} continually [_{Asp} affecting_i [_{vP} *t*_{subj} [_{v'} *t*_i [_{VP} V *new*
fashions]]]]]]]]

In (53), a verb *affect* base-generated in the head of VP undergoes head movement to *v* and then to Asp. It is combined with the suffix *-ing* and the present participle *affecting* is yielded. The subject noun *gouernment* is based-generated in the specifier of vP and then moves to the specifier of AspP. The frequency adverb *continually* is adjoined to the head of AspP and licensed appropriately. As a result, the participial relative *gouernment continually affecting new fashions* is produced.³¹ Thus it would be safe to assume that it was in end of the sixteenth century that the participial relatives with the structure of (53) appeared.

Now that the time of the appearance of AspP in the participial relative is revealed, we need to consider the motivation for the structural change. I argue that the emergence of AspP in the participial relative is related to the establishment of the periphrastic progressive form in the fifteenth century.

There is no consensus of opinion as regards the period when the periphrastic tense form consisting of the auxiliary *be* and the present participle was established in the history of English. According to Mustanoja (1960: 584ff), Nakao (1972: 259ff), Hashimoto (2005: 150-153) and Kranich (2010: 82ff), the periphrastic form in OE (e.g., *bip healdende* ‘be hielding,’ *wæs sprecende* ‘was speaking’) is not infrequent or remarkably highly observed in some texts while it was very rare in other texts. However, they all point out that the

periphrastic progressive form in OE was used as an imitation of Latin or the translation from it. Thus it would be plausible to assume that the periphrastic progressive form in OE was not an intrinsic usage in English.

In ME, the periphrastic progressive form was gradually spread across England. Mustanoja (1960) and Nakao (1972) note that by the end of the thirteenth century, it had been common in the north area, and then after the fourteenth century, it expanded to the middle and south area. In the fifteenth century, the periphrastic progressive form becomes current regardless of dialects or genres of texts, including prose and poetry.

However, Hashimoto claims that it is around 1800 that the periphrastic form began to function as a progressive form that corresponds to the usage in Present-day English. In (54), a simple form is used in the context in which the peripheral form that consists of the auxiliary *be* and the present participle should be used in Present-day English.

(54) a. What do you *read*, my lord? ... I mean, the matter you *read*, my lord.

(1603) (Shakespeare, *Hamlet* II, ii, 193-197)

b. What do you laugh for, Mrs. Jevis?

(1740) (Richardson, *Pamela*, Letter xxviii)

(Hashimoto (2005: 150, 151))

Furthermore, Araki and Ukaji (1984: 438ff) observe that the frequency of the peripheral form is low in the end of ME; on the other hand, they point out the gradual increase in Shakespeare. They add that after the late of the seventeenth century, it became like the modern usage and in the late of the eighteenth century it increased greatly.

However, following Mustanoja (1960) and Nakao (1972), I assume that it was common for many speakers in the fifteenth century. In other words, they assigned the

structure of (55) to the peripheral progressive form in the fifteenth century.

(55) [TP Subj_i [T' T [AspP [Asp *be-ing* [_{vP} *t_i* [_{v'} *v* VP]]]]]]]

The establishment of the peripheral progressive form with the structure of (55) means that the suffix *-ing* expressing the progressive aspect is hosted by an aspectual category. In (55), a complex of the auxiliary *be* and the suffix *-ing* is base-generated in the head of AspP. The auxiliary *be* is moved to T, and a lexical verb base-generated in the head of VP moves to the head of *vP* and then to the head of AspP, finally combining with the suffix *-ing*.

I argue that due to analogy with (55), AspP was introduced into the participial relative in end of the sixteenth century. When a speaker heard the participial relatives such as (50) or (51), he or she assigned them the structure in (56c) on analogy with (55), instead of the structure in (56a, b), so that the participial relative that has the structure of (56c) was yielded. Therefore, participial relatives allowed a floating quantifier and a frequency adverb in the end of the sixteenth century. Thus, the syntactic structures of (56a, b) were reanalyzed into (56c) in the end of the sixteenth century.

- (56) a. [DP D [_{vP} Subj [_{v'} [V-*ende/-ing*] [_{PP} P DP]]]] (13th~16th)
 b. [DP D [_{vP} Subj [_{v'} *v* [_{vP} V-*ende/-ing* DP]]]] (14th~16th)
 c. [DP D [AspP Subj_i [Asp *-ing* [_{vP} *t_i* [_{v'} *v* [_{vP} V DP]]]]]]] (16th~PE)

3.3.4. Summary

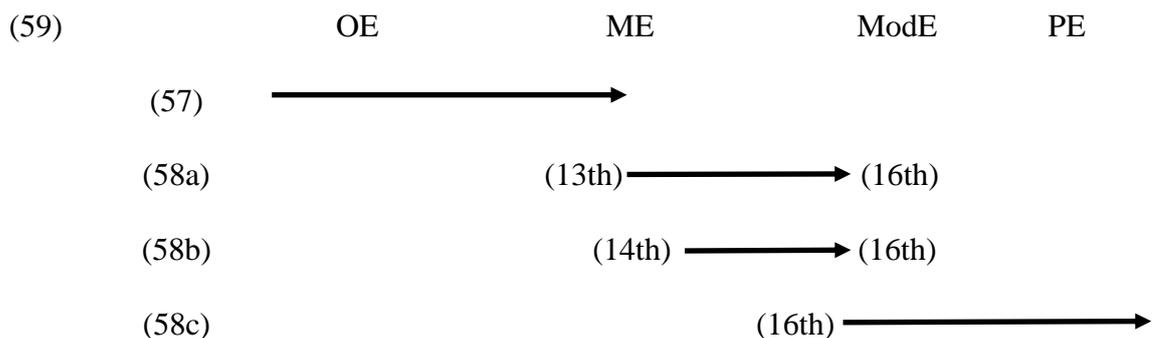
The discussion in section 3.3 will be summarized as follows. Firstly, I showed two kinds of reanalysis in the thirteenth century concerning the occurrence of participial relatives that have the structure of (58a): the suffix *-ende* in OE in (57) was reanalyzed from a

derivational suffix into an inflectional suffix, with the result that the *-ende* participle was reanalyzed from adjectives into verbs.

- (57) [DP D [AP V-*ende*] [NP NP]] (OE~early ME)
- (58) a. [DP D [VP Subj [_{v'} [V-*ende/-ing*] [PP P DP]]]] (13th~16th)
- b. [DP D [_{vP} Subj [_{v'} v [VP V-*ende/-ing* DP]]]] (14th~16th)
- c. [DP D [AspP Subj_i [Asp -*ing* [_{vP} t_i [_{v'} v [VP V DP]]]]]] (16th~PE)

I pointed out that the loss of *-an*, which is a weak adjectival inflection, brought about the former reanalysis. The latter reanalysis took place as a by-product of the former reanalysis. About one hundred year after the occurrence of the intransitive participial relative with the structure of (58a), transitive participial relatives with the structure of (58b) also became available. This would be because the suffix *-ende* became compatible with transitive verbs as well as intransitive verbs.

Secondly, participial relatives that have the structure of (58a, b) were reanalyzed into (58c) in the end of the sixteenth century. The cause of the structural change is due to analogy with progressives that includes AspP. Participial relatives in Present-day English also have the structure of (58c). The whole path of the *-ende* participle and the participial relative in the history of English is schematized below.



3.4. The Internal Structure of Participial Relatives

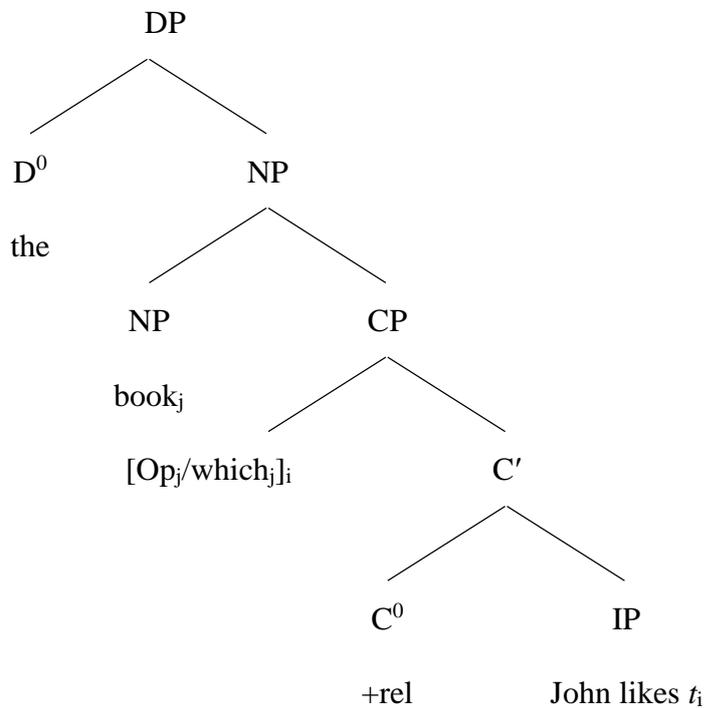
This section explores the internal structure of the participial relative. There is a vast amount of literature on the internal structure of full relative clauses and there are three schools of thought concerning it; the head external analysis, the head raising analysis (the head internal analysis or the promotion analysis) and the matching analysis. On the other hand, there has been a small number of works that deal with participial relatives (reduced relatives) in terms of the above three types of analysis. The aim of this chapter is not to offer an exhaustive account of the internal structure of the participial relative, and we will only give a brief account of the internal structure of the participial relative. In Section 3.4.1, we will overview the three kinds of analysis of full relative clauses and in section 3.4.2, I will argue for the head raising analysis of the participial relative.

3.4.1. Overview of the Three Analyses

The most traditional approach is the head external analysis (Chomsky (1977), Jackendoff (1977), Boef (2012), among others), where the head noun is base-generated outside the relative clause CP, which is adjoined to the head noun, as illustrated in (60). The relative clause involves A'-movement of an empty operator or a relative pronoun, which is semantically linked with the head noun through co-indexing. What is important in the head external analysis is that the head noun cannot be reconstructed into an internal position of the relative clause because it is base-generated in a position external to the relative clause.

(60) a. the [book]_j [CP [Op_j/which_j]_i John likes *t_i*]

b.

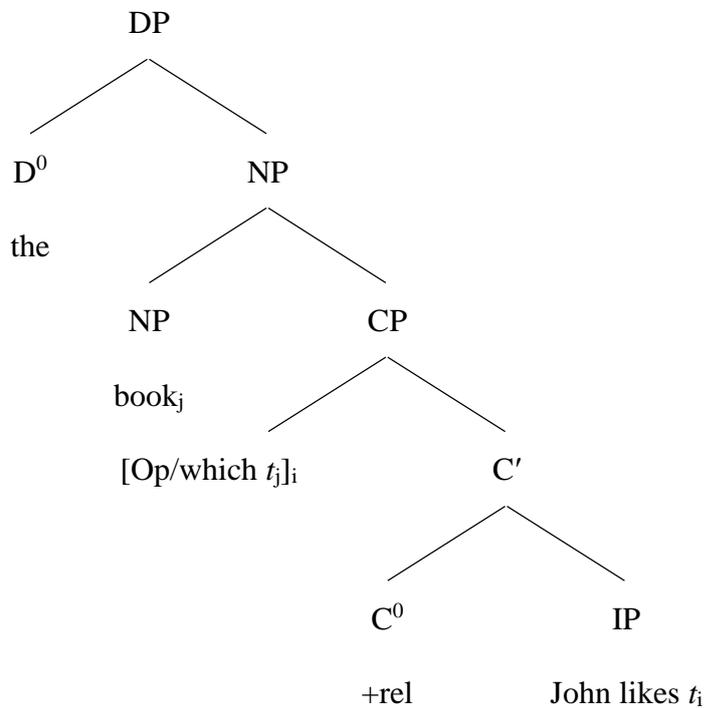


(cf. Bhatt (2002: 44))

The head raising analysis is the most prominent analysis of relative clauses within the generative grammar (Boef (2012)). It has been proposed by Shachter (1973), Kayne (1994), Bianchi (2000), Bhatt (2002) among others. The head raising analysis assumes that the head noun originates inside the relative clause and then raises outside it, as illustrated in (61). The important thing is that unlike the head external analysis, the head raising analysis permits reconstruction; the head noun can be interpreted in its base position.

(61) a. the [book]_j [CP [Op/which *t_j*]_i John likes *t_i*]

b.

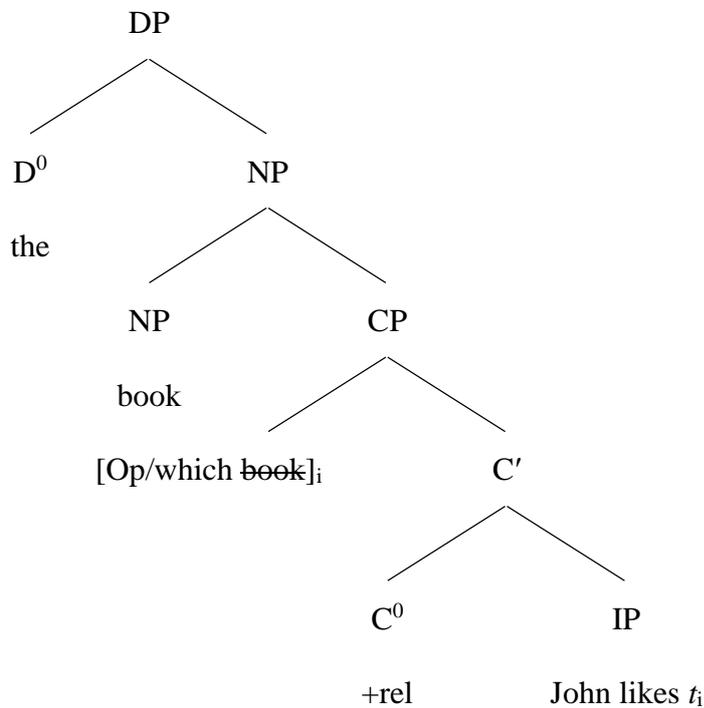


(cf. Bhatt (2002: 45))

The matching analysis was proposed by Lees (1960, 1961), Chomsky (1965), Sauerland (2003) among others. It combines the head external analysis with the head raising analysis; the head noun is base-generated outside the relative clause, while there is another representation of the head noun inside the relative clause that raises to the specifier of CP, as exemplified in (62). The head noun in the specifier of CP undergoes PF-deletion under identity with the external head, and thereby the adequate phrase is produced.

(62) a. the [book] [_{CP} [Op/which ~~book~~]_i John likes *t_i*]

b.



(cf. Bhatt (2002: 45))

3.4.2. The Head Raising Analysis of Participial Relatives

I argue for the head raising analysis of the participial relative, partly based on Tozawa (2014) and Siloni (1995). I present five pieces of evidence for the head raising analysis of the participial relative. Regarding the first two pieces of evidence, the discussion proceeds along the same lines as Tozawa (2014).

In the first place, together with the AspP analysis, the head raising analysis of the participial relative accounts for the fact that part of an idiom occurs as the head noun of the participial relative. Examples in (63b) and (64b) express that part of idioms such as *make headway* and *keep track of* can be the antecedent noun of full relatives, whereas those in (63c) and (64c) indicate that *headway* and *careful track* cannot occur by itself. Thus it is assumed that *headway* in (63b) and *track* in (64b) are base-generated inside the full relative clause so

that *make headway* and *keep track of* can have the interpretation as idioms, and then raise to the antecedent position.

- (63) a. We made headway.
b. The headway that we made was satisfactory.
c. *(The) headway was satisfactory. (Schachter (1973: 31))
- (64) a. She's keeping careful track of her expenses.
b. The careful track that she's keeping of her expenses pleases me.
c. *(The) careful track pleases me (ibid.: 32)

Headway and *track* can also be the antecedent noun of participial relatives as well as that of full relatives, as illustrated in (65). This fact would support the head raising analysis of participial relatives.

- (65) a. Is there any headway being made? (COCA, SPOK, CNN_Politics)
b. The test of this theory would be made by some impartial track being kept of these graduates,...
- (*On Doing the Right Thing* written by Nock, Albert Jay, 119)

Part of idioms such as *pay homage* and *put on airs* can also be the antecedent noun of participial relatives. These facts would also maintain the head raising analysis of participial relatives.

- (66) a. The nobles paid homage to the queen by bowing to her.

- b. The fourth example, therefore, which I select of divine homage being paid to Jesus by one of his disciples, is the case of Stephen:

(*The Relief Preacher: Sermons on Important Subjects*, unknown author 238)

- (67) a. She is just putting on airs.
 b. The latter are likely to feel equally negative about the ‘airs’ being put on by the former...”

(http://www.hkimr.org/uploads/publication/43/ub_full_0_2_303_wp-no-37_2011-final-.pdf)

Under the AspP analysis of participial relatives, the derivation is expressed in (68). The head noun is base-generated in the complement of V and then raises to the specifier of AspP. The auxiliary *be* base-generated in the head of VP raises to the head of vP and then to the head of AspP. Finally, a participial relative *any headway being made* is yielded, as shown in (68b).³²

- (68) a. [DP D [AspP Subj_i [Asp *-ing* [vP be made [any headway]_i]]]]
 b. [DP D [AspP any headway_i [Asp being_j [vP t_j made t_i]]]]

In the head external analysis, the antecedent noun *any headway* is supposed to be base-generated outside the vP domain. Then the idiomatic interpretation would be unavailable.

In the second place, the head raising analysis of the participial relative correctly accounts for the absence of late insertion in the participial relative and the possibility of reconstruction effects.

- (69) a. Which student who was reading Chomsky's_i book did he_i say was smart?
 b. *Which student reading Chomsky's_i book did he_i say was smart?

(Thompson (2001: 308))

The grammaticality of (69a) indicates that the *wh*-phrase *which student who was reading Chomsky's book* is not reconstructed in its original position. If there were a reconstruction effect, the sentence would be ungrammatical because Condition C is violated. On the other hand, the ungrammaticality of (69b) indicates that the *wh*-phrase *which student reading Chomsky's book* is reconstructed in its base-generated position; otherwise, (69b) would be wrongly predicted to be grammatical because Condition C is observed.

The observation that participial relatives have a reconstruction effect is properly accounted for under the head raising analysis. In (70a), a lexical verb *read* and its object *Chomsky's book* are base-generated in the VP domain and the antecedent noun *which student* is base-generated in the specifier of *vP*, whereby a participial relative is derived, as shown in (70b). Then, the participial relative *which student reading Chomsky's book* is merged with *was smart*, so that it can become the subject of the embedded clause, as shown in (70c). When the matrix subject *he* is merged, as shown in (70d), Condition C is violated because *he* binds *Chomsky*. As a result, the derivation is crashed. Thus, the ungrammaticality of (69b) is adequately accounted for.

- (70) a. [DP D [AspP Subj_i [Asp *-ing* [vP which student [v' v [VP read Chomsky's book]]]]]]
 b. [DP D [AspP which student_i [Asp reading_j [vP t_i [v' t_j [VP t_j Chomsky's book]]]]]]
 c. [CP [DP D [AspP which student_i [Asp reading_j [vP t_i [v' t_j [VP t_j Chomsky's

book]]]]]] was smart]

- d. [_{he_k} say [_{CP} [_{DP} D [_{AspP} which student_i [_{Asp} reading_j [_{vP} t_i [_{v'} t_j [_{VP} t_j Chomsky's_k book]]]]]]]] was smart]]

In the third place, the head raising analysis of the participial relative is supported in terms of Burzio's generalization. As we have already seen, there have been transitive participial relatives since the fourteenth century. In the proposed analysis, they have the structures in (71b). Those in Present-day English have the structure of (72b).

- (71) a. 3if ich hated þe hatend þe, Lord,
 if I hated those hating you, Lord,
 'if I hated those hating you, Lord,' (1350, (CMEARLPS,169.7438))
- b. [_{DP} D [_{vP} þe [_{v'} v [_{VP} hatend þe]]]]
- (72) a. the boys playing soccer together
- b. [_{DP} D [_{AspP} the boys_i [_{Asp} playing_j [_{vP} t_i [_{VP} t_j soccer together]]]]]]

According to Burzio's generalization, which says that a verb assigning an accusative Case to its object must assign a theta role to its subject, the antecedent nouns *þe* in (71a) and *the boys* in (72a) must be base-generated inside the vP so that they can receive a theta role from the verb. In the head external analysis, because the antecedent nouns *þe* and *the boys* are base-generated outside the participial relative, they would not be able to get a theta role from the verb.

In the fourth place, the floating quantifier in participial relatives also supports the head raising analysis. In the current proposal, a quantifier *all* in (73a) and (74a) is assumed to be base-generated together with the subject noun inside the vP domain (Sportiche (1988)),

therefore can bind the reflexive pronoun *herself*.

It should be noticed that the head raising analysis of participial relatives is also supported by cross-linguistic data. Hebrew participial relatives allow a reflexive pronoun in the object position in the same way as English participial relatives in (75), as exemplified in (76).

- (76) ha-hores 'et 'acmo ye'anesh
 the-destroying ACC himself will+be+punished
 'Whoever destroys himself will be punished.' (Siloni (1995: 454))

In (76), the participle in the free participial relative *hores* takes a reflexive pronoun *'acmo* as its object. Since the antecedent of the reflexive pronoun must be within its local domain, Siloni assumes that there is an understood subject in the free participial relative that binds the reflexive pronoun, as shown in (77).³⁴

- (77) [DP D [_{vP} Subj_i [_{v'} v [_{VP} hores 'et 'acmo_i]]]]

Like the participle in English participial relatives, the participle in Hebrew participial relatives assign an accusative Case to its object, and the quantifier is also stranded, as shown in (78a, b), respectively. Based on the discussion from (71)-(74), examples in (78a, b) would also show that the head noun is base-generated inside the *vP/VP* domain.³⁵

- (78) a. ha-hores 'et ha-bayit ye'anesh
 the-destroying ACC the-house will+be+punished

‘Whoever destroys the house will be punished.’

- b. ha-yeladim [DP [D ha-] [AGR_{PP} e_{Ci} xosh_v-im [VP [kulam t_i] t_v 'al kesef]]]
the-children the thinking-AGR all about money
‘the children all thinking about money’ (cf. Siloni (1995: 454-455))

Furthermore, French participial relatives also show the same behaviors as those in English and Hebrew. In (79a), the reflexive pronoun is assumed to be bound by the subject that lies inside the local domain. In (79b), before the subject raises to the higher head, it is assumed to stay inside the vP domain together with the quantifier.

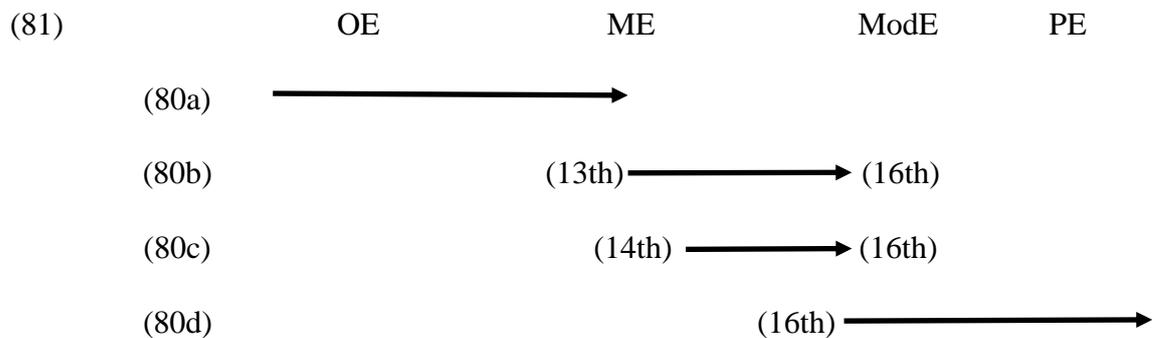
- (79) a. L'homme s'examinant toujours dans le miroir...
the man himself_{ci}examining always in the mirror
‘the man always examining himself in the mirror’
b. Les hommes regardant tous la télévision...
the men watching all the television
‘the men all watching the television’ (Siloni (1995: 473))

To summarize, I argued that participial relatives are properly derived under the head raising analysis. I showed five pieces of evidence for the head raising analysis: the idiomatic interpretation, the possibility of reconstruction, Burzio’s generalization, the floating quantifier, and the reflexive pronoun. I also demonstrated that the head raising analysis is supported cross-linguistically by looking into the participial relative in Hebrew and French as well as English.

3.5. Concluding Remarks

This chapter has discussed the historical development of participial relatives and their internal structure. The whole path of their historical development is shown in (80) and (81).

- (80) a. [DP D [AP V-ende] [NP NP]] (OE~early ME)
 b. [DP D [VP Subj [v' [V-ende/-ing] [PP P DP]]]] (13th~16th)
 c. [DP D [vP Subj [v' v [VP V-ende/-ing DP]]]] (14th~16th)
 d. [DP D [AspP Subj_i [Asp -ing [vP t_i [v' v [VP V DP]]]]]] (16th~PE)



-Ende participles in OE were adjectives. When they modified the noun, they had the syntactic structure shown in (80a). Since they were adjectives in OE, they had rich inflectional morphology. However, it began to undergo gradual simplification from the end of OE.

In EME, a weak adjectival inflection *-an* was lost, which triggered the reanalysis of the suffix *-ende* of the *-ende* participle from a derivational suffix to a inflectional suffix. As a result, the *-ende* participle was reanalyzed from adjectives into verbs in the thirteenth century. The reanalysis led to the occurrence of the intransitive participial relative with the syntactic structure of (80b). In the fourteenth century, the suffix *-ende* became compatible with transitive verbs, so that transitive participial relatives with the structure of (80c) became

available. The earliest example of the intransitive and transitive participial relative with the structure of (80b, c) are shown in (82a, b), respectively.

- (82) a. And alle heore teres beoð berninde gleden glidende ouer heore a3ene nebbe
 And all her tears are barning glede gliding over her own neb
 ‘and all her tears are bearing kites gliding over her own neb’
 (1225, (CMLAMBX1,43.554))
- b. 3if ich hated þe hatend þe, Lord,
 if I hated those hating you, Lord,
 ‘if I hated those hating you, Lord,’ (1350, (CMEARLPS,169.7438))

The suffix *-ende* in participial relatives was replaced by the gerundive suffix *-ing* in the end of the fourteenth century and had almost disappeared by the beginning of the fifteenth century because the present participle suffix *-ende* was phonologically assimilated to the gerundive suffix *-ing*.

In ModE, participial relatives that have the structures of (80b, c) were reanalyzed into (80d) in the sixteenth century on analogy with the progressive. I assume that the peripheral tense form consisting of the auxiliary *be* and the present participle was established in the fifteenth century. That is, many speakers assigned the structure of (83) to the progressive in the fifteenth century.

- (83) [TP Subj_i [T' T [AspP [Asp *be-ing* [_{vP} t_i [_{v'} v VP]]]]]]

The establishment of the peripheral progressive form means that the suffix *-ing* expressing the progressive aspect is hosted by an aspectual category. When a speaker heard the participial

relatives like (84), he or she assigned them the structure in (80d) on analogy with (83), instead of the structure in (80b, c), so that participial relatives that have the structure of (85) occurred in the sixteenth century. This made it possible for a floating quantifier and a frequency adverb to occur in participial relatives in end of the sixteenth century. As a result, the syntactic structures of (80b, c) were reanalyzed into the syntactic structure of (80d) in end of the sixteenth century.

(84) As in garments so in government continually affecting new fashions.

‘As in garments so in government continually affecting new fashions.’

(1589) (OED: T. Nashe Almond for Parrat sig. 15)

(85) [DP [AspP *gouernment_{subj}* [Asp' continually [Asp affecting_i [_{vp} *t_{subj}* [_{v'} *t_i* [VP V new fashions]]]]]]]]

After the sixteenth century, the participial relative has the structure of (80d), where it lacks a TP domain. This is verified by the lack of a tense interpretation independent of the matrix clause.

Finally, I argued for the head raising analysis of the participial relative. Five pieces of evidence for the head raising analysis were provided: the idiomatic interpretation, the possibility of reconstruction, Burzio's generalization, the floating quantifier, and the reflexive pronoun.

Notes to Chapter 3

1 The term *participial relative* is employed in Siloni (1995), Hazout (2001), Doron and Reintges (2005), and Belikova (2008). The generative literature traditionally uses the term *reduced relative* to refer to the phrase in (1). However, it usually includes phrases such as those illustrated in (i), where the antecedent noun is postmodified by a past participle (ia) or an adjective (ib).

- (i) a. the book sent to me (Kayne (1994: 97))
b. the editors present (Cinque (2014: 10))

This thesis only considers a type of reduced relative clause consisting of a present participle and its argument/an adjunct such as those in (1a, b). Therefore, I use the term a *participial relative (clause)* in order to distinguish it from reduced relative clauses illustrated in (i). In passing, Thompson (2001) employs the term *gerundive relatives* and Doron and Reintges (2005) uses the term *participial modifiers* for participial relatives.

2 I have left out of consideration the historical development of premodification by present participles: transitive present participles like *attracting* in (2) that derive from a psycho verb and intransitive present participles like *burning* and *living* in the gloss of (3). I will not offer a syntactic account of them in this thesis, either.

3 When a participle is loosely combined with a modified noun (Ono and Nakao term it “principal”) and has a function equivalent to an adjectival clause, an adverbial clause or a coordinate clause, it is called appositive participle or *participium conjunctum* (Ono and Nakao (1980: 438)). For more details, see Callaway (1901).

4 Visser (1966: 1064ff) shows a large amount of data with present participles in which they modify the following or preceding nouns. He states that they are attributive adjuncts to nouns that are equivalent to adjectives. I have not examined all the data

given in Visser, so that there remains a possibility that he offers instances of transitive participial relatives.

5 Roeper states that the second type (5b) is exemplified, perhaps uniquely, by *-ing*.

6 The corpora used in this corpus survey often have two kinds of philological information: PPCME2 information and Helsinki information. In that case, I adopt the PPCME2 information. Besides, when there are more than one original data about a literature, I adopt the earliest data. This holds for other historical corpora as well.

7 Visser (1966: 1069, 1070) points out that the *-ende* participles have “a clearly verbal character” and the *-end* participles are nouns, but Mitchell (1985: 410) indicates that “the distinction cannot be generally maintained because the confusion of endings is greater” than Visser thinks.

8 It is necessary to take into account the fact that sixty five examples with the suffix *-and* and one example with the suffix *-end* are included in the text *The Earliest Complete English Prose Psalter* (CMEARLPS). This might mean that there is some preference of a specific author involved.

9 ‘Wastumbearing’ means ‘fruitful.’

10 Gelderen (1993: 184) shows that *-ende* participles in OE assigned the accusative Case to their object, as illustrated in (i), where *ealne* and *þone* are realized as an accusative form. This might be a counterexample to my argument. However, she analyzes *-ende* participles in OE as an adjective because they followed a copula, and assumes that they assigned an accusative Case in environments other than participial relatives.

(i) mid þæm þeowum ic eom ealne þone hefon ymbhweorfende,

with these servants, I am all the heaven encompassing.

‘with these servants, I am encompassing all the heaven,’

(Gelderen (1993: 184))

- 11 Anthony Warner (p.c.) indicates that it would be necessary to distinguish monosyllables from polysyllables, because Chaucer still has inflection in monosyllables, but it is lost earlier in polysyllables.
- 12 For the rest of the paradigm, such as Singular-Feminine, Singular-Neutral and Plural, see Nakao (1972: 144-146).
- 13 Nakao notes that in the strong inflection of adjectives, the inflectional morphology of adjectives that end in *-e* is different from that of adjectives that end in a consonant.
- 14 It is generally known that intransitive verbs are divided into unaccusative verbs and unergative verbs. The proportion of the two types of verbs in Table 8 is almost the same. In passing, most of them appeared in the fourteenth century.
- 15 There remains one problem concerning the word order between the modifier and the modifiee: why did postmodification by the present participle become possible in the thirteenth century, although *-ende* participles in OE only premodified nouns? I tentatively assume that the possibility of the postmodification in the thirteenth century has something to do with the tendency for the heavy element to be postposed. In (13a, b), repeated as (ia, b), the intransitive present participles *glidende* ‘gliding’ and *lyfande* ‘living’ postmodify the noun together with their argument *ouer heore azene nebbe* ‘over her own neb’ and *in erthe* ‘in earth,’ respectively. When verbs involve their arguments, the verb phrase would be likely to become heavy. Hence, it would be natural that when present participles involving their arguments modify the noun, they are postposed.

- (i) a. and alle heore teres beoð berninde gleden glidende ouer heore aʒene nebbe
and all her tears are barning glede gliding over her own neb
'and all her tears are bearing kites gliding over her own neb'

(1225, (CMLAMBX1,43.554))

- b. in þte wylke þtay moghte well forgaa þe lufe of all creaturs lyfande in
'In the walk they may well forgo the love of all creatures living in
erthe

earth'

(1349, (CMROLLTR,8.244))

In contrast, when present participles do not involve overt arguments, they premodify the noun, as illustrated in (ii).

- (ii) Bittyr hony & kyllande fruyte.

'Bitter honey and killing fruit'

(1435) (OED: R. Misyn tr. R. Rolle Fire of Love 89)

16 We need to consider a time lag of no less than about one hundred years between the appearance of the intransitive and transitive participial relative. I leave this issue open for future research.

17 If we could present cases where the loss of the inflection brought about the categorial change, the argument given here would be more convincing. In addition, it would be necessary to give a theoretical evidence for the reanalysis of the suffix *-ende* from a derivational suffix to an inflectional suffix.

18 Nishio (1990) points out that some adjectives in OE assigned an inherent Case to the noun complement. According to Ono and Nakao (1980), for example, adjectives such as *full* 'full,' *æmettig* 'empty,' *gefægen* 'glad,' *scyldig* 'guilty,' *wyrþe* 'worthy' and others took a genitive noun as their complement, whereas those expressing approach, resemblance and emotion such as *neah* 'near,' *feorr* 'far,' *gelic* 'like,' *deore*

‘dear,’ and *lap* ‘hateful’ took a dative noun as their complement.

19 The fact that a negative marker appears between the antecedent and the present participle also suggests that participial relatives in Present-day English have a bigger projection than *vP*.

- (i) Watched by more than half the households in New York, it drew, said a network spokesman (without evident irony), the largest audience for any broadcast event not involving sports.

(Collins, brbooks, BA-Ym022208, biog)

20 The fact that auxiliaries cannot occur in the participial relative also shows the lack of TP in the participial relative.

- (i) * The passengers should/could/may/might be waiting for the flight spoke to the flight attendant. (Thompson (2001: 298))

21 Mizuno regards *often* as a member of “-ly adverbs” because it shows the same distributional properties as other ordinary -ly adverbs.

22 Speaker-oriented adverbs are divided into attitudinal disjuncts and style disjuncts, the former expressing the speaker’s attitude toward the proposition of a sentence (e.g., *probably, evidently, certainly, fortunately*), as shown in (30) and (31), and the latter expressing the speaker’s comment about the style or manner of what is being stated (e.g., *frankly, honestly, confidentially, seriously*), as exemplified in (32) and (33). Participial relatives are possible with both types of speaker-oriented adverbs. Subject-oriented adverbs express an attribute of the subject, which concerns volition, obligation and ability of subjects (e.g., *carelessly, cleverly, stupidly, willingly*). As the grammaticality of (34) shows, the subject-oriented adverb is also compatible with participial relatives.

23 Tozawa (2013, 2014) judges that participial relatives are compatible with a sentence

adverb, as shown in (i), and claims that they are TP.

- (i) Please tell me what you know about [the person probably being a worker
on the ship] (Tozawa (2014: 222))

Assuming that the present participle in (i) does not have an independent tense interpretation and that *probably* in (i) appears in a DP domain just in the same way as (36), I argue that (i) does not serve as evidence that the participial relative is TP.

24 One might wonder why Thompson judged (19), repeated here as (i), to be ungrammatical, though some sentence adverbs occur in a DP domain.

- (i) * The person probably playing the music you heard used to be my roommate.
(Thompson (2001: 297))

According to my three informants, two of them judged (i) to be unacceptable, and one considers it to be a little strange but grammatical. One of my informants illustrated that examples in (iia, b) are a better grammar than (i). I suppose that the ungrammaticality of (i) may be related with the scope of the sentence adverb because *probably* in (iia, b) scopes a DP *my old/former roommate*, while *probably* in (i) scopes a verb phrase *playing the music*.

- (ii) a. The person you heard playing the music was probably my old/former roommate.
b. It was probably my old/former roommate who was playing the music you heard.

The problem with the scope ambiguity of the sentence adverb goes beyond the scope of this thesis, so it is left out of consideration.

25 We would have to show the motivation for movement of the subject noun to the specifier of AspP. I will leave it aside here.

26 I understand that the claim that the sentence adverbs in (30)-(34) appear in a DP

domain is descriptive. Hence we would need to give it a theoretical explanation. If we follow Mizuno (1999), we will have to reveal which functional category licenses the sentence adverb in a DP domain. In addition, the internal structure of the DP domain in (38) would need looking into at length.

27 Miller (2002) categorizes the bare infinitive complement in PVCs as AspP and the participial complement in PVCs as VoiceP.

28 Felser does not distinguish the manner adverb from the frequency adverb and treats *frequently* as one of the manner adverbs.

29 Miller (2002: 248) gives a counterexample to the AspP analysis in terms of VP-fronting shown in (i) and points out that there is no reason (ia) is grammatical but (ib) is ungrammatical. I do not have a clear answer to this question.

- (i) a. operating on the patient I saw the doctor
 b. *operate on the patient I saw the doctor (Miller (2002: 248))

30 Besides the instance of a floating quantifier in (50), we can attest the following instance, where two negative markers *nou3t* precedes *-ende* participles *herand* and *hauand* in a participial relative. This may imply that the participial relative had a bigger projection than *vP* in the fourteenth century.

- (i) ich am made as man nou3t herand and nou3t hauand undernimynges in hys
 ‘I am made as man not hearing and not having rebuke in ice.’
 ((1350, (CMEARLPS,46.1983))

31 The proposed analysis cannot explain the derivation of (50) correctly.

- (i) [DP [AspP this & many other cause_{Ssubj} [Asp hangyng_i [vP t_{subj} all [v' t_i [VP V on one roote]]]]]]

The verb *hang* base-generated in the head of VP undergoes head movement to *v* and then to Asp. It is combined with the suffix *-yng* and the present participle *hangyng*

is yielded. The subject *all this & many other causes* is based-generated in the specifier of *vP* and then part of the subject moves to the specifier of *AspP* with the quantifier *all* stranded in its base position. As a result, the string *this & many other causes hangyng all on one roote* is wrongly produced, as shown in (i). Therefore we need to make some assumption to derive the grammatical string *this & many other causes all hangyng on one roote*.

32 The derivations shown in (68) and (70) are largely based on Tozawa (2014: 223), except that I adopt the *AspP* analysis of participial relatives.

33 Recall that in order to maintain the current analysis, we need to solve the problem with word order, as stated in notes 31.

34 In (77), *AspP* is omitted because it is irrelevant to the discussion. What is important here is that the null subject and the reflexive pronoun lie in the same local domain.

35 In (78a), a null element in the subject position is assumed to receive a theta role from the verb. See Siloni (1995) for detailed discussion.

Chapter 4

Diachronic and Synchronic Aspects of *With*-Augmented Absolute Constructions: With Special Reference to Grammaticalization of *With*

4.1. Introduction

There are several studies on absolute constructions exemplified in (1)-(3), but very little research has been done on the historical background.

- (1)
 - a. A patrol car was parked at the corner with its blue light flashing.
 - b. We repeated the exercise with arms kept rigid.
 - c. He was lying on his bed with his eyes wide open.
 - d. He stood with a pipe in his mouth.
- (2)
 - a. With prices so high, we have to cut down the expenses.
 - b. No one steals with the Giant ace Horiuchi on the mound.
 - c. With the pronoun in parentheses remaining, these sentences are more or less acceptable. (“Filters and Control,” *Linguistic Inquiry* 8: 3, 493)
 - d. With parliamentary elections only eleven days away, Japanese Prime Minister Masayoshi Ohira died of a heart attack last week at the age of 70.

(*Newsweek*, June 23, 1980, 1)
 - e. With every opportunity for reform blocked by the majority, the minority can only wait for a new election.
 - f. It sometimes happens when the sons of a family die without heirs that a married daughter is obliged to remarry her husband, with the husband

assuming her maiden name at the second ceremony.

- (3) a. They had passed without a single word spoken.
b. He felt out of place without a child in tow.
c. Without the Prime Minister on the campaign trail, the chances of LDP gains appeared slim.

(*Newsweek*, June 23, 1980, 7)

(Sakakibara (1982: 79, 80, 81, 84))

Ishihara (1982), Sakakibara (1982), McCawley (1983), Mihara (1985), Napoli (1988), Kortman (1991, 1995), Felser and Britain (2007) and Trousdale (2012) deal with the absolute constructions with *with(out)* and give syntactic or semantic accounts of them, while no attempt has been made to give a historical study of the absolute constructions with *with*, except van de Pol and Cuyckens (2013). This chapter discusses the historical development of the absolute constructions with *with* exemplified in (1) and (2), paying special attention to those like (2c), which have the sequence *with* + a noun + a verb with an *-ing* form.¹

There are two types of absolute constructions in Present-day English: one is sentences exemplified in (1)-(3) with *with(out)*; the other is sentences like those in (4), which are equivalent to an absolute adjunct, a participial construction that has an accusative or nominative subject.

- (4) The dean turned and went out, his gown billowing in the wind.

(Kortmann (1995: 193))

This thesis calls sentences in (1) and (2) *with*-augmented ACs (*with*-augmented absolute constructions) since they are augmented by *with*, and calls sentences like those in (4) unaugmented ACs (unaugmented absolute constructions).² The term “augment” has often

been employed in several literatures that deal with the absolute constructions with *with* (Kortmann (1991), Felser and Britain (2007), Trousdale (2012), van de Pol and Cuyckens (2013)).³

I bear out van de Pol and Cuyckens' (2013) claim that *with*-augmented ACs underwent a gradual semantic development in the history of English. I claim that *with* in *with*-augmented ACs in (2) was grammaticalized in the twentieth century, based on the data given in van de Pol and Cuyckens (2013) and Kortmann (1995) and the data obtained from OED quotations about the distribution of *with*-augmented ACs containing an *-ing* predicate. Assuming that grammaticalization involves the following four processes: (i) pragmatic inference, (ii) semantic bleaching and/or phonological reduction, (iii) high frequency and (iv) an upward reanalysis, I will argue that it is in the twentieth century that *with* in *with*-augmented ACs was grammaticalized. The rapid increase in the frequency of their use in the twentieth century promoted diversification of the meaning of *with*, so that the semantic content of *with* was bleached. Then *with* in *with*-augmented ACs was reanalyzed from a lexical item to a functional item in the twentieth century. This is an instance of reanalysis from a preposition to a complementizer.

This chapter is organized as follows: section 4.2 shows the syntactic and semantic properties of *with*-augmented ACs, based on Sakakibara (1982) and Napoli (1988). Section 4.3 discusses the historical development of *with*-augmented ACs and grammaticalization of *with* in *with*-augmented ACs in (2). Section 4.4 concludes this chapter.

4.2. Syntactic and Semantic Properties of *With*-Augmented ACs

With-phrases in *with*-augmented ACs are divided into two types by Sakakibara (1982). One type of *with*-phrases express manner or attendant circumstances, as shown in (1). This thesis follows the Sakakibara's (1982: 80) definition of the notion of "*with*-phrases

expressing attendant circumstances,” which says that “*with*-phrases express circumstances under which the activity specified in the main clause simultaneously occurs, and functionally, they add extra conditions to the assertion of the whole sentence.” Sakakibara (1982: 81) remarks that they “provide a predicate phrase of the main clause with the detailed specifications of how, in what manner or under what circumstances the action described by it was, is, or will be performed.”⁴

The other type of *with*-phrases express cause, reason, time, condition, concession and conjunctive, as exemplified in (2). Each *with*-phrase in (2a-f) denotes cause or reason, time, condition, concession, time or condition, and conjunctive, respectively. These *with*-phrases behave as if they were a subordinate adverbial or coordinate clause, and therefore they are more sentential than the *with*-phrases expressing manner or attendant circumstances.

In what follows, the two types of *with*-augmented AC are distinguished; we will call the *with*-phrases expressing manner or attendant circumstances Class I *with*-phrase and those expressing cause, reason, time, condition, concession and conjunctive Class II *with*-phrase.

4.2.1. Class I *With*-Phrases

The configuration of Class I *with*-phrases is *with* + NP + X, with X being a verb phrase with an *-ing* form, a past participle phrase, an adjectival phrase, an adverbial phrase, or a prepositional phrase. They have three syntactic properties. Firstly, they usually follow the matrix clause, but sometimes precede it, as exemplified in (5).

- (5) a. A patrol car was parked at the corner with its blue light flashing.
b. With her heart pounding in her breast she opened the door.

(Sakakibara (1982: 81))

Secondly, they behave like manner adverbs. The ungrammaticality of (6a, b) shows that Class I *with*-phrases cannot occur initially in the negative sentence, similarly to manner adverbs. (7) shows that they can be conjoined with manner adverbials. Besides, (8) indicates that they function as an argument of verbs; if it were not for the *with*-phrase in (8b), the sentence would be ungrammatical.

- (6) a. * With his face pink with irritation he didn't appear at the front door.
 b. * Quickly they didn't leave for home.
- (7) He always listens to music with his eyes closed and with extraordinary attention.
- (8) a. Joan worded the letter carefully.
 b. Joan worded the letter with her heart filled with affection for him.

(Sakakibara (1982: 82, 83))

Thirdly, Class I *with*-phrases are dominated by VP. They are deleted by VP deletion, as illustrated in (9).

- (9) a. Children often speak with their mouths full, but their parents never do.
 b. Michael said he had been lying on the bed with his eyes wide open, but I don't really believe he had been.

(Sakakibara (1982: 83))

In addition, a coreference fact also supports the assumption that Class I *with*-phrases are dominated by VP. The ungrammaticality of (10b) can be ascribed to the violation of Condition C, which says that "an R-expression is free" (Chomsky (1981: 188)). This implies that Class I *with*-phrases adjoin to VP in the matrix clause; otherwise, (10b) would be

wrongly predicted to be grammatical because there is no violation of Condition C.

- (10) a. She guided Tom_i aboard with her hand on his_i back.
b. * She guided him_i aboard with her hand on Tom's_i back.

(cf. Sakakibara (1982: 83))

These Class I *with*-phrases are further divided into two types: in one type of *with*-phrases, *with* denotes possession, and in the other type, *with* do not denote possession. (11a) is the first type of Class I *with*-phrase, where *with* has the meaning of possession, as shown in (11b). The omission of a prepositional phrase in (11a) is also possible, as shown in (11c).

- (11) a. He stood with a pipe in his mouth.
b. He had a pipe in his mouth. (Sakakibara (1982: 84))
c. He stood with a pipe.

The second type of Class I *with*-phrase is shown in (12), where *with* does not denote possession, while the complement of *with* shows the sentential properties.

- (12) They stood with their hats off. (Sakakibara (1982: 84))

Sakakibara argues that the fact in (13a, b) that gapping is applied in the second type Class I *with*-phrases supports its sentencehood. This is similar to gapping in finite clauses exemplified in (13c), in that when gapping is applied the omission of *with/that* is disallowed.

- (13) a. John, Mary, and I were leaning against the walls with him facing her and (*with) her \emptyset me.
- b. Passing Mars, swooping around Jupiter, with one photoelectric eye fixed on the star Canopus and (*with) one \emptyset on the sun ...
- (*Newsweek*, Nov 24, 1980, 40)
- (Sakakibara (1982: 85))
- c. It is hard to believe that Jack hates swimming and (*that) Fred \emptyset fishing.
- (Jackendoff (1977: 45))

Although the second type of Class I *with*-phrase has a sentential property, it does not allow sentence adverbs, tense-adverbials expressing a tense independent of the matrix clause such as *yesterday*, *last year* and so on, or a perfective *have*, as illustrated in (14).

- (14) a. * He was lying on the bed with, frankly, his eyes wide open.
- b. * We repeated the exercise with arms unfortunately kept rigid.
- c. * Last Sunday he was lying on the bed with his eyes wide open yesterday.
- (Sakakibara (1982: 86))
- d. * A patrol car was parked at the corner with its blue light having flashed.

It should be noticed that since the second type of Class I *with*-phrase expresses a temporary state, a verb with an *-ing* form in the second type of Class I *with*-phrase must indicate “an activity in progress” (Sakakibara (1982: 86)). This is shown in the grammatical difference between (5a), (13a) on the one hand and (15) on the other.

- (15) *John and Mary graduated from college with them remaining good friends.

Note also that the *with*-phrase in (2c), repeated as (16), is an instance of Class II *with*-phrases, which allow for the progressive form of stative verbs (see section 4.2.2).⁵

- (16) With the pronoun in parentheses remaining, these sentences are more or less acceptable. (“Filters and Control,” *Linguistic Inquiry* 8: 3, 493)

4.2.2. Class II *With*-Phrases

Class II *with*-phrases are more clausal and sentential than Class I *with*-phrases. The configuration of Class II *with*-phrases is also *with* + NP + X, with X being a verb phrase with an *-ing* form, an adjectival phrase, an adverbial phrase, a prepositional phrase, and in addition to these predicates, other items such as a noun phrase, a raising predicate, an infinitive phrase and an idiom like *about to* are also possible in the X position and an expletive *there* is possible in the NP position, as exemplified in (17).

- (17) a. With Mexico City (currently) (probably) the largest city in the world, I’m surprised you don’t have a branch office there.
- b. With Gonzalez appearing to know everything about economics, we could hardly put up a better candidate. (McCawley (1983: 273, 275))
- c. With their apartment building to be razed the following week, they felt they had to move.
- d. With Harry about to mow the lawn, we’d better put gas in the mower.
- e. With there being so many people in the room, we couldn’t hear each other.

(Sakakibara (1982: 88, 89))

Class II *with*-phrases are compatible with various idioms, whether they are analyzable or unanalyzable, as shown in (18) and (19), respectively.⁶

- (18) a. With the cat out of the bag about our plans, we can't expect Oscar to help us.
- b. With the shit just about to hit the fan, now might be a great time for you to visit your uncle in Florida. (McCawley (1983: 273))
- (19) With mum being the word, we don't have to worry. (Napoli (1988: 342))

The sentencehood of Class II *with*-phrases is demonstrated by the facts concerning gapping in (20), sentence adverbs in (21), a perfective *have* in (22) and tense-adverbials expressing a tense independent of the matrix clause in (23).

- (20) a. Life is entirely too easy, with his daughter working for Japan Air Lines and (*with) his son \emptyset for Honda.
- b. With the White House saying one thing, (*with) the Pentagon \emptyset another and (*with) the defense establishment \emptyset a third, the public has been left bewildered, anxious and reluctant to rock the boat.
- (*Newsweek*, Oct 27, 1980, 10)
- (Sakakibara (1982: 88))
- (21) a. With the students probably all wanting to find out their grades, we had better finish grading the papers tonight

- b. With most students (evidently) (perpetually) eager to learn about new things, we shouldn't teach the same courses year after year.

(McCawley (1983: 273, 275))

(22) b. With even John having said such things, we may be in trouble.

(23) a. With John having painted one chair yesterday, he has one fewer to paint today.

- b. With their apartment building to be razed the following week, they felt they had to move.

(Sakakibara (1982: 89))

Sakakibara (1982: 89, 90) indicates that sentence adverbs can occur, in particular, within Class II *with*-phrases expressing cause, reason, concession and conjunctive meaning, while they cannot occur within those expressing time and condition meaning. Notice also that the Class II *with*-phrases in (21) denote reason. Moreover, he remarks that *being* usually remains undeleted when Class II *with*-phrases represent cause, reason, concession and conjunctive meaning, as shown in (24). The Class II *with*-phrases in (24a, b) denote cause and conjunctive, respectively.

(24) a. Speakers differ considerably in which idioms they allow to undergo Tough-movement, with some idioms being impossible for almost everyone.

- b. Although, historically work on the cross-over principle developed in just this way, with it-replacement being taken as supporting evidence, ...

(Sakakibara (1982: 89))

Given that a verb with an *-ing* form such as *being* must be inserted in (24), it would

be safe to assume that the presence of a verb with an *-ing* form within the *with*-phrases has very much to do with the sentencehood in Class II *with*-phrases. It should also be noticed that an *-ing* form appearing in Class II *with*-phrases do not necessarily denote the progressive meaning, as shown in (16) and (21a).

Napoli (1988: 340ff) argues for the clausehood of Class II *with*-phrases in a different way. She runs several diagnostic tests for the clausehood by using two kinds of nouns: one type is those that do not have theta roles (henceforth, nonthematic nouns), including such items as an expletive *there*, *it* in raising predicates and nouns in unanalyzable idioms, and the other type is those that have theta roles (henceforth, thematic nouns), including items like ambient *it*, as in (25a), *it* used in extraposition, as in (25b), and nouns in analyzable idioms.

- (25) a. It's cold enough to freeze the balls on a brass monkey.
b. It's likely enough that John did it to convince me we ought to question him. (Napoli (1988: 327, 328))

She concludes that Class II *with*-phrases with an *-ing* form are more clausal than those without an *-ing* form. This is demonstrated by the contrast between (26) and (27), which shows that an *-ing* form is necessary in order for nonthematic nouns to occur within Class II *with*-phrases.^{7, 8}

- (26) a. With there being no possibility of advancement in her present job, Linda is determined to leave.
b. With it at least appearing that John knows economics well, we should nominate him.

- c With mum being the word, we don't have to worry.
- (27) a. * With there a flaw in his argument, he'll never win.
- b. * With mum the word, we can count on silence.

(Napoli (1988: 342, 343))

In contrast to (26) and (27), thematic nouns can occur within Class II *with*-phrases that do not have a verb with an *-ing* form.

- (28) a. With it cold enough to freeze the balls on a brass monkey, you better bring a warmer coat.
- b. With it clear that tomorrow will be no better, let's just ignore the weather and go to the movies anyway.
- c. With the cat out of the bag, why whisper anymore? (Napoli (1988: 343))

Based on the observations by Sakakibara (1982), McCawley (1983) and Napoli (1988), we assume here that the presence of an *-ing* form in Class II *with*-phrases maintains their clausal status.⁹

4.2.3. Summary

Finally, we will discuss which position in the sentence Class I and Class II *with*-phrases are attached to. As shown in section 4.2.1, Class I *with*-phrases behave like manner adverbs and are dominated by VP. Sakakibara (1982: 92, 93) points out the following three differences between Class I and Class II *with*-phrases: (i) Class II *with*-phrases are “immune to the scope of sentence negation,” (ii) Class II *with*-phrases allow cataphora, but Class I *with*-phrases do not, (iii) when Class II *with*-phrases are “used to

express cause or reason, they very often appear before the main clause.” The first two differences are illustrated in (29)-(30), respectively. The last point would not need illustrating.

First, Class I *with*-phrases are within the scope of sentence negation, as shown in (29a), and therefore the negative polarity item *any* is properly licensed. On the other hand, Class II *with*-phrases are out of the scope of sentence negation. (29b) has the same meaning as *He didn't want to throw anything good to Oh because (or when) a game was on the line*, and (29c) has the same meaning as *Although some passengers were already standing on the platform and waiting for the train, store clerks did not open the store on that day*. This fact suggests that Class II *with*-phrases are outside the scope of negation and are located in the higher position than Class I *with*-phrases.

- (29) a. The samurai wouldn't have walked around with any/*some toothpicks in his mouth.
- b. He didn't want to throw anything good to Oh, with a game on the line.
- (*The Chrysanthemum and the Bat*, 125)
- (Sakakibara (1982: 92))
- c. With some passengers already standing on the platform and waiting for the train, store clerks did not open the store on that day.

Second, an R-expression in Class II *with*-phrases is not bound by a pronoun in the matrix clause, as shown in (30a), whereas an R-expression in Class I *with*-phrases is bound, as already shown in (10b), repeated here as (30b). (30b) violates Condition C, while (30a) does not violate Condition C, because Class II *with*-phrases are assumed to lie in the higher position than Class I *with*-phrases and therefore the R-expression in Class II *with*-phrases is

not c-commanded by the pronoun in the matrix clause.

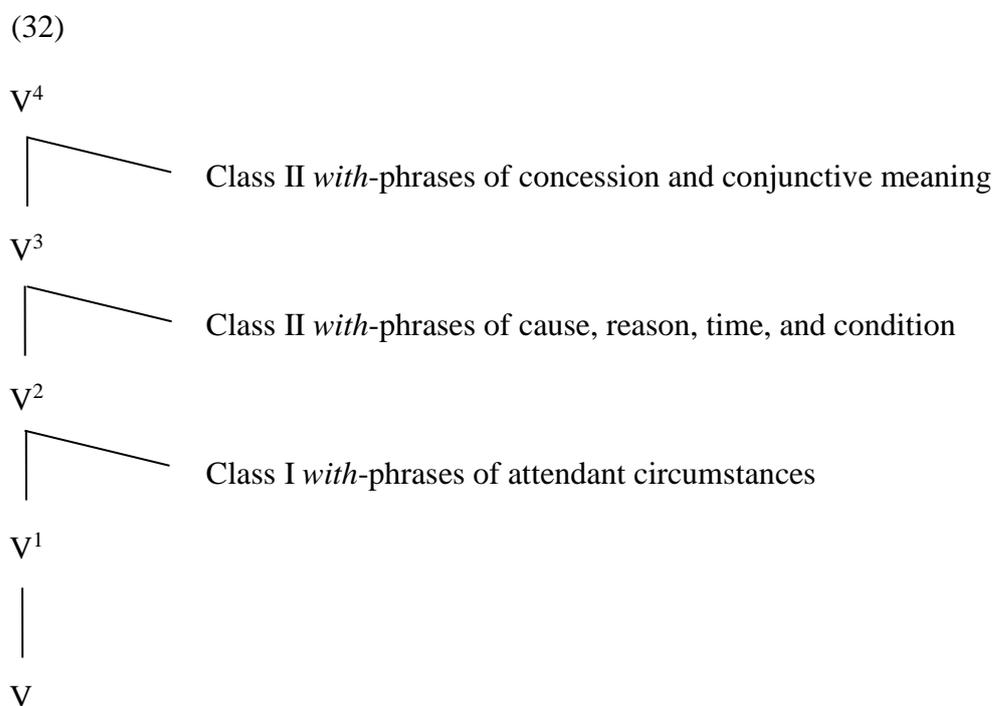
- (30) a. Rosa won't like him_i anymore, with Ben's_i mother hanging around all the time. (cf. Reinhart (1979: 115))
- b. * She guided him_i aboard with her hand on Tom's_i back. (cf. Sakakibara (1982: 83))

In addition to the three facts, Sakakibara indicates that Class II *with*-phrases are classified into two types in terms of its semantic in relation to the matrix clause. Class II *with*-phrases expressing the concession meaning (i.e. “although” reading) are impossible with focalization, while those expressing cause or reason, time, and condition are possible, as exemplified in (31a, b), respectively. This fact in turn implies that the former belongs to the higher layer than the latter.

- (31) a. * It was with parliamentary elections (being) only eleven days away that Japanese Prime Minister Ohira died of a heart attack last week. (“although” reading)
- b. It was with population increasing everywhere that improvements in agriculture are an absolute necessity. (“reason” reading)
- (cf. Sakakibara (1982: 92))

Based on the above four syntactic facts and the hierarchical structure of subordinate adverbial clauses proposed by Imai and Nakajima (1978) and Nakajima (1982), he proposes the hierarchical structure of Class I and Class II *with*-phrases as (32), which shows that Class I and Class II *with*-phrases belong to three different layers, V^2 , V^3 and V^4 in the sense of

Jackendoff (1977).



(cf. Sakakibara (1982: 92))

The syntactic and semantic properties of Class I and Class II *with*-phrases would be roughly integrated in (32), which shows that the higher position the *with*-phrases occupy, the more clausal they become. On the assumption that the main use of *with*-phrases is to denote attendant circumstances, Sakakibara (1982: 93) predicts that the original use of *with*-phrases is to express attendant circumstances and it was extended hierarchically upward in the configuration of (32) in the history of English. I will confirm whether this prediction is correct or not in the next section by looking to the historical data in van de Pol and Cuyckens (2013).¹⁰

4.3. Grammaticalization of *With* of Class II *With*-Phrases

Section 4.3 discusses grammaticalization of *with* of Class II *with*-phrases. After

reviewing the historical development of *with*-augmented ACs in section 4.3.1 and illustrating the process of grammaticalization in section 4.3.2, I will argue for grammaticalization of *with* of Class II *with*-phrases in section 4.3.3.

4.3.1. Historical Development of *With*-Augmented ACs

As already described, Sakakibara predicts that the origin of *with*-augmented ACs is Class I *with*-phrases and their use extended upward in the configuration in (32). This would be readily confirmed by looking at the historical development of *with*-augmented ACs from OE to Present-day English. I use data given by van de Pol and Cuyckens (2013) and data I collected from OED quotations, which are concerned about the distribution of Class II *with*-phrases with an *-ing* predicate.

According to van de Pol and Cuyckens (2013), *with*-phrases of *with*-augmented ACs in OE consisted of the sequence *with* + NP + a past/present participle predicate. They only expressed manner, elaboration or attendant circumstances, as exemplified in (33).

- (33) a. Agathes clypode mid **astræhtum** handum.
 Agathes cried with outstretch-PST.PTCP-DAT.PL hand-DAT.PL
 ‘Agathes cried out with hands outstretched.’

(Ælfric, *Lives of Saints*: Kisbye 1972: 73)

- b. Gode samod wycendum & getrymmendum þa spræce
 God with working and confirming the word
mid **æfterfylgendum** tacnum
 with follow-PRS.PTCP-DAT.PL sign-DAT.PL
 ‘God working with them and confirming the word with signs following’

(Homilies 1, 1.21.349.107.4191, 950-1050, HC)

(cf. van de Pol and Cuyckens (2013: 350))

Van de Pol and Cuyckens (2013: 350, 351) state that in late ME, *with*-phrases of *with*-augmented ACs began to take an adjectival/prepositional phrase as a predicate, but only denoted manner, elaboration or attendant circumstances, as illustrated in (34a, b), respectively.¹¹

- (34) a. Then, when þe pepull com to Godys bord, he sagh som com wyth hor face red as blod, and blod droppynge out of hor mowþys, som hor face as blacke as any pyche, summe as whyte as snow, and summe fayre and rody and lusty forto behold.

‘Then, when the people came to God’s table, he saw some come with their face red as blood, and blood dropping out of their mouths, some people’s face as black as any pitch, some as white as snow, and some fair and rosy and delightful to behold.’ (Mirk’s Festial, 1350-1420, PPCME2)

- b. Ande at the drawe brygge there was a nothyr ryalle toure, there yn stondynge iij empryssys ryally arayde, whythe crownys on hyr heddys, the whyche namys folownys here: ...

‘And at the draw bridge, there was another regal tower, on which stood three empresses, royally arrayed, with crowns on their heads, the names of whom follow here: ...’ (Gregory’s Chronicle, 1420-1500, PPCME2)

(van de Pol and Cuyckens (2013: 351))

Note that all the *with*-phrases in (33) and (34) are Class I *with*-phrases since they express

manner, elaboration or attendant circumstances. Therefore it would be assumed that the *with*-phrases in (33) and (34) occupied the V² position in the configuration of (32) in OE and ME if van de Pol and Cuyckens' investigation is correct.

Van de Pol and Cuyckens show that it was not until EModE that *with*-augmented ACs began to allow for almost all kinds of predicates including noun/adverb/infinitive predicate in the predicate position of the *with*-phrases. At the same time, they indicate that *with*-phrases of *with*-augmented ACs took on new meanings such as time and cause, as exemplified in (35a, b), respectively. The relevant part of (35a, b) would be expressed as (36a, b), respectively.

- (35) a. The French Generall, with Tyrconell & their forces gon back to france,
 beaten out by K. William. (Diary Evelyn, 1688-1689, PPCEME)
- b. At the later end of dynner as we wended westsowest with the larboard tack
 aboard and a bold wynd, the mayn topmast was bloen down even as the
 general was drinking. (Diary Madox, 1582, PPCEME)
- (van de Pol and Cuyckens (2013: 355))
- (36) a. when (after) Tyrconell and their forces went back to France,
 b. because the larboard tack was aboard and (there was) a bold wind,

It is worth noting that the *with*-phrase in (35a) expresses time (i.e. anteriority) and the *with*-phrase in (35b) denotes cause; this means that both the *with*-phrases belong to Class II and thus occupied the V³ position no later than in EModE. More specifically, since (35b) is an instance in 1582, it would be safe to assume that there existed Class II *with*-phrases occupying the V³ position no later than in the end of the sixteenth century.

The frequency of Class II *with*-phrases was still extremely low in EModE. Van de

Pol and Cuyckens (2013: 355) show that the rate of Class II *with*-phrases denoting time, reason or purpose in EModE was just five percent of all *with*-augmented ACs, with the rate of Class I *with*-phrases denoting manner, accompanying circumstance, or elaboration being around ninety five percent.

They also suggest that in LModE, *with*-phrases of *with*-augmented ACs acquired still other new meanings such as condition and result, as exemplified in (37a, b), respectively, while the rate of those expressing time, reason, condition, result and contrast rose to ten percent. The relevant part in (37a, b) can be expressed as (38a, b), respectively.

- (37) a. There shall be printed 50,000 Tickets, 7,150 shall be fortunate; two of them 10,000 l. three 5,000 l. five 2,000 l. fifteen 1,000 l. thirty-one 500 l. one hundred and fifty-one 100 l. three hundred and ninety-eight 50 l. six thousand five hundred and forty-five 20 l. which with 500 l. to the first drawn Ticket, and 1,000 l. to the last drawn Ticket will amount to 242,900 l. (Statutes, 1745, PPCMBE)
- b. The next Day 40,000 Tlascalans appear'd, whom the Spaniards nothing daunted, attack'd, and after a resolute Opposition, put to Flight, with the Loss of one Horse on their Side, and nine or ten Men wounded; but on the Enemy's Side most of the prime Officers, and a great Number of private Men, were kill'd.
- (A voyage to the South Sea and round the world, 1712, PPCMBE)
(van de Pol and Cuyckens (2013: 356))
- (38) a. ... if 500 l. is to the first drawn Ticket, and 1,000 l. is to the last drawn Ticket ...

- b. ..., with the result that the loss of one horse was on their side, and nine or ten men were wounded; ...

It can be argued that the *with*-phrase in (37b) not only belongs to Class II, but is attached to the V⁴ position in the configuration of (32). The *with*-phrase denoting result cannot be focalized in the cleft sentence, as shown in (39), and therefore it could be treated as equivalent to the *with*-phrase denoting conjunctive.

- (39) *It was with the Loss of one Horse on their Side, and nine or ten Men wounded that the next Day 40,000 Tlascalans appear'd, whom the Spaniards nothing daunted, attack'd, and after a resolute Opposition, put to Flight, ("result" reading)

Hence it would be plausible to assume that the *with*-phrase in (37b) is attached to the V⁴ position. Given that (37b) is an instance in 1712, it would follow that there existed Class II *with*-phrases occupying the V⁴ position no later than in the early of the eighteenth century.

To summarize, from the facts in (35b) and (37b), it was revealed that the Class II *with*-phrase occupying the V³ position already existed in the end of the sixteenth century, and that the Class II *with*-phrase occupying the V⁴ position already existed in the early of the eighteenth century. The relative share of Class II *with*-phrases in all *with*-augmented ACs in LModE just rose to about ten percent. Recall that the figure in EModE was only five percent. Hence, the frequency of Class II *with*-phrases was still low in LModE. In passing, Kortmann (1995: 216) indicates that the relative share of Class II *with*-phrases in all *with*-augmented ACs in Present-day English is about forty percent.

Van de Pol and Cuyckens (2013) do not discuss the time when Class II *with*-phrase

emerged in the history of English. In order to investigate the period when Class II *with*-phrase became available in the history of English, I searched for Class II *with*-phrases in OED quotations. The data obtained from OED quotations will supplement the lack of data given by van de Pol and Cuyckens. For the sake of convenience, I searched for Class II *with*-phrases with an *-ing* predicate. Following Sakakibara (1982: 93) in assuming that Class II *with*-phrases denoting cause or reason very often appear before the matrix clause, I investigated only Class II *with*-phrases with an *-ing* predicate that appear before the matrix clause. Therefore, my investigation is not intended to fully reveal the whole path of the historical development of Class II *with*-phrases. Rather, what I want to show here is in which period in ME Class II *with*-phrases appeared. Hence it would be sufficient if I can provide instances of Class II *with*-phrases that existed earlier than the end of the sixteenth century.

As a result of the investigation, I obtained three instances of Class II *with*-phrases with an *-ing* predicate denoting time or reason in ME. They are exemplified in (40). All the *with*-phrases in (40) denote time or reason.¹²

- (40) a. With his comynge þerto oure Lorde made þis Mountt worshipful.
 ‘With his coming across over, Lord made this mountain worshipful.’

(1398 J. Trevisa tr. Bartholomew de Glanville *De Proprietatibus Rerum*

xiv. xliv. (Tollem. MS.), OED)

- b. With this rodde fleeynge he..departed the troublouse clowdes that he recounted in hys way.
 “With this road fleeing, he ... departed the troublous cloud that he encountered by chance in his way.”

(1490, Caxton tr. *Eneydos* xvi. 62, OED)

- c. With his swerd droppende of blod, The which withinne his douhter stod.

‘With his sword dropping blood, the witch within his daughter

stood.’

(1390, J. Gower *Confessio Amantis* III. 268)

In the *with*-phrase in (40a), the genitive subject *his* is followed by an *-ing* predicate *coming* that involves two adverbs *perto* and *oure*.¹³ In the *with*-phrase in (40b), a nominal subject *this rodde* precedes an *-ing* predicate *fleeynge*. In the *with*-phrase in (40c), a nominal subject *his swerd* also precedes an *-ing* predicate *droppende*, which in turn selects the object *blod* via a preposition *of*.¹⁴ Because all the *with*-phrases in (40) denote time or reason, they are Class II *with*-phrases, which means that Class II *with*-phrases occupying the V³ position appeared no later than in the end of the fourteenth century.

Furthermore, I discovered eleven and seven instances of Class II *with*-phrases with an *-ing* predicate in EModE and LModE, respectively, and one hundred thirty six instances of Class II *with*-phrases with an *-ing* predicate in Present-day English in OED quotations. I also judged all the *with*-phrases from EModE onward to express time or reason. Examples in each period are given in (41).

- (41) a. With a solempne conge departing he went about his busines.

‘With a solemn conge departing, he went about his business’

(1590 R. Greene *Neuer too Late* i. 47)

- b. With a crotchet holding up the integuments [I] keep them from touching.

(1753 *Philos. Trans.* 1751-2 (Royal Soc.) 47 83)

- c. With the recession apparently having bottomed out there is now much less

insistence..that the Government take some vigorous action.

(1958 *Times* 14 July 13/3)

The result of the investigation is summarized in Tables 1 and 2. Table 2 reveals that the frequency of Class II *with*-phrases with an *-ing* predicate suddenly increased in the twentieth century.¹⁵

Table 1: Tokens of Class II *With*-Phrases with an *-ing* Predicate from the Quotations in OED

1301-1500 (ME)	1501-1700 (EModE)	1701-1900 (LModE)	1901- (PDE)
3	11	7	136

Table 2: Frequency per 10,000 Quotations of Class II *With*-Phrases with an *-ing* Predicate

Based on Table 1

1301-1500 (ME)	1501-1700 (EModE)	1701-1900 (LModE)	1901- (PDE)
0.13	0.15	0.05	1.32

To summarize, *with*-phrases in *with*-augmented ACs in OE and early ME were Class I *with*-phrases because they only denoted manner, elaboration or attendant circumstances. Therefore, they occupied the V² position in the configuration of (32). In late ME, *with*-phrases in *with*-augmented ACs began to express time or reason, which indicates that they are Class II *with*-phrases occupying the V³ position. It can be argued that they emerged no later than in the end of the fourteenth century on the basis of the data in (40a, c). Furthermore, Class II *with*-phrases occupying the V⁴ position appeared in the early of the eighteenth century. Then it follows that *with* of Class II *with*-phrases also underwent

diversification of its meaning, because *with* is a marker expressing the semantic relation between the Class II *with*-phrase and the matrix clause. It should be also noticed that we safely confirmed Sakakibara's prediction that the original use of *with*-phrases is to express attendant circumstances and it was extended hierarchically upward in the configuration of (32) in the history of English.

As for the frequency of Class II *with*-phrases, it is in the twentieth century that the frequency of Class II *with*-phrases with an *-ing* predicate rapidly increased. In this connection, Kortmann (1995: 216) illustrates that in Present-day English, nearly half of the *with*-phrases in *with*-augmented ACs denote meanings other than manner, addition/accompanying circumstances and exemplification/specification. Around forty percent out of all the *with*-phrases in *with*-augmented ACs express time, reason, condition, result, contrast, and so on. Recall that the relative rate of *with*-phrases expressing time, reason, condition, result and contrast in LModE is just ten percent. This would indicate that the entire Class II *with*-phrases as well as those with an *-ing* predicate rapidly increased in the twentieth century.

4.3.2. Overview of Grammaticalization

Before proceeding to the issue of grammaticalization of *with* of Class II *with*-phrases, let us put arguments concerning grammaticalization into shape. Though there are several different conceptions on grammaticalization among linguists, it is generally agreed that grammaticalization is defined as the course of change from open lexical items (i.e. content words) to closed grammatical items (i.e. function words). Hopper and Traugott (2003: 4) state that "when a content word assumes the grammatical characteristics of a function word, the form is said to be 'grammaticalized.'" It is assumed in the standard approach that grammaticalization proceeds along the cline of grammaticality in (42).¹⁶

(42) content item > grammatical word > clitic > inflectional affix

(Hopper and Traugott (2003: 7))

This indicates that in the course of grammaticalization, a lexical item undergoes semantic bleaching and/or phonological reduction.

Hopper and Traugott (2003: 81ff) suggest that grammaticalization takes place as a result of pragmatic inference and semantic bleaching and that in order for pragmatic inferences to occur, conversational implicatures must frequently appear in the context. Recent studies on grammaticalization (Dahl (1985: 82), Hopper and Traugott (2003: 82, 106, 126-130), Bybee (2003: 614), Mair (2004) and Watanabe (2011)) have laid emphasis on frequency of use of items.

- (43) a. If some condition happens to be fulfilled frequently when a certain category is used, a stronger association may develop between the condition and the category in such a way that the condition comes to be understood as an integral part of the meaning of the category.

(Hopper and Traugott (2003: 82) cited from Dahl (1985: 82))

- b. Important factors in our discussion will be [...]. Another will be frequency: the more frequently a form occurs in texts, the more grammatical it is assumed to be. Frequency demonstrates a kind of generalization in use patterns.

(Hopper and Traugott (2003: 106))

Hopper and Traugott give an example of the development of *since* as a representative

The *sibban* clause expressing causative implicature was very rare in OE. Because it is not until in the fifteenth century that the causative *sibban* became attested frequently, Hopper and Traugott conclude that it established the meaning of cause in the fifteenth century.¹⁷

As for semantic bleaching, the historical development of *be going to* in the fifteenth century would be a straightforward example. In (46), Stage I shows that *going* is a directional verb and the *to*-infinitive is a purpose clause. For example, *I am going to visit Bill* means that *I am leaving/traveling in order to visit Bill*. Then, pragmatic inference makes available the future meaning; if I am leaving in order to visit Bill, the visit will be in the future. While *go* acquires the future meaning, the *to*-infinitive loses the purposive meaning. In stage II, [*I am going [to visit Bill]*] is rebracketed as [*I [am going to] visit Bill*] by reanalysis. The auxiliary *am* ceases to be a progressive marker; instead, *am going to* functions as just a tense marker denoting immediate future. In stage III, by analogy, all verbs become available in the *to*-infinitive. In stage IV, *going to* undergoes phonological reduction to *gonna*. Since the phrasal boundary between *-ing* and *to* already disappeared in Stage II, *going to* is readily reanalyzed as a complex *gonna*. Hopper and Traugott (2003: 69) add that “reanalysis and analogy play a crucial role in grammaticalization.”

(46)	a.	be	going	[to visit Bill]	Stage I
		PROGRESSIVE	V _{direction}	[Purpose Clause]	
	b.	[be going to]	visit Bill		Stage II
		TENSE	V _{action}	(by reanalysis)	
	c.	[be going to]	like Bill		Stage III
		TENSE	V	(by analogy)	
	d.	[gonna]	like/visit Bill		Stage IV

(by reanalysis)

(Hopper and Traugott (2003: 69))

Especially relevant for semantic bleaching would be Stage I, where an inference of futurity is derived from purposive meaning. Of course, reanalysis and analogy after Stage II would greatly affect the loss of the physical and deictic meaning of *go* as well. Hopper and Traugott (2003: 3) indicate that as grammaticalization takes place, the original concrete meaning (i.e. motion or directionality) of *go* was lost and it acquired some new temporal meanings, which are more abstract and speaker-based.

Roberts and Rossou's (2003) view is innovating in that they explicate grammaticalization within the framework of Minimalist Program. They propose that grammaticalization occurs as a result of categorial reanalysis directed upward along the X-bar theoretic structure (p.194).¹⁸ This is illustrated in (47).

- (47) a. Sone hit mæi ilimpen
 ‘soon it may happen’
- b. [TP Sone [TP hit mæi [VP *t*_{mæi} [TP T [VP ilimpen]]]]
- c. [TP Soon [TP it may [VP happen]]]

(cf. Roberts and Rossou (2003: 40, 41))

(47) represents the course of grammaticalization of English modals in the sixteenth century. Assuming that earlier English had V-to-T movement until at least sixteenth century and infinitival complements are at least TP, Roberts and Rossou affirm that (47a) had the biclausal structure in (47b), which was reanalyzed into a monoclausal structure in (47c) as a result of the loss of V-to-T movement. Before reanalysis, pre-modal *mæi* merged in VP and then

moved to T in order to satisfy its tense feature. After reanalysis, it came to merge directly in TP, so that the monoclausal structure in (47c) was yielded. Since T is higher than V in the X-bar theoretic structure, (47) clearly illustrates the upward reanalysis of the pre-modal in English.

To summarize, the loss of V-to-T movement triggered the reanalysis of pre-modals from V to T, leading to its grammaticalization. Thus, grammaticalization of pre-modals explicitly illustrates a process in which they are relocated from the lower position (i.e. V) to the higher position (i.e. T).

In this connection, it would be important to bear Amano's (2006) counterargument in mind that grammaticalization does not always involve an upward reanalysis. Roberts and Rossou (2003: chapter 3) discuss the development of the infinitive marker *to* in the history of English. They argue that the preposition *to* was grammaticalized as an element in M(ood) in ME, which is contained in the CP domain or identified with C; the preposition *to* was reanalyzed as a complementizer. The structural change of *to* in ME is represented as (48).

(48) [PP *to* [DP V+*enne*]] > [VP V [CP [MP *to* [TP [T V+*enne*]]]]]

(Roberts and Rossou (2003: 196))

Amano (2006: 75) strongly objects that it is unclear in that in what sense *to* came to be merged in a higher head in the structural reanalysis in (48). In addition, he also regards the historical development of the complementizer *that* as a clear example of downward grammaticalization.

However, this thesis follows Roberts and Rossou's argument that grammaticalization takes place as a result of an upward reanalysis, by assuming that C or M is higher than P in the X-bar theoretic structure.

I assume that in order for grammaticalization to take place, the following four processes are necessary: (i) pragmatic inference, (ii) semantic bleaching and/or phonological reduction, (iii) high frequency and (iv) an upward reanalysis. With the four points in mind, I will demonstrate in the next subsection that *with* in Class II *with*-phrases was grammaticalized in the twentieth century.

4.3.3. Grammaticalization of *With* of *With*-Augmented ACs

We observed in section 4.3.1 that semantic relations denoted by *with*-phrases have been diversified since the end of the fourteenth century. They originally expressed only manner, elaboration and attendant circumstances in OE and early ME, and after late ME, they acquired other meanings such as time, cause, reason, condition, concession, conjunctive. Kortmann (1995: 216) notes that in Present-day English, about forty percent of all *with*-phrases in *with*-augmented ACs denotes simultaneity, anteriority, condition, concession, cause, contrast, result and so on, as well as manner, addition/accompanying circumstances and exemplification/specification.

Given that *with* is the only semantic marker representing the relation between the Class II *with*-phrase and the matrix clause, it would be possible to assume that *with* of Class II *with*-phrases underwent diversification of its meaning, as suggested in the end of section 4.3.1. Then it is predicted that the meaning carried by *with* of Class II *with*-phrases was bleached as a result of diversification of its meaning. As shown in the previous subsection, semantic bleaching is a necessary condition for grammaticalization, so that we will consider the possibility that *with* in Class II *with*-phrases was grammaticalized in the history of English.

I showed in section 4.3.1 that *with*-phrases of *with*-augmented ACs in OE and early ME were attached to the V² position and began to be attached to the V³ position no later than in the end of the fourteenth century. One might argue that *with* of *with*-augmented ACs was

grammaticalized in this period, because the meaning of *with* became diversified and Class II *with*-phrases were shifted into the V³ position.

It might be possible to assume that semantic bleaching of *with* began no later than in the end of the fourteenth century if it is ascribed to diversification of meaning of *with*. Then it would follow that *with* satisfies one of the four conditions for grammaticalization. However, it is very difficult in terms of its frequency and pragmatic inference to affirm that *with* was grammaticalized in that period, because the use of Class II *with*-phrases was extremely rare in ME. I only discovered three examples of Class II *with*-phrases in the OED investigation; van de Pol and Cuyckens (2013) do not adduce any instances of Class II *with*-phrases in ME. They claim that *with*-phrases of *with*-augmented ACs either indicated manner or sometimes also elaboration and accompanying circumstance in OE and ME (p.354). This means that there were very few Class II *with*-phrases in ME.

As described in the previous subsection, grammaticalization occurs as a result of pragmatic inference and semantic bleaching. When conversational implicatures frequently appear in the context, pragmatic inferences are induced and strengthened. Thus there is a close connection between high frequency and pragmatic inference. Since there were very few Class II *with*-phrases in ME, pragmatic inference would not be induced, let alone be fully strengthened, so that the semantic change of *with* would not take place completely.

Besides, it is doubtful whether the attachment of *with*-phrases from the V² to V³ position is a reanalysis because the internal structure of the *with*-phrase remains unchanged. I assume that the underlying structure within the *with*-phrase was not changed and no modification of its surface manifestation was involved when Class II *with*-phrases were shifted into the V³ position.¹⁹ Hence, it can be said that no reanalysis took place inside the *with*-phrase in the end of fourteenth century.

Given the sporadic occurrence of Class II *with*-phrases in late ME, it would be

plausible to assume that several *withs* in *with*-augmented ACs began to undergo semantic bleaching in the end of the fourteenth century, whereas *with* in *with*-augmented ACs, for the most part, still preserved lexical meanings such as manner or attendant circumstances in ME.

Class II *with*-phrases occupying the V⁴ position appeared in the early the eighteenth century. Again this is not an instance of reanalysis within the Class II *with*-phrases; instead this is simply an upward shift of the attachment site of *with*-phrases as well as the one from the V² to V³ position.

Taking into account the rapid increase of frequency of the whole Class II *with*-phrases in the twentieth century (Tables 1 and 2, and Kortmann (1995)), I claim that *with* in *with*-augmented ACs was grammaticalized in the twentieth century. The increased use of Class II *with*-phrases accelerated pragmatic inference, so that semantic relations denoted by *with* of Class II *with*-phrases were diversified, leading to semantic bleaching of *with*. As described above, in Present-day English, about forty percent of all *with*-phrases in *with*-augmented ACs express simultaneity, anteriority, condition, concession, cause, contrast, result and so on, as well as manner, addition/accompanying circumstances and exemplification/specification. Remember that the rate of Class II *with*-phrases expressing time, reason, condition, result and contrast was just ten percent in LModE. Notice also that grammaticalization is not limited to *with* of Class II *with*-phrases with an *-ing* predicate; rather, it is applicable to *with* of the entire Class II *with*-phrases.

It is time to consider the cause of the diversification of the meaning denoted by *with* in *with*-augmented ACs. Let us discuss it in relation to pragmatic inference. Van de Pol and Cuyckens (2013: 359) argue that “‘manner/attendant circumstance’ semantics of *with* corresponds well to the general ‘circumstantial,’” so that the semantics of *with* is realized as time, condition, cause and so on. This would be quite possible, but I assume in relation to pragmatic inference that there is another cause of the diversification of the meaning denoted

by *with* in *with*-augmented ACs. I claim that it would be attributed to the fact that Class II *with*-phrases occurred before the matrix clause in the end of the fourteenth century. Furthermore, I claim that the fronting of Class II *with*-phrases was caused on analogy with another type of *with*-phrases similar to Class II *with*-phrases: *with*-phrases consisting of *with* + a verb with an *-ing* form that denote time, cause, reason and so on other than manner and attendant circumstances, as exemplified in (49). It is obtained from OED quotations. We will call them Class III *with*-phrases in what follows.

- (49) wip clipping & kessing þei kauʒt here leue.
 with clipping and kissing you caught here leave.
 ‘Clipping and kissing, you caught leave here.’

(a1375 , William of Palerne (1867) l. 1053)

To begin with, let us consider why the position of *with*-phrases is related to the diversified meaning denoted by *with*. It is generally agreed in pragmatics that if two different events are connected by the conjunction *and*, they are interpreted as constituting one single proposition. The semantic difference between (50a) and (50b) shows that the conjunction *and* expresses a temporal function (i.e. anteriority): the event in the first conjunct of *and* usually occurs before the event in the second conjunct of *and*.²⁰

- (50) a. She got married and she had a baby.
 b. She had a baby and she got married.

Examples in (51a, b) illustrate that the conjunction *and* can also entail a causal relationship.

- (51) a. She is honest and we can trust her.
 b. She is honest and because of that we can trust her.

Thus, when one event precedes another, it entails time (i.e. anteriority), cause/reason and so on through pragmatic inference. Furthermore, anteriority can produce the meaning of cause/reason and so on from pragmatic inference.

Another case of pragmatic inference is illustrated by the historical development of *while*. This is an illustration of the interpretation of cause and concession that comes from simultaneity. According to Hopper and Traugott (2003: 91), *while* originally had served as a temporal conjunction denoting simultaneity till late OE, as shown in (52a), but it began to express the grounds for the situation in the matrix clause as well as the simultaneity, as shown in (52b), which was also interpreted as “that (the disasters) lasted nineteen years because Stephen was king.” The semantic change of *while* is assumed to be due to the loss of *þa*, a marker of simultaneity; the loss of *þa* made meanings other than time available, with the result that the meaning of cause for the situation in the matrix clause was yielded.

- (52) a. & wicode þær þa hwile þe man þa burg
 and lived there that: DAT time: DAT that one that fortress
 worhte & getimbrode
 worked-on and built
 ‘And camped there at the time/while the fortress was worked on and built’
 (Chron A [plummer] 913.3)
- b. Ðæt lastede þa [xix] wintre wile Stephne was king.
 ‘That lasted those 19 winters while (because) Stephen was king’

(Chron E [plummer] 1137.36)

(cf. Hopper and Traugott (2003: 91))

The meaning of cause became dominant over temporality after the late fourteenth century.

In (53), *Quhill* ‘while’ expresses grounds for the situation in the matrix clause.²¹

(53) Thar mycht succed na female, Quhill foundyn mycht be only male.

‘No female was able to succeed while any male could be found.’

(1375, Barbours Bruce 1.60 [*OED* **while** 2a])

(Hopper and Traugott (2003: 91))

Furthermore, *while* underwent another different inference in the early seventeenth century. A pragmatic inference of surprise regarding the overlap in time or the relations between an event and the ground gave rise to a new meaning of adversative or concession, as exemplified in (54).

(54) Whill others aime at greatnes boght with blod, Not to bee great thou
stryves, bot to bee good.

‘While others aim at greatness that is bought with blood, you strive to be
not great but good.’

(1617, Sir W. Mure, *Misc. Poems* xxi. 23 [*OED* **while** 2b])

(Hopper and Traugott (2003: 91))

It follows that anteriority or simultaneity often produces the meaning of cause/reason, concession or other meanings from pragmatic inference.

Let us turn back to the relations between the position of *with*-phrases and the diversified meaning denoted by *with*. It would be feasible to assume that Class II *with*-phrases also underwent a semantic change similar to that of *while*. When *with*-phrases appeared before the matrix clause in the end of the fourteenth century, as shown in (40a, c), *with* entailed anteriority or simultaneity, whereby a new meaning of cause or reason was induced because of pragmatic inference.²² In the early eighteenth century, it came to express still other meanings such as condition and result, as shown in (37a, b), leading to further diversification of meaning denoted by *with* of *with*-augmented ACs. Furthermore, *with* in *with*-augmented ACs in Present-day English denotes simultaneity, anteriority, condition, concession, cause, contrast, result and so on as well as manner, addition/accompanying circumstances and exemplification/specification (Kortmann (1995)). Therefore, it is safe to conclude that *with* lost or lessened its original lexical meaning like manner or accompanying circumstances in the course of diversification of its meaning, resulting in its semantic bleaching.

If fronting of Class II *with*-phrases triggered diversification of meaning of *with*, then it would be necessary to identify the cause of fronting of Class II *with*-phrases in the end of the fourteenth century. I argue that it was caused on analogy with Class III *with*-phrases denoting time, cause, or reason that appear before the matrix clause, as exemplified in (55). Fronting of Class II *with*-phrases must have been possible because of the structural similarity between Class II and Class III *with*-phrases, the only difference being the presence or absence of a subject noun.

- (55) wip clipping & kessing þei kauʒt here leue.
 with clipping and kissing you caught here leave.

‘Clipping and kissing, you caught leave here.’

(a1375 , William of Palerne (1867) l. 1053)

According to *Middle English Dictionary* (MED), *with* taking gerunds as its object expressed attendant actions in ME. In (55), *wip clipping and kessing* is interpreted as denoting an attendant action/accompanying circumstances, while one could possibly interpret such *with*-phrases as denoting time, cause, or reason, because they appear before the matrix clause.

Another example of Class III *with*-phrases that appear before the matrix clause is given in (56), where the *with*-phrase could also express the meaning of either an attendant action/accompanying circumstances or time/reason.²³

(56) But, [...], first, with vnderstanding his lesson more quicklie, with parsing more readelie, with translating more spedelie and perfitlie then he was wonte,

‘But, [...], first, understanding his lesson more quickly, parsing more readily, translating more speedily and perfectly, then he was wanted,’

(1563-1568 ASCH-E1-P1,3R.2)

If an adequate context is provided, (56) can be construed as ”when he understood his lesson more quickly, parsed it more readily and translated it more speedily and perfectly, he might have been wanted.” or ”because of his quick understanding of the lesson, his high ability to parse it, and his speedy and perfect translation, he might have been needed.”

On the other hand, when Class III *with*-phrases occurred after the matrix verb phrase, as shown in (57), the *with*-phrase was only construed as expressing attendant circumstances.

(57) this day was rainie so that I Could nor durst goe abroad but exersised in the house, with prainge and reading and singing psa: and Conferinge:
 ‘this day was rainy so that I could nor dare go abroad but exercised in the house, praying, reading, singing psa and conferring.’

(1599-1601 HOBY-E2-P1,164.261)

I assume that the semantic difference between the *with*-phrases in (55), (56) on the one hand and (57) on the other is partly attributed to the positioning of *with*-phrases; whether they appear before or after the matrix clause. As shown in section 4.2.3, Sakakibara states that when Class II *with*-phrases are “used to express cause or reason, they very often appear before the main clause.” This would be also true for Class III *with*-phrases denoting time, cause or reason.

With these semantic properties about the positioning of *with*-phrases in mind, I investigated the distribution of Class III *with*-phrases denoting time, cause or reason in OED quotations. I only searched for Class III *with*-phrases that appear before the matrix clause. The result of the investigation is shown in Tables 3 and 4.

Table 3: Tokens of Class III *With*-Phrases from the Quotations in OED

1301-1500	1501-1700	1701-1900
4	16	6

Table 4: Frequency per 10,000 Quotations of Class III *With*-Phrases Based on the data in Table 3

1301-1500	1501-1700	1701-1900
0.17	0.21	0.05

I could not discover any instances of Class III *with*-phrases denoting time, cause or reason before 1300 or after 1901. Sentences in each period are given in (58).

- (58) a. With prechyng in the pulpit ther he stood.
‘With preaching in the pulpit, he stood there’
(c1395 Chaucer *Summoner's Tale* 2282)
- b. With shorting and pikynge your bowes..[you] can neuer haue done vntyll they be starke nought.
‘With shorting and piking your bows.. you can never have done until they are stark not.’
(1545 R. Ascham *Toxophilus* ii. f. 7)
- c. With having the boys at home she has mistimed herself a bit.
(1886 R. E. G. Cole *Gloss. Words S.-W. Lincolnshire* 92)

In (57a), a *with*-phrase would denote time (i.e. simultaneity) and in (57b) it would express reason or condition. In (57c), it would represent time or reason.

The earliest instances of Class II and Class III *with*-phrases denoting time, cause or reason that appear before the matrix clause are (40a, c) and (55), respectively, both of which emerged in the end of the fourteenth century. (40a, c) are repeated here as (59a, b), respectively.

- (59) a. With his comynge þerto oure Lorde made þis Mountt worschipful.

‘With his coming across over, Lord made this mountain worshipful.’

(1398 J. Trevisa tr. Bartholomew de Glanville *De Proprietatibus Rerum*

xiv. xliv. (Tollem. MS.), OED)

b. With his swerd droppende of blod, The which withinne his douhter stod.

‘With his sword dropping blood, the witch within his daughter

stood.’ (1390, J. Gower *Confessio Amantis* III. 268)

It is assumed that speakers produced Class II *with*-phrases in (59) denoting time, cause or reason on analogy with Class III *with*-phrases in (55). This type of analogy must have been feasible due to the structural similarity between Class II and Class III *with*-phrases, with the only difference being the presence or absence of a subject noun. As a result, Class II *with*-phrases denoting time, cause, and reason that appear before the matrix clause became common.

Nevertheless, the frequency of Class II *with*-phrases with an *-ing* predicate had been extremely low till 1900, as shown in Tables 1 and 2. Their rarity in ModE might be related to the low frequency of gerunds with an accusative subject, as exemplified in (60).

(60) I replied that I had no objection to them doing so.

(1883, Trollope *Autobiography* XIX)

(Ukaji (2000: 272))

According to Ukaji (2000), gerunds with an accusative subject emerged around 1400 but the frequency of use was extremely low. It was not until in the end of the nineteenth century that its use became somewhat common. Therefore, speakers in ModE would have had difficulty accepting the sequence of an accusative noun + a verb with an *-ing* form. After the

end of the nineteenth century when the sequence of an accusative noun + a predicate became popular, speakers readily would have accepted Class II *with*-phrases with an *-ing* predicate.²⁴

We have so far discussed grammaticalization of *with* of Class II *with*-phrases. Firstly, I claimed that the semantics of *with* in Class II *with*-phrases was bleached in the twentieth century. This claim is reinforced by the high frequency of *with*-phrases with diversified meanings in Present-day English. Secondly, I attributed the cause of the semantic diversification of *with* to the fact that Class II *with*-phrases with an *-ing* predicate occurred before the matrix clause in the end of the fourteenth century. Fronting of Class II *with*-phrases with an *-ing* predicate made it possible for them to express anteriority or simultaneity from pragmatic inference, which led to creation of other meanings such as cause, reason, concession and so on. Fronting of Class II *with*-phrases with an *-ing* predicate is due to analogy with Class III *with*-phrases denoting time, cause or reason that appear before the matrix clause. In the next subsection, we will consider the process of reanalysis that *with* of *with*-augmented ACs underwent.

4.3.4. Reanalysis

In this subsection, I argue that *with* of Class II *with*-phrases was reanalyzed from P(reposition) to C(omplementizer) in the twentieth century. Examination of *the Corpus of Historical American English* (COHA) reveals that sentence adverbs such as *probably* or *evidently* became possible within Class II *with*-phrases with an *-ing* predicate in the twentieth century. There is no instance of Class II *with*-phrases with an *-ing* predicate containing sentence adverbs before the nineteenth century.²⁵

- (61) a. With a general election probably coming next year, most Britons expected

Chancellor of the Exchequer Reginald Maudling to produce

(1963, COHA, MAG, *TIME*, 205257)

- b. With the North Vietnamese evidently going in as fast as the Americans are clearing out, a new enemy offensive could catch the U.S. off balance;

(1970, COHA, MAG, *TIME*)

The presence of sentence adverbs suggests that there is a projection of TP in the *with*-phrase. Then, it is assumed that *with* occupies the head of CP since it is located in a position higher than TP. I propose that the syntactic structure of the *with*-phrase in (61a) is (62).

(62) [CP [C With [TP a general election probably coming next year]]]

Since *with* of Class II *with*-phrases in Present-day English underwent a gradual diversification of meaning, its semantic contents have been bleached. I argue that it ceased to serve as a lexical item in the twentieth century and instead it was reanalyzed from a preposition into a functional word that does not have semantic contents. If this is the case, the plausible position for *with* of Class II *with*-phrases would be the head of CP.

This structure could be readily extended to other Class II *with*-phrases containing a past participle phrase, an adjectival phrase, a prepositional phrase, a noun phrase and so on, because frequency of the whole Class II *with*-phrases increased in the twentieth century in the same way as Class II *with*-phrases with an *-ing* predicate (Kortmann (1995)). These Class II *with*-phrases can also include sentence adverbs. Therefore *with* would occupy the head of CP, as shown in (63).

- (63) a. [CP [C With [TP lawyers currently subjected to frequent attacks in the press]]], you should consider changing to a different profession
- b. [CP [C With [TP most students evidently eager to learn about new things]]], we shouldn't teach the same courses year after year.
- c. [CP [C With [TP the FBI currently on his track]]], Tom is lying low.
- d. [CP [C With [TP Mexico City probably the largest city in the world]]], I'm surprised you don't have a branch office there.

(cf. McCawley (1983: 273, 275))

The whole path of *with*-phrases in *with*-augmented ACs in the history of English is represented in (64). *With* of Class I *with*-phrases has been a preposition since OE. It has been a lexical item denoting manner or attendant circumstances. Even after Class II *with*-phrases expressing time or reason emerged in the end of the fourteenth century, *with* of Class II *with*-phrases had preserved the categorial status as a preposition till the nineteenth century, though some *withs* underwent semantic bleaching. In the twentieth century, *with* was reanalyzed as an element in C; it came to be realized in the head of CP, instead of the head of PP.

- (64) a. Class I
 [PP [P *mid/with* [Subj + XP]]] (OE~PDE)
- b. Class II
 [PP [P *with* [Subj + XP]]] (the end of 14th~19th)
 [CP [C *with* [TP Subj + XP]]] (20th~)
- XP= a verb phrase with an *-ing* form, a past participle phrase, an adjectival

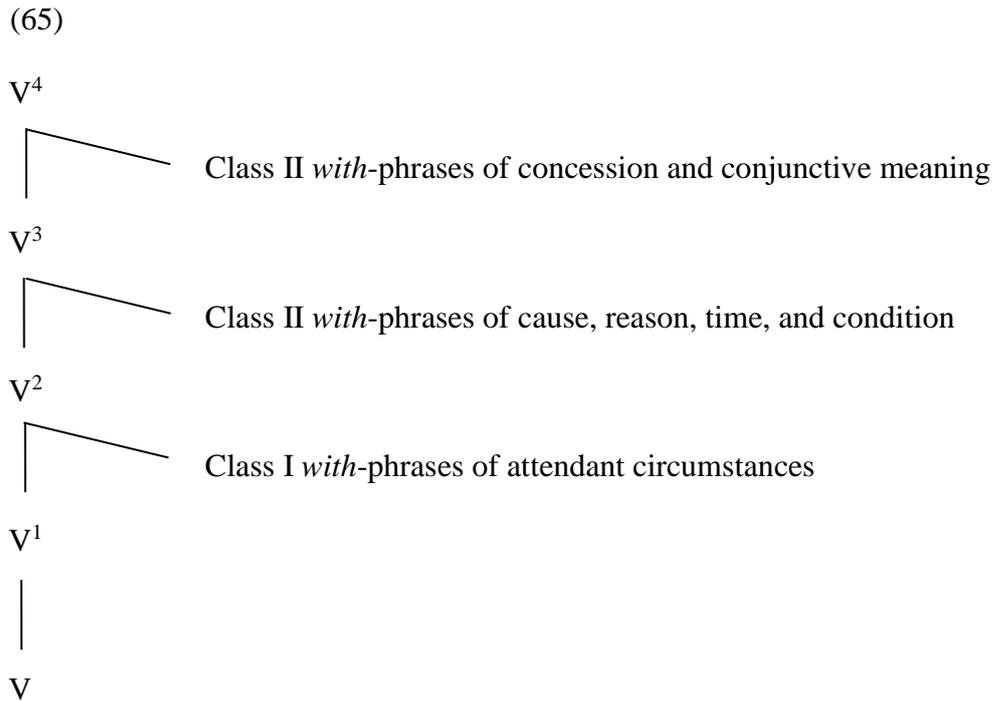
phrase, an adverbial phrase, a prepositional phrase and so on.

The structural change in (64b) demonstrates the categorial reanalysis that is directed upward along the X-bar theoretic structure in the sense of Roberts and Rossou (2003).

Let us summarize what we have so far discussed in this section in terms of grammaticalization of *with*. After Class II *with*-phrases with an *-ing* predicate occurred before the matrix clause in the end of the fourteenth century, *with* began to take on various meanings such as anteriority, simultaneity, cause, reason, and concession, which are derived from pragmatic inference. The high frequency of Class II *with*-phrases in the twentieth century promoted the diversification of semantics of *with*, leading to semantic bleaching of *with*. As a result, *with* was reanalysed from a lexical item denoting manner or attendant circumstances to a functional word in the twentieth century. This is an upward reanalysis from a preposition to a complementizer in the X-bar theoretic structure.

4.4. Concluding Remarks

In this chapter, we discussed the syntactic and semantic properties of *with*-augmented ACs and their historical development. Special attention was paid to Class II *with*-phrases with an *-ing* predicates. In section 4.2, after showing the syntactic and semantic properties of Class I and Class II *with*-phrases in Present-day English, it was shown that they are integrated in the configuration of (32), repeated here as (65).



(cf. Sakakibara (1982: 92))

This configuration in (65) shows that Class II *with*-phrases are more clausal than Class I *with*-phrases, and furthermore Class II *with*-phrases denoting concession and conjunctive are more clausal than those denoting cause, reason, time, and condition.

In section 4.3.1, it was revealed that semantics denoted by *with*-augmented ACs was extended gradually after the end of the fourteenth century. The *with*-phrases of *with*-augmented ACs in OE and early ME were limited to Class I *with*-phrases because they only expressed manner, elaboration or attendant circumstances. Hence they occupied the V² position in the configuration of (65). In the end of the fourteenth century, the *with*-phrases of *with*-augmented ACs came to indicate time or reason, which means that they are Class II *with*-phrases occupying the V³ position. Class II *with*-phrases occupying the V⁴ position occurred in the early of the eighteenth century. However, the frequency of Class II *with*-phrases had remained very low till LModE. In the twentieth century, it finally went up rapidly. The investigation with OED quotations demonstrated that the frequency of Class II

with-phrases with an *-ing* predicate also increased suddenly in the twentieth century.

In section 4.3.2, the four processes for grammaticalization were assumed: (i) pragmatic inference, (ii) semantic bleaching and/or phonological reduction, (iii) high frequency and (iv) an upward reanalysis. Based on this assumption, it was claimed in section 4.3.3 that *with* of Class II *with*-phrases was grammaticalized in the twentieth century. After Class II *with*-phrases with an *-ing* predicate occurred before the matrix clause in the end of the fourteenth century, *with* began to bear various meanings such as anteriority, simultaneity, cause, reason, and concession. These diversified meanings of *with* are derived from pragmatic inference. The increased frequency of Class II *with*-phrases in the twentieth century accelerated the diversification of semantics of *with*, which led to semantic bleaching of *with*. As a result of semantic bleaching, *with* was reanalysed from a lexical item denoting manner or attendant circumstances to a functional word in the twentieth century; *with* was reanalysed from a preposition to a complementizer. The whole path of *with*-phrases in *with*-augmented ACs in the history of English is shown in (66).

- (66) a. Class I
 [PP [P *mid/with* [Subj + XP]]] (OE~PDE)
- b. Class II
 [PP [P *with* [Subj + XP]]] (the end of 14th~19th)
 [CP [C *with* [TP Subj + XP]]] (20th~)
- XP= a verb phrase with an *-ing* form, a past participle phrase, an adjectival phrase, an adverbial phrase, a prepositional phrase and so on.

NOTES to Chapter 4

1 I will leave the study of absolute constructions with *without* given in (3) out of consideration.

2 There is another augmentor *what with* in absolute constructions in Present-day English, as exemplified in (i). The absolute constructions with *what with* are called *what with* construction (Trousdale (2012)) or *what with* absolute (Felser and Britain (2007)). They can contain “(coordinated) NPs, non-finite *ing*-clauses with an overt subject, non-finite *ing*-clauses with no overt subject, non-finite *en*-clauses (with an overt subject) or verbless/small clauses” (Trousdale (2012: 580)), as shown in (ia-e), respectively.

- (i) a. What with the gown, the limos, and all the rest, you’re probably looking at about a hundred grand.
- b. In retrospect I realize I should have known that was a bad sign, what with the Raven Mockers being set loose and all.
- c. But of course, to be fair to the girl, she wasn’t herself at the Deanery, what with thinking of how Lord Hawtry’s good eye had darkened when she refused his hand in marriage.
- d. The bed was big and lonesome what with Dimmert gone.
- e. The Deloche woman was going to have one heck of a time getting rid of the place, what with the economy the way it was in Florida.

(Trousdale (2012: 580))

In addition to *with(out)* and *what with*, there were still other augmentors in earlier English such as *after at*, *upon*, and *by reason of*. (ii) illustrates an absolute construction with the augmentor *after*.

- (ii) Then the Clerk of the Arraigns after Silence commanded read over his

Indictment to him, which was as follows:...

(The genuine trial of Grancis Townley, late of Manchester, 1746,

PPCMBE) (van de Pol and Cuyckens (2013: 347))

For relevant discussions, see Visser (1972: 1158, 1271-1278) and van de Pol and Cuyckens (2013: 346, 347). In Present-day English, the absolute constructions with *what with* are very rare and those with other augmentors are not used.

- 3 McCawley (1983) calls the sentences in (2) *with* absolute construction. Napoli (1988) dubs them *with*-ABS, in which ABS represents “absolutive.”
- 4 Kortmann (1991: 169) gives a little different definition to the notion of attendant circumstances (accompanying circumstances): “they denote an event/state separate from the event or ... state in the matrix clause, but do not provide details as to the specific circumstances (i.e. time, cause, conditions, etc.) under which the matrix proposition obtains.”
- 5 Apart from these Class I *with*-phrases, there are other two types of *with*-phrases. They are different from the Class I *with*-phrases in the text in that they are not VP adjuncts. One is *with*-phrases that modify the preceding noun as if they were a restrictive clause, and the other is *with*-phrases that appear in the position where predicates usually occur, as exemplified in (i) and (ii), respectively.

- (i)
 - a. The man with a scar on his left wrist is in this very room.
 - b. As often happens in January, there were several days with the sun shining.
 - c. It is a crisp autumn afternoon; an azure blue sky with not a cloud in sight.

(*The Chrysanthemum and the Bat*, 68)

- d. Such a book would be as misleading as its opposite number, the tourist

guide with Mount Fuji framed in cherry blossoms on the cover.

(*Living Japan*, 4)

- (ii) a. I saw John with a toothpick in his mouth.
- b. I saw Mary with her coat dripping and her feet soaked.

(Sakakibara (1982: 86, 87))

6 Napoli (1988: 329-331) classifies idioms into two types: analyzable and unanalyzable ones. Analyzable idioms can be readily parsed into lexical subparts; unanalyzable idioms cannot. Examples of analyzable and unanalyzable idioms are given in (i) and (ii), respectively.

- (i) a. The cat got out of the bag. (The secret was discovered.)
- b. The shit hit the fan. (The problems were discovered.)
- c. A little bribe told me. (I found out in some secret way.)
- (ii) a. They put on the dog. (They went to an extra effort to do something that looks good.)
- b. Mum's the word. (No one should talk about this.)
- c. The jig is up. (We can't go on with the ruse.) (Napoli (1988: 329, 331))

She assumes that NPs in analyzable idioms bear a thematic role, while NPs in unanalyzable idioms do not.

7 The omission of *appearing* in (26b) would produce a ungrammatical sentence without the raising predicate *With it at least that John knows economics well, we should nominate him*. It says nothing about whether an *-ing* form is necessary in order that the nonthematic noun *it* in raising predicates occurs in (26b).

8 It should be noticed that an expletive *there* can be used without involving a verb with an *-ing* form only if a deictic locative phrase such as *in the park* is included in the *with* phrase, as shown in (i).

- (i) Life on our street used to be very dangerous for the kids, but now, with there a stop sign at the corner, life is much safer. (Napoli (1988: 342))

9 The presence of an infinitive marker *to* also indicates the clausal status of *with*-phrases, as shown in (23b), repeated here as (i), where the *with*-phrase has a tense interpretation independent of the matrix clause. Since this thesis concentrates on participial constructions, I will leave the analysis of an infinitive marker *to* out of consideration.

- (i) With their apartment building to be razed the following week, they felt they had to move. (Sakakibara (1982: 89))

10 As already noted in the previous subsection, sentence adverbs cannot occur within Class II *with*-phrases denoting time and condition meaning, and *being* is usually mandatory within those representing cause, reason, concession and conjunctive meaning. Hence, Class II *with*-phrases expressing cause and reason might be more clausal than those denoting time and condition. I will put the distinction between them aside here. Moreover, the configuration in (32) cannot capture the facts in (25)-(28). I will also leave this aside.

11 PPCME2 represents *The Second Edition of the Penn-Helsinki Parsed Corpus of Middle English*. Van de Pol and Cuyckens (2013) employed another two corpora, *The Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME) and *The Penn Parsed Corpus of Modern British English* (PPCMBE). They collected 14 *with*-augmented ACs in ME from PPCME2, 222 *with*-augmented ACs in EModE from PPCEME and 315 *with*-augmented ACs in LModE from PPCMBE.

12 Examining the semantic relations to the matrix clause that the *with*-phrases express is not straightforward since it depends on the context. OED quotations do not provide enough contexts for us to identify the semantic relations to the matrix clause that the *with*-phrases express. However, on the basis of the semantic relation between the *with*-phrase and the following matrix clause, I judged the *with*-phrases in (40) to denote time or reason and

never to express manner or attendant circumstances. The standard for judgment is also applied to the examples in (41).

- 13 One might argue that the *with*-phrase in (40a) is not a Class II *with*-phrase because *coming* is a nominal gerund. Of course, the presence of the genitive pronoun might imply that the following element is a nominal, but the fact that *coming* involves the adverbs shows its verbal property. I assume that the *with*-phrase in (40a) consists of the configuration of *with* + NP + a verb with an *-ing* form, and therefore it is a Class II *with*-phrase.
- 14 A verb with an *-ing* form *droppende* in (40c) is supposed to be derived from a present participle because it has the suffix *-ende* (see section 3.3 in chapter 3).
- 15 Table 2 shows that the frequency of Class II *with*-phrases with an *-ing* predicate decreased gradually till 1900 but rapidly increased since 1901. The irregular change may be ascribed to lack of data from ME to LModE. This may be because the target of the investigation is limited to Class II *with*-phrases with an *-ing* predicate that occur before the matrix clause.
- 16 Roberts and Rossou (2003: chapters 3, 4) discuss grammaticalization involving reanalysis from a functional word to another functional word.
- 17 Hopper and Traugott do not give concrete data on the development of the causative *sipþan* from OE to ME. They do not consider the development of *sipþan* to be an instance of grammaticalization; instead they just mention it as an illustration of pragmatic inference.
- 18 Roberts and Rossou (2003) also suggest that the categorial reanalysis always involves structural simplification.
- 19 I follow Harris and Campbell (1995: 50) in assuming that reanalysis is “a mechanism which changes the underlying structure of a syntactic pattern and which does not involve any modification of its surface manifestation.”
- 20 A sentence containing clauses conjoined by *and* that do not denote an event has the same

meaning even if their order is changed.

- (i) a. Kim is tall and she is brilliant.
- b. Kim is brilliant and she is tall.

21 The meaning of cause disappeared later. In Present-day English, *while* does not represent the meaning of cause.

22 Even if *with*-phrases appeared after the matrix verb phrase, they could express the meaning of cause or reason, as exemplified in (35b), repeated here as (ia), and the interpretation of (ia) is repeated as (ib).

- (i) a. At the later end of dynner as we wended westsowest with the larboard tack aboard and a bold wynd, the mayn topmast was bloen down even as the general was drinking. (Diary Madox, 1582, PPCEME)
 - b. because the larboard tack was aboard and (there was) a bold wind,
- (van de Pol and Cuyckens (2013: 355))

However, assuming that fronting of Class II *with*-phrases would certainly trigger the diversification of meaning, I will proceed without considering the cases like (i) with the claim that the meanings of anteriority, simultaneity and cause or reason were given risen to when *with*-phrases appeared before the matrix clause.

23 The sentences in (56) and (57) come from PPCEME.

24 Frequency of the entire Class II *with*-phrases had been very low till LModE. I do not have a clear answer to the question. I leave it open for my future research.

25 I did not investigate whether Class II *with*-phrases with other types of predicate than an *-ing* predicate are compatible with sentence adverbs in the history of English.

Chapter 5

Synchronic Aspects of Preposing around *Be*: With Special Reference to Present Participle Preposing

5.1. Introduction

The goal of this chapter is to propose a syntactic structure of preposing around *be* (henceforth, PAB), paying special attention to Present Participle Preposing. Some examples of PAB and their correspondences with the canonical word order are given in (1, 2).¹

- (1) a. Jutting down from his long, graying locks were his ever-present giant sideburns, each shaped like the state of Idaho.
- b. Tried separately from Koike were Nomura and three former executives. (Samko (2014a: 371))
- c. Also complimentary is red and white wine. (cf. Birner (1994: 245))
- d. Up in my room, on the night-stand, is a pinkish-reddish envelope that has to go out immediately. (cf. Birner (1994: 234))
- (2) a. His ever-present giant sideburns, each shaped like the state of Idaho, were jutting down from his long, graying locks.
- b. Nomura and three former executives were tried separately from Koike. (cf. Samko (2014a: 371))
- c. Red and white wine is also complimentary. (cf. Birner (1994: 245))

- d. A pinkish-reddish envelope that has to go out immediately is up in my
room, on the night-stand. (cf. Birner (1994: 234))

In (1), DPs appear to the right side of the auxiliary *be*, while the complement of the auxiliary *be* appears to its left side. In (1a), the complement of a progressive *be* lies in its left side, so we will call (1a) Present Participle Preposing. In contrast, in (1b), the complement of a passive *be* lies in its left side, so we will call (1b) Past Participle Preposing. The DP subject in the right side of the auxiliary *be* will be called canonical subject. As for the instances in (1c, d), we call them Adjective Preposing and Preposition Preposing, respectively, because an adjectival phrase or a prepositional phrase is preposed, and we will not deal with them in this thesis.

There has been little attempt made to give a generative account of PAB despite the fact that locative inversion constructions (LICs), which have a lot of common properties with PABs, have been studied in considerable detail (Nishihara (1999), Culicover and Levine (2001), Kitada (2011), Mikami (2010) and Koike (2013) and others).

- (3) a. In the corner was a lamp.
b. Into the room walked John. (Mikami (2010: 298))

One of the reasons for the small number of studies of PAB might be because it has been regarded as equivalent to locative inversion. For example, Mikami (2009a, b) and Kitada (2011) only deal with Adjective Preposing in parallel with LICs. Rochemont and Culicover (1990) regard PAB and LICs as Stylistic Inversion and provide a unified account of them. They offer a detailed analysis for PAB within the framework of the government and binding theory. Birner (1994) explains PAB and LICs in terms of pragmatics. In this thesis,

however, I will work on issues about PAB on the basis of Samko (2014a, b), who analyzes Participle Preposing within the recent minimalist framework.

We will investigate the syntactic behavior of PAB, focusing on Present Participle Preposing, comparing it with that of LICs, and conclude that Present Participle Preposing shares a lot of common properties with locative inversion except for a few points. Then I claim that in Present Participle Preposing the canonical subject undergoes heavy NP shift (HNPS) to move to the TP-adjoined position. I also claim that when the progressive aspect is present, it is Asp(ect)P that is preposed; otherwise *v*P is preposed. They undergo A'-movement to the specifier of TopP. AspP bearing the progressive aspect and *v*P can be fronted because of their phasal status.

This chapter is organized as follows: section 5.2 explores the syntactic and pragmatic properties of PAB on the basis of Samko (2014a, b) and points out problems with her analysis. Section 5.3 offers an alternative proposal to derive Present Participle Preposing. This is a modified version of Samko (2014a, b). Section 5.4 discusses the phasal status of progressive AspP on the basis of Harwood (to appear). Section 5.5 concludes this chapter.

5.2. Previous Analyses and Their Problems

5.2.1. Syntactic Properties

This section overviews syntactic behaviors of Present Participle Preposing, mainly relying on Samko (2014a). I will clarify the similarities and differences between Present Participle Preposing and LICs.

Firstly, let us consider the size of the preposed participle. Examples in (4a, b) are instances of Participle Preposing in which the participle and its complement or an adjunct are preposed. Examples in (5a, b, c) show that preposing of *being* is obligatory in progressive passive.

- (4) a. Joining the chorus of political figures was former Georgia Sen. Sam Nunn.
 b. Tried separately from Koike were Nomura and three former executives.
- (5) a. Being tried separately from Koike are Nomura and three former executives.
 b. *Tried separately from Koike are being Nomura and three former executives.
 c. *Tried separately from Koike are Nomura and three former executives
 being. (Samko (2014a: 371-373))

Examples in (6a, b, c) indicate that *by*-phrases must be preposed together with the participle and an adjunct or the participle and its complement when they are present.

- (6) a. Being tried separately by prosecutors are Nomura and three former
 executives
 b. *Being tried separately are by prosecutors Nomura and three former
 executives.
 c. *Being tried separately are Nomura and three former executives by
 prosecutors. (Samko (2014a: 372))

Secondly, let us examine the subjecthood of the canonical subject. In Present Participle Preposing, it is the canonical subject that triggers agreement with a finite verb, as illustrated in (7).

- (7) a. Joining the chorus of political figures were five former Georgia senators.
 b. *Joining the chorus of political figures was five former Georgia senators.

(Samko (2014a: 372))

This is in parallel with LICs, as shown in (8).

- (8) a. In the swamp {was/*were} found a child.
b. In the swamp {*was/were} found two children. (Mikami (2011: 299))

In spite of the subjecthood of the canonical subject in Present Participle Preposing, the post-verbal position cannot be occupied by a pronoun, whether it is nominative or accusative, as exemplified in (9).^{2,3}

- (9) * Standing in the doorway was he/him. (Rochemont (1985: 31))

In addition, the pronominal subject of tag-questions must not be a pronoun referring back to the canonical subject, as shown in (10a); on the other hand, many speakers accept the expletive *there*, as exemplified in (10b).⁴ This phenomenon is also observed in LICs, as shown in (11).

- (10) a. * Surrounding the stricken president are the power brokers, aren't they?
b. % Surrounding the stricken president are some power brokers, aren't there?
(11) Around the stricken president are some power brokers, aren't there?

(Samko (2014a: 372))

Thirdly, let us look at three apparent A-properties that the preposed participle exhibits. In the first place, (12a) shows that the preposed participle can occur in the raising construction,

similarly to the locative PP in LICs with unaccusative verbs in (12b).

- (12) a. Undermining Abbey's confidence seemed to be the decline in value of
Lloyds' shares. (Samko (2014a: 372))
- b. [On that hill]_i appeared [_{t_i} to be located a cathedral]. (Mikami (2010: 302))

Given the standard assumption that the subject undergoes A-movement from the embedded infinitival clause to the matrix clause in the raising construction, as shown in (13), it is predicted that the preposed participle in (12a) might have undergone A-movement.

- (13) John_i seems [_{t_i} to be honest].

On the other hand, the locative PP in LICs with unergative verbs, which is analyzed as having a heavy theme DP by Culicover and Levine (2001) and Koike (2013), cannot occur in the raising construction, as exemplified in (14).

- (14) * At the corner seemed to smoke a man wearing a red headband and dark
sunglass. (Koike (2013: 579))

Given the facts in (12, 14), it will be rash to conclude that the preposed participle phrase undergoes A-movement.

In the second place, in Present Participle Preposing, movement of the present participle phrase and its complement does not show the Weak Crossover (WCO) effect in the same way as the locative PP in LICs.

- (15) a. Undermining John_i's confidence was his_i mother. (Samko (p.c.))
 b. In every dog_i's pen peered its_i owner. (Mikami (2010: 302))

The WCO effect is observed when a fronted phrase moves across a pronoun it refers to through A'-movement. Then the sentence becomes ungrammatical. In (16a), the relative pronoun *who* moves across the pronoun *his* through A-movement. Then the WCO effect is not observed, so *who* appropriately binds *his* and the sentence is grammatical. In contrast, (16b) shows that if the locative PP *into every dog* moves across the pronoun *its* to the Top position through A'-movement, the noun *dog* cannot become the antecedent of the pronoun *its*. Since it cannot bind the pronoun, (16b) is ungrammatical.

- (16) a. Who_i appears to his_i mother [_{t_i} to be a genius]?
 b. *Into every dog_i's cage its_i owner peered. (Mikami (2010: 302))

Hence, the grammaticality of (15a) suggests that the preposed participle phrase undergoes A-movement.

In the third place, in Present Participle Preposing, negative polarity items (NPIs) in the canonical subject position are licensed, as shown in (17).

- (17) Lacking from the discussion is any civility. (Samko (p.c.))

In (17), a verb with the negative meaning *lack* in the preposed participle phrase licenses the NPI *any* in the canonical subject position. Mikami (2010) points out that the negative element in the specifier of TP can license the NPI that it c-commands, as exemplified in (18a), but the negative element in the topicalized phrase, which is assumed to be in the specifier of

TopP, cannot license the NPI in the canonical subject position even if it is c-commanded by the negative element, as shown in (18b).

- (18) a. None of the students walked into any of the classrooms.
b. *Into none of the classrooms any of the students walked

(Mikami (2010: 302))

If his assumption is correct, the grammaticality of (17) suggests that the preposed participle phrase *lacking from the discussion* occupies the specifier of TP via A-movement.⁵

Fourthly, let us turn to an A'-properties of the preposed participle. Present Participle Preposing does not allow topicalization of the canonical subject, as exemplified in (19a), and does not form *wh*-questions or polar questions, as shown in (19b, c), which exhibits the topichood of the preposed participle. That is, it is assumed to lie in the Top position.

- (19) a. *Jeff Maggert, leading the way is.
b. *When_i were leading the group down Bombardier Inc. shares t_i ?
c. *Was softening the blow the fact that Mirror Group's cable television account was one of the four pieces of business? (Samko (2014a: 373))

Another indication of topichood of the preposed participle is that it cannot occur in the ECM complement, as illustrated in (20).

- (20) a. *I believe anchoring their prizes to be pictures of former dictators.
b. I believe that anchoring their prizes were pictures of former dictators.

(Samko (2014a: 378))

Finally, let us consider the heaviness of the canonical subject. The canonical subject in Present Participle Preposing seems to be heavy for the most part, which has not been pointed out in the previous studies. All the instances in (21) come from magazines or newspaper, and the canonical subjects are put in italic type.⁶

- (21) a. Remaining on the list were *Houston, Texas; Mobile, Ala.; Savannah, Ga.; Charlestown, S.C.; Brevard County, Fla.; Salisbury, Md.; and Norfolk, Va.*
- b. Underlying the debate is *the inexorable logic and pressure of the \$3 billion, 11.4-mile subway itself, now well behind schedule.* (Samko (2014a: 376))
- c. Not so obvious are *the euphemisms ‘umpteens years young’ and ‘Golden Ager.’*
- d. Zooming in on you like a guided missile comes *a rival contender, bullying you to get out of the way.*
- e. Complementing the relatively affordable books are *the dolls, one for each fictional heroine and each with a comparably pricey historically accurate wardrobe and accessories ...* (Birner (1994: 234, 246))

Samko (2014a) gives nineteen instances of Present Participle Preposing in total in her article, and fourteen out of them have a heavy canonical subject. I judged the subject to be heavy without taking the context or the stress on it into consideration if it consists of more than five words. Although it is necessary to do a comprehensive research in order to verify the heaviness of the canonical subject, let us tentatively assume that the canonical subject in Present Participle Preposing is usually heavy and it undergoes heavy NP shift (HNPS).⁷

On the other hand, we must bear in mind instances like (22) with an apparent light canonical subject.

- (22) Standing in the middle of it all is *Jesse Jackson*. (Birner (1994: 245))

As already described, I ignore the context and the stress on the canonical subject, so *Jesse Jackson* in (22) may be regarded as heavy in the discourse.

5.2.2. Pragmatic Properties

Samko (2014a) conducted a corpus-based investigation for the purpose of examining pragmatic properties of Participle Preposing and reinforcing Birner's (1994) work in (23).

- (23) The material in the preposed vP must be at least as familiar as the material in the canonical subject. (Samko (2014a: 376))

She collected data from the 910-million-word *New York Times* subcorpus called English Gigaword corpus compiled by Graff and Cieri (2003). She collected one hundred instances of Participle Preposing randomly sampled from the subcorpus and classifies them into four types: (i) both the preposed participle phrase and the canonical subject are familiar in the discourse (e.g., (24a)), (ii) the preposed participle phrase is familiar in the discourse and the canonical subject is unfamiliar in the discourse (e.g., (24b)), (iii) the preposed participle phrase is unfamiliar in the discourse and the canonical subject is familiar in the discourse (e.g., (24c)), and (iv) both the preposed participle phrase and the canonical subject are unfamiliar in the discourse (e.g., (24d)). In each sentence of (24), the preposed participle phrases are underlined and the canonical subjects are put in italic type. Words or phrases in the

preceding sentences and the preposed participle phrases or the canonical subjects are boldfaced if they are relevant in the discourse.⁸

- (24) a. *Familiar preposed participle phrase, familiar canonical subject*

The **Peace Corps**, long synonymous with grass-roots volunteerism, is today placing greater emphasis on **business and economic development**. Promoting the **business agenda** is *Mark D. Gearan, director of the **Peace Corps***, [. . .].

- b. *Familiar preposed participle phrase, unfamiliar canonical subject*

“We came here to defend the right of our parliamentarians to enter their own house,” said **Guillermo Arocha**, 34, a lawyer and sympathizer of Accion Democratica, the more left-leaning of the two parties. “We elected them with our votes, and no one has the right to remove them through a coup.” Standing next to **Arocha** was *Manuel Contreras* [. . .].

- c. *Unfamiliar preposed participle phrase, familiar canonical subject*

The deputy attorney general whom Salinas put in charge of **the case**, Ruiz Massieu’s brother, Mario, said he put his strongest belief in the idea that the crime was motivated by politics. Some Mexicans speculated that Ruiz Massieu, a reform-minded official who was expected to be the PRI’s next leader in the lower house of the Congress if not a key official in Zedillo’s Cabinet, had been killed because he was a major proponent of steps to democratize the political system and an important negotiator with opposition parties. But other aspects of Ruiz Massieu’s background pointed in different directions. He had earned a reputation for toughness during a

term as the governor of the Pacific Coast state of Guerrero, where a handful of leftist activists were killed in struggles with the governing party or the police and drug trafficking interests entrenched themselves in the resort city of Acapulco.

Adding to suspicions about a personal vendetta was *the fact that another main suspect in **the case**, Abraham Rubio Canales, was a onetime aide to Ruiz Massieu in Guerrero [. . .]*.

d. *Unfamiliar preposed participle phrase, unfamiliar canonical subject*

He hopes his showing can narrow the coaches' options some. Last week against the Lions, he had six carries for 60 yards. "I want them to think of me as the man behind the man," Murrell said. "I want them to know that when the first guy gets tired or has to come out that I'm ready to go in and pick up where he left off."

Making his debut for the Jets was *Tony Meola, the goalkeeper for the U.S. soccer team in the World Cup, who handled the kickoffs in the second half.*

(cf. Samko (2014a: 378, 379))

The result of the examination is summarized in Table 1.

Table 1: Relative Familiarity in 100 instances of Participle Preposing

	Familiar canonical subject	Unfamiliar canonical subject
Familiar preposed participle phrase	30	64
Unfamiliar preposed participle phrase	1	5

(cf. Samko (2014a: 377))

Samko made a detailed inquiry into the thirty instances of familiar preposed participle phrases and familiar canonical subjects, and found out that seventeen instances out of them are the ones where the preposed participle phrase is more recently mentioned in the discourse than the canonical subject. In (25a), *Cowboys* in the preposed phrase is more closely mentioned in the preceding sentences than *Lester* in the canonical subject; on the other hand, in (25b), *Welch* in the canonical subject is more closely mentioned than ‘Immelt’ in the preposed phrase.

(25) a. *Preposed participle phrase is more recently mentioned*

The time-tested flip side is that such setbacks often set up Tim **Lester**-like opportunities. In one room at the **Cowboys**’ Valley Ranch headquarters, there sat the 10-year veteran Johnston, explaining the frustrations of another season-ending neck injury that possibly could end his career. Talking to **Cowboys** coaches in another room sat the newly signed **Lester** [. . .].

b. *Canonical subject is more recently mentioned*

The advantage **Immelt** will have, as a chief executive in his mid-40s, is that

he is much more familiar with the latest technological developments than older executives like **Welch**. “He grew up with a laptop on his desk,” Gariano said. “Jack and I grew up with slide rules.”

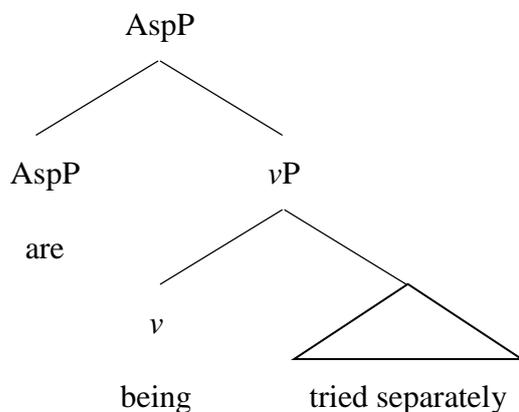
Making **Immelt**’s succession more complicated is **Welch**’s *decision to stay until the end of next year*. (cf. Samko (2014a: 379))

Because eighty one out of one hundred Participle Preposing instances include familiar information in the preposed participle, Samko concludes that Participle Preposing is strongly related to discourse factors.

5.2.3. Samko’s (2014a, b) analysis

Taking into account the syntactic and discourse properties described in the preceding two subsections, Samko (2014a, b) makes the following proposal. Firstly, based on the syntactic facts observed in (4)-(6), she claims that it is *vP* that is preposed, assuming the structure in (26).

(26)



(Samko (2014a: 372))

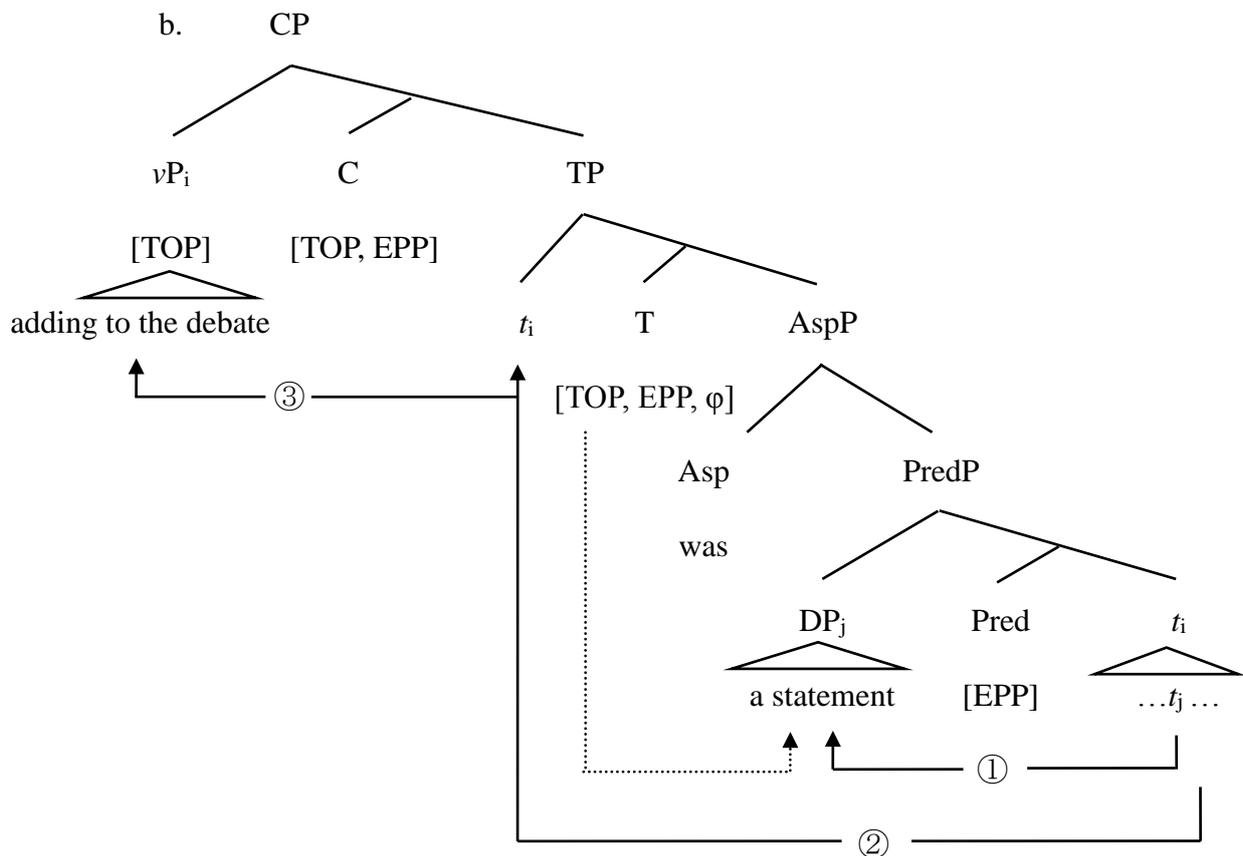
Moreover, she postulates that Present Participle Preposing has the clausal architecture in (26),

based on the assumption that the auxiliary *be* takes a small clause and the complement of *be* is PredP, which has the EPP property.

(27) CP > TP > AspP > PredP > vP (> PredP) > VP

Given these presuppositions, she proposes the syntactic structure of Present Participle Preposing in (28a) as (28b).

(28) a. Adding to the debate was a statement by a top Justice Department official.



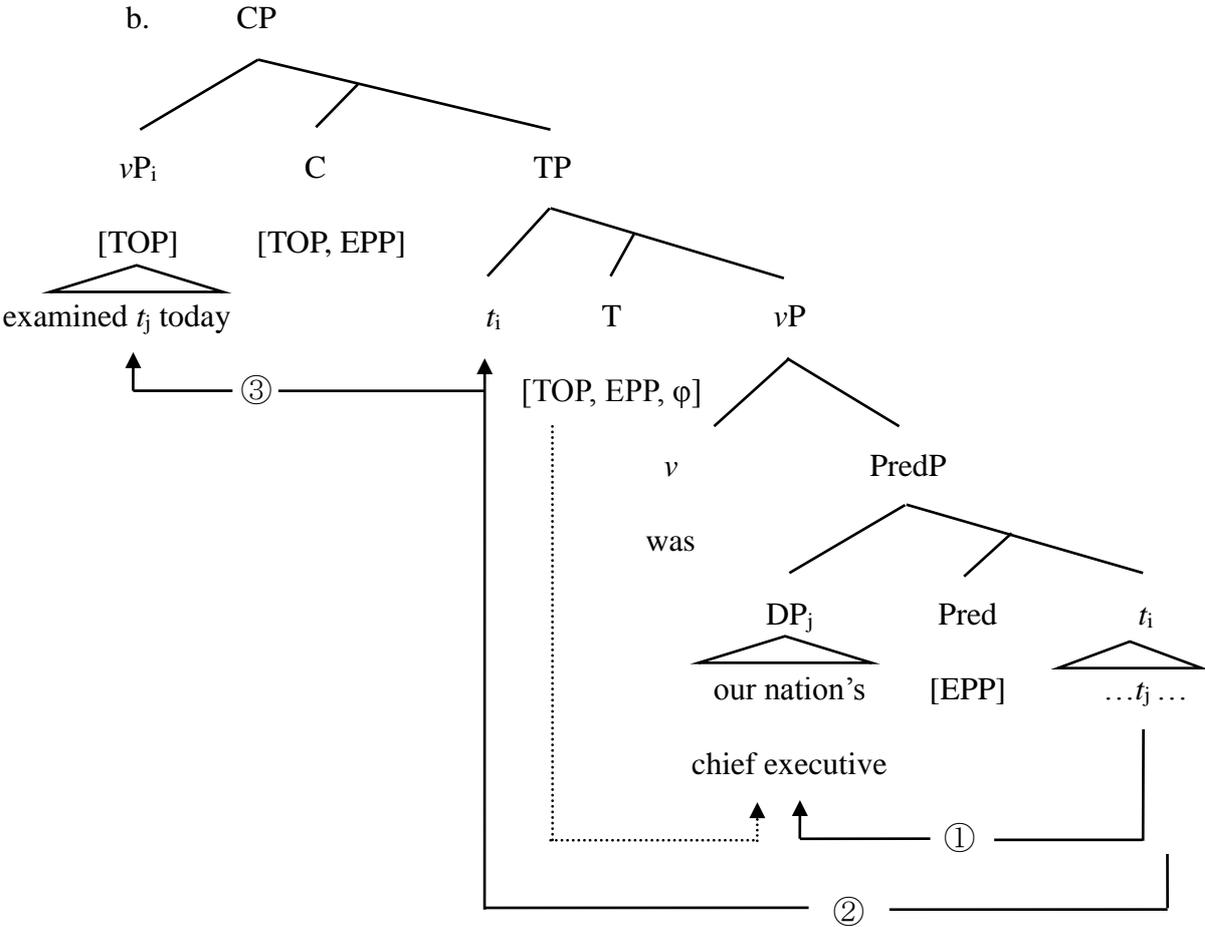
(Samko (2014a: 377))

The canonical subject *a statement* is base-generated in the specifier of vP. It moves to the specifier of PredP in order to satisfy the EPP feature of Pred, and agrees with T. Then

*v*P does not contain the subject and only has the present participle and its complement. It moves to the specifier of TP and then to the specifier of CP. This movement is explained as follows. Following Chomsky (2008) in assuming that the uninterpretable features of T are inherited from C, Samko proposes that “C bears information-structurally distinguished TOP(IC) features” which are shared with T (Samko (2014a: 377)). The bundle of EPP and TOP features on T attracts a TOP-marked phrase, that is, *v*P, to the specifier of TP, followed by the additional movement to the specifier of CP that is also motivated by the bundle of EPP and TOP features on C.

The syntactic structure of Past Participle Preposing in (29a) is shown in (29b).

(29) a. Examined today was our nation’s chief executive.

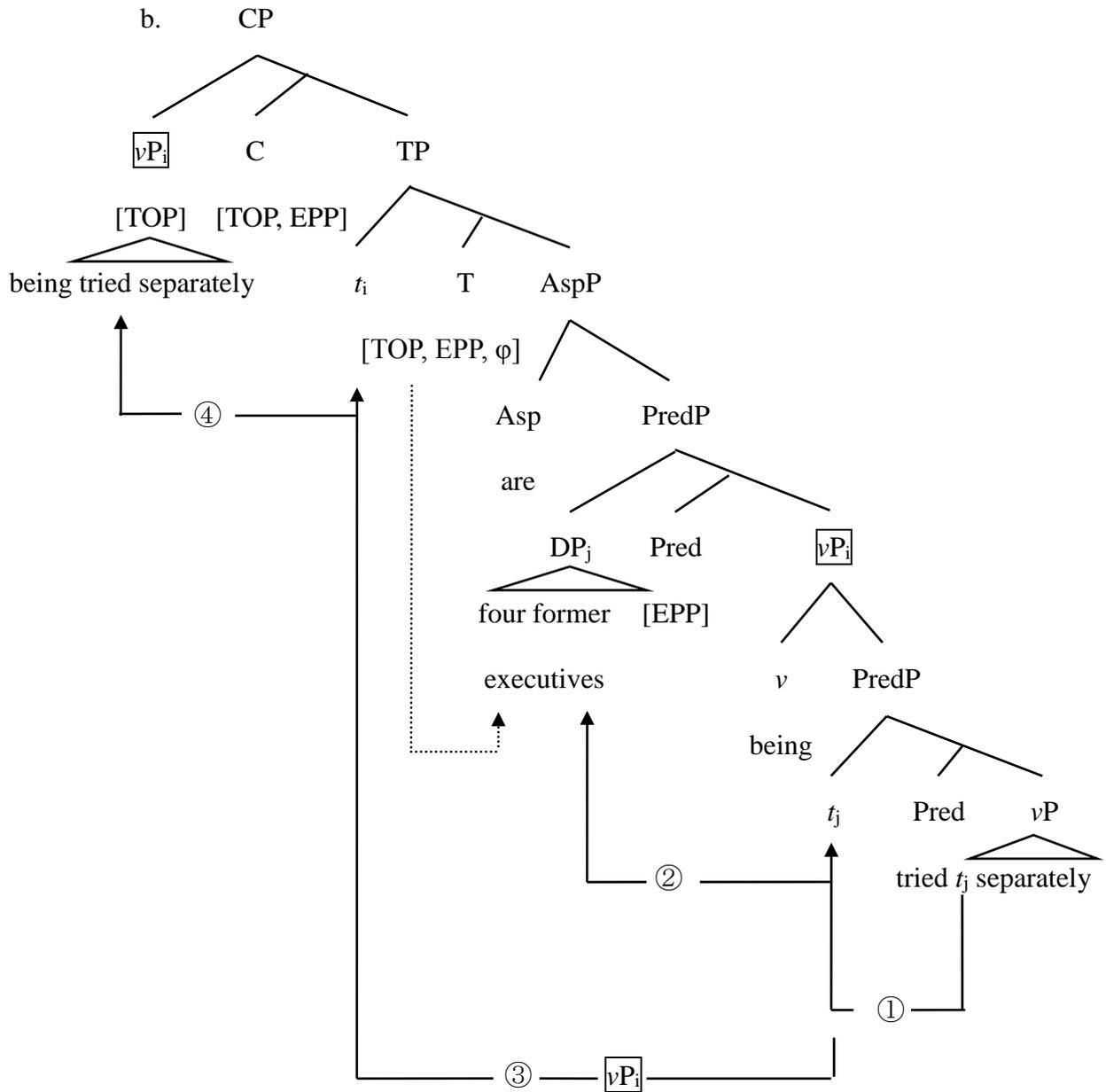


(cf. Samko (2014a: 374))

Apart from the absence of AspP, the derivation of (29a) is almost the same as (28). The canonical subject *our nation's chief executive* is base-generated in the complement of the verb *examine*. It moves to the specifier of PredP in order to satisfy the EPP feature of Pred, and agrees with T. The lower *v*P, consisting of a past participle and an adjunct, is attracted to the specifier of TP and then to the specifier of CP by the bundle of EPP and TOP features on T and C since it is a TOP-marked phrase.

Finally, the syntactic structure of Progressive Passive Participle Preposing in (30a) is schematized in (30b).

(30) a. Being tried separately are four former executives.



(cf. Samko (2014a: 375))

The derivation is also almost the same as (28) and (29). On the basis of the assumption that the auxiliary *be* takes a small clause, *are* and *being* take distinct PredPs. The canonical subject that is base-generated in the complement of the verb *tried* moves to the specifier of the lower PredP and then to that of the higher PredP, where it agrees with T. The higher vP, consisting of *being*, the past participle *tried* and the adjunct *separately*, moves to the specifier

of TP and then to the specifier of CP because it is a TOP-marked phrase.

Based on these three structures for Participle Preposing, Samko gives an explanation about the grammatical difference between (31a, b) and the grammaticality of (32). (31a) is ungrammatical because if we assume that the ECM complement is TP, a non-finite T cannot inherit a TOP feature from C and thus cannot attract the TOP-marked phrase *anchoring their prizes*; on the other hand, in (31b) the finite T can inherit a TOP feature from C, and therefore, attract the TOP-marked phrase.

- (31) a. *I believe anchoring their prizes to be pictures of former dictators.
b. I believe that anchoring their prizes were pictures of former dictators.

(Samko (2014a: 378))

The grammaticality of (32) is explained as follows. In embedded TP of the raising construction, a non-finite T cannot inherit a TOP feature from C because of the absence of C. Samko follows Boeckx and Grohmann (2007) in assuming that the specifier of embedded TP in the raising construction is not a stopping-off point for cyclic A-movement. Then she claims that the TOP-marked phrase *undermining Abbey's confidence* in (32) is preposed directly to the matrix TP specifier and then to the matrix CP specifier without stopping off at the embedded TP specifier. This movement is motivated by the bundle of EPP and TOP features on the matrix T and C.

- (32) Undermining Abbey's confidence seemed to be the decline in value of
Lloyds' shares. (Samko (2014a: 372))

Regarding tag questions in (33), Samko (p.c.) assumes that an expletive *there* is a

default subject for tag questions; when the subject of the matrix clause is not a DP, it is inserted for the purpose of forming tag questions.

- (33) a. *Surrounding the stricken president are the power brokers, aren't they?
b. % Surrounding the stricken president are the power brokers, aren't there?

(Samko (2014a: 372))

5.2.4. Problems

In this section, I point out two problems with previous analyses. They are concerned about the impossibility of the local subject topicalization and the heaviness of the canonical subject.

Firstly, Samko's analysis in (28)-(30), where the ν P is moved to the specifier of TP and then to the specifier of CP, is problematic in that the vacuous topicalization is generally banned, as illustrated below. This is especially shown by the contrast between (34b) and (35b).

- (34) a. *John thinks that Mary likes himself.
b. John thinks that himself, Mary likes *t*.

- (35) a. *John thinks that himself likes Mary.
b. *John thinks that himself, *t* likes Mary. (Lasnik and Saito (1992: 110-111))

In (34a), the embedded object *himself* is not bound by the matrix subject *John*, while in (34b), where the topicalization of the embedded object *himself* is applied, it is correctly bound by the matrix subject. The ungrammaticality of (35a) shows that the embedded subject pronoun *himself* is not bound by the matrix subject *John*. Based on the fact in (34), (35b) is predicted

to be grammatical if local subject topicalization is permissible, because the topicalized embedded subject *himself* would be adequately bound by the matrix subject *John* in the same way as (34b). However, this is not the case. This means that the subject does not undergo movement to the Top position via Topicalization: the subject does not move from the specifier of TP to the specifier of CP.⁹

Another evidence against the vacuous topicalization comes from the instance of the subject condition violation in (36) and the following paradigm in (37) and (38).

(36) ?* Who_i do you think that pictures of *t_i* are on sale?

(37) a. ? Which athletes_i do you wonder which pictures of *t_i* Mary bought?

b. ?? Which athletes_i do you think that pictures of *t_i*, Mary bought?

(38) a. ? Which athletes_i do you wonder which pictures of *t_i* are on sale?

b. ?* Which athletes_i do you think that pictures of *t_i*, are on sale?

(cf. Lasnik and Saito (1992: 111))

(36) illustrates subject condition violation; extraction out of noun phrases in A-position is unacceptable. Taking this constraint into consideration, let us now consider (37a) and (38a), which illustrate extraction out of *wh*-phrases in A'-positions; extraction out of a *wh*-phrase in the specifier of CP of the embedded clause is reasonably acceptable. Especially relevant in the discussion is the contrast between (36) and (38a), which indicates that subject condition violation can be ameliorated if the subject is moved to an A'-position.

Let us now look into (37b) and (38b). (37b) is marginally allowed, where a topicalized object noun is moved to the specifier of CP of the embedded clause and a *wh*-phrase is extracted out of there., This is an illustration of extraction out of nouns phrases in A'-positions. Then it is predicted that (38b) would be also marginally allowed if local

subject topicalization is permissible, because a topicalized subject noun would be moved to the specifier of CP of the embedded clause and a *wh*-phrase would be extracted out of there. However, the acceptability of (38b) is not ameliorated. Lasnik and Saito (1992: 111) assert that the unacceptability of (38b) is ascribed to the failure of embedded topicalization; in other words, vacuous topicalization is impossible. Given this, Samko's argument in (28)-(30), in which *v*P is moved to the specifier of TP and then to the specifier of CP is untenable because it includes vacuous topicalization.

Secondly, previous analyses do not pay attention to the heaviness of the canonical subject in Present Participle Preposing. Given (21) and the related discussion, it would be natural to suppose that the canonical subject in Present Participle Preposing undergoes HNPS. Although we need to conduct a comprehensive research for the heaviness of the canonical subject, I assume in this thesis that it undergoes HNPS.¹⁰

I have pointed out two problems with previous analyses of Present Participle Preposing: the prohibition of the local subject topicalization and the heaviness of the canonical subject. Since Present Participle Preposing shows syntactic behaviors similar to those of LICs, it might be wise to analyze it in parallel with LICs in order to solve these problems. In fact, Mikami (2010) and Koike (2013) offer an account of LICs that overcomes the problem with the prohibition of the local subject topicalization; Koike additionally proposes a syntactic structure to derive LICs with unergative verbs, arguing that their DP subject undergoes heavy NP shift.

We must, however, take into consideration the following syntactic differences between Present Participle Preposing and LICs: (i) in Present Participle Preposing, the preposed element is a present participle followed by its complement and/or an adjunct when they are present, whereas in LICs, the preposed element is a prepositional phrase expressing a location, (ii) the verb used in Present Participle Preposing is almost limited to *be*, while the

verbs used in LICs are unaccusative or unergative verbs. With these differences in mind, we would need to deliberate carefully on whether the analysis of LICs provided by Mikami (2010), Kitada (2011) and Koike (2013) is applicable to Present Participle Preposing. However, because the discussion in this chapter proceeds on the basis of Samko's analysis, I will not analyze Present Participle Preposing in terms of analysis provided by them. It is set aside for my future research. In the next section, I attempt to solve the two problems discussed above, although the problem on the heaviness of the canonical subject is not completely solved.

5.3. Alternative Proposal

5.3.1. The Derivation of Participle Preposing

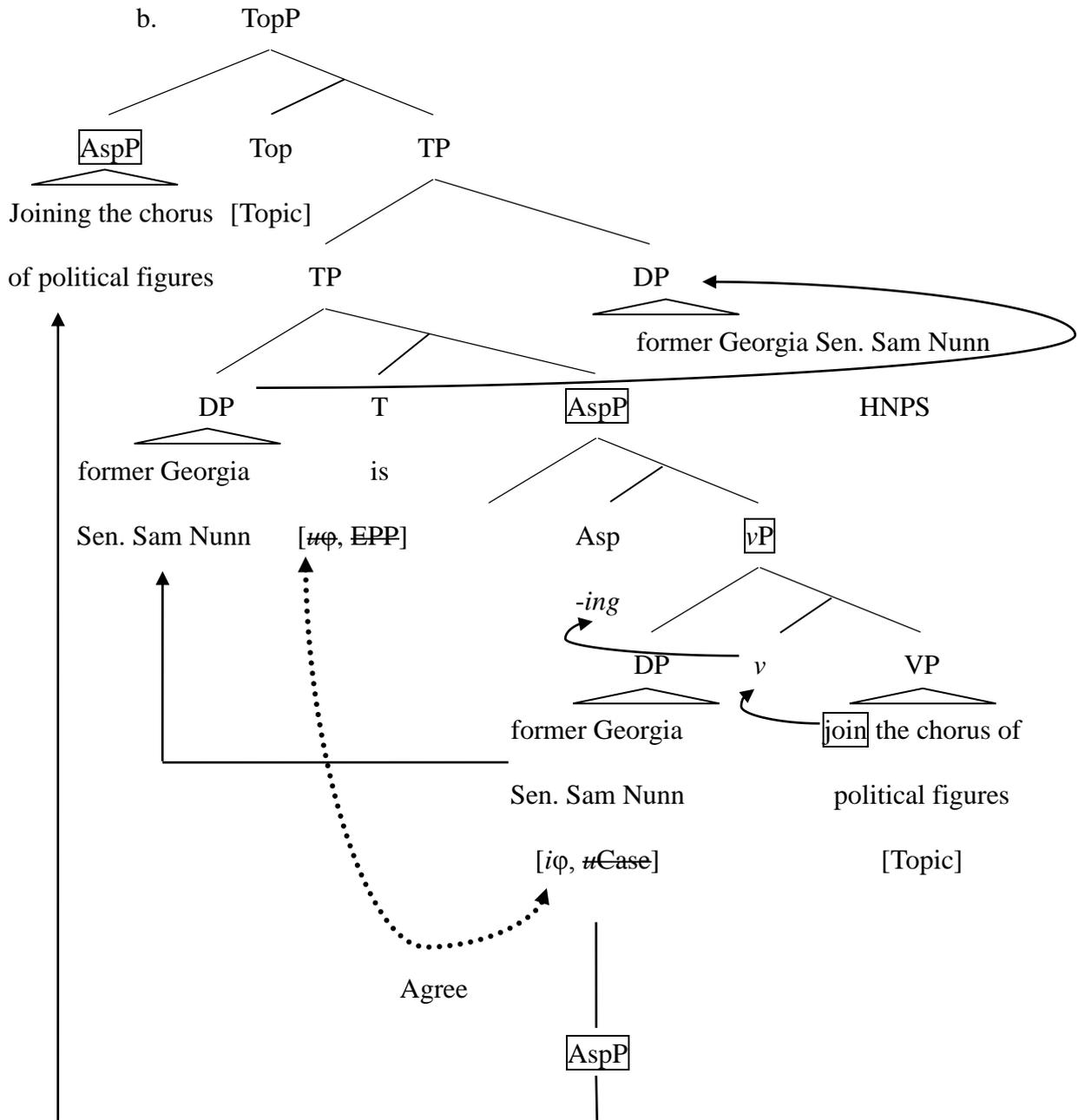
I assume (39) as the clausal architecture.

(39) Top > TP (> AspP) (> VoiceP) > vP > VP

Asp is a functional category that serves to host the progressive suffix *-ing*. The sentence does not have AspP if it does not have a progressive aspect. Voice is a functional category which carries a passive auxiliary. A sentence has VoiceP only if it is a progressive passive like *Her room is being cleaned*.

Under this assumption, the derivation of Present Participle Preposing in (40a) is schematized in (40b).

(40) a. Joining the chorus of political figures was former Georgia Sen. Sam Nunn.



The lexical verb *join* is base-generated in the head of VP and merges with the DP argument *the chorus of political figures*. The canonical subject *former Georgia Sen. Sam Nunn* is base-generated in the specifier of vP to form *former Georgia Sen. Sam Nunn join the chorus of political figures*. The suffix *-ing* and the auxiliary *be* are base-generated in the head of AspP and TP, respectively. *Be* serves as an active probe by virtue of its uninterpretable

person and number features and has an uninterpretable EPP feature. Then it searches for a c-commanded nominal goal to agree with. Since the only goal is *former Georgia Sen. Sam Nunn*, *be* agrees with it in person and number. As a result, *be* is spelled out as the third person singular form *is* in the PF component. At the same time as agreement applies, the EPP feature on T attracts the goal *former Georgia Sen. Sam Nunn* to the specifier of TP. *Former Georgia Sen. Sam Nunn* receives nominative Case and the uninterpretable EPP feature on T is deleted. Given Earliness Principle advocated by Radford (2009: 139), which requires that linguistic operations must apply as early as possible in a derivation, heavy NP shift will be applied as soon as *former Georgia Sen. Sam Nunn* is moved to the specifier of TP. The lexical verb *join* moves to *v*, and further moves to the head of AspP in order to attach to and host the present participle suffix *-ing*. Now that the canonical subject *former Georgia Sen. Sam Nunn* already left *vP*, AspP only includes the present participle and its complement: *joining the chorus of political figures*. When VP *join the chorus of political figures* serves as a topic in the discourse, it has a Topic feature. Then AspP can function as a Top-marked phrase. It is attracted by the Topic feature on Top and moves to the specifier of TopP. The highest copies of the canonical subject DP and the Top-marked phrase AspP is spelled out in the PF component, yielding the surface form of (40a).

There are three options available other than the pattern of (40a): (i) VP does not have a Topic feature and heavy NP shift is not applied, (ii) VP has a Topic feature and heavy NP shift is not applied, (iii) VP does not have a Topic feature and heavy NP shift is applied. In the pattern (i), AspP will stay in the original position without being attracted by a Topic feature on Top. Then a sentence with a canonical word order like (41a) will be produced. In the pattern (ii), since AspP is a Top-marked phrase, it will be attracted to the specifier of TopP by a Topic feature on Top. As a result, a sentence with VP-preposing like (41b) will be yielded.¹¹

- (41) a. Former Georgia Sen. Sam Nunn was joining the chorus of political figures.
b. Joining the chorus of political figures, former Georgia Sen. Sam Nunn was.

Regarding the pattern (iii), I tentatively assume that when heavy NP shift is applied, with AspP being in the original position, a sentence with a right-dislocated subject would be produced, as exemplified in (42).

- (42) [He_i] was joining the chorus of political figures, [Former Georgia Sen. Sam Nunn_i].

The derivation of Past Participle Preposing in (43a) is expressed as (43b).

form *Nomura and three former executives separately try from Koike*. This is in turn merged with an intransitive light verb *v* with no external argument, which attracts the lexical verb *try* to attach to it. The light verb *v* is spelled out as *-ed* because the structure is a passive, with the result that the lexical verb is spelled out as *tried* in the PF component. The auxiliary *be* is base-generated in the head of TP and serves as an active probe because of its uninterpretable person and number features and its uninterpretable EPP feature. It locates a c-commanded nominal goal *Nomura and three former executives* because it has an unvalued Case feature, and agrees with it in person and number. *Be* assigns nominative Case to and attracts the DP *Nomura and three former executives* to the specifier of TP. Because of Earliness Principle, the DP must undergo heavy NP shift as early as possible when it moves to the specifier of TP. Since the canonical subject *Nomura and three former executives* has already left VP, *vP* only includes *tried separately from Koike*. When VP *separately try from Koike* serves as a topic in the discourse, it has a Topic feature. Then *vP* serves as a Top-marked phrase and is attracted by the Topic feature on Top to the specifier of TopP. The highest copy is spelled out and the others are deleted in the PF component, whereby we can get the surface form of (43a).

Again, there are other three patterns available; if VP does not have a Topic feature and heavy NP shift is not applied, an ordinary sentence like (44a) will be produced; if VP has a Topic feature and heavy NP shift is not applied, a sentence with VP-preposing like (46b) will be yielded.¹²

- (44) a. Nomura and three former executives were tried separately from Koike.
 b. Tried separately from Koike, Nomura and three former executives were.

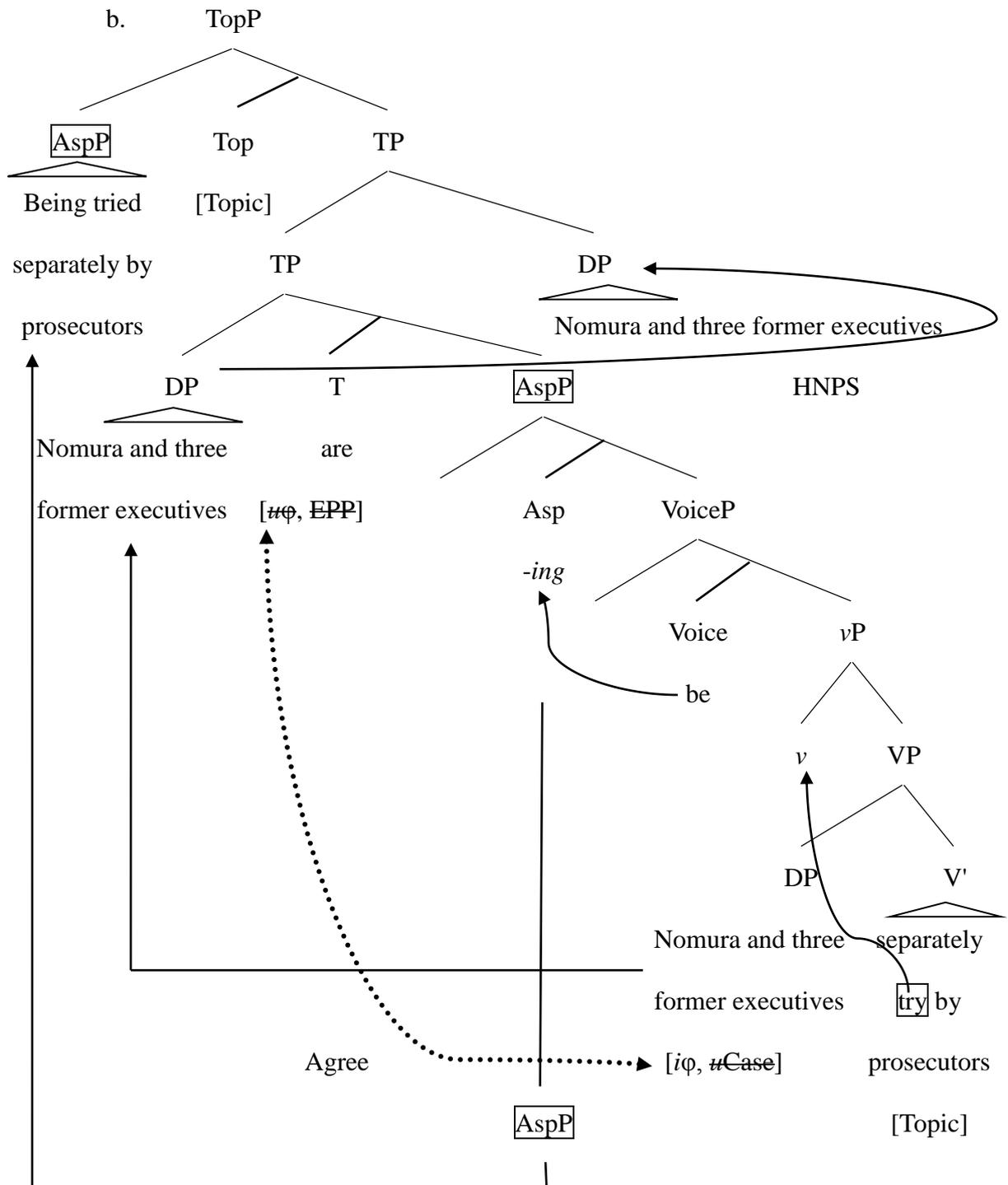
Again, when VP does not have a Topic feature and heavy NP shift is applied, I tentatively

assume that a sentence with a right-dislocated subject would be yielded, as exemplified in (45).

- (45) [They_i] were tried separately from Koike, [Nomura and three former executives_i].

Lastly, let us consider the derivation of Progressive Passive Participle Preposing in (46a). It is shown in (46b).

(46) a. Being tried separately by prosecutors are Nomura and three former executives.



The derivation of Progressive Passive Participle Preposing proceeds as follows. The vP structure is formed in the same way as vP in (43b). The suffix *-ing* and the auxiliary *be* are

base-generated in the head of AspP and VoiceP, respectively and *be* moves to the head of AspP in order to host the suffix *-ing*. Another auxiliary *be* is in turn base-generated in the head of TP and serves as a probe. *Be* agrees with a goal *Nomura and three former executives* in the specifier of VP and assigns nominative Case. The DP *Nomura and three former executives* is attracted to the specifier of TP in order to satisfy the uninterpretable EPP feature on T. Due to Earliness Principle, once the DP is moved to the specifier of TP, heavy NP shift is applied and the DP adjoins to TP. AspP only contains *being tried separately by prosecutors*. Again, when VP *separately try by prosecutors* serves as a topic in the discourse, it has a Topic feature. AspP can function as a Top-marked phrase, and so it is attracted to the specifier of TopP. Only the highest copy is spelled out and the others are deleted in the PF component, giving rise to the surface form of (46a).

Again, if VP does not have a Topic feature and heavy NP shift is not applied, an sentence with a regular order like (47a) will be produced; if VP has a Topic feature and heavy NP shift is not applied, a sentence with VP-preposing like (47b) will be given rise to.

- (47) a. Nomura and three former executives are being tried separately by prosecutors.
- b. Being tried separately by prosecutors, Nomura and three former executives are.

As for the case when VP does not have a Topic feature and heavy NP shift is applied, I also tentatively assume that a sentence with a right-dislocated subject would be yielded, as exemplified in (48).

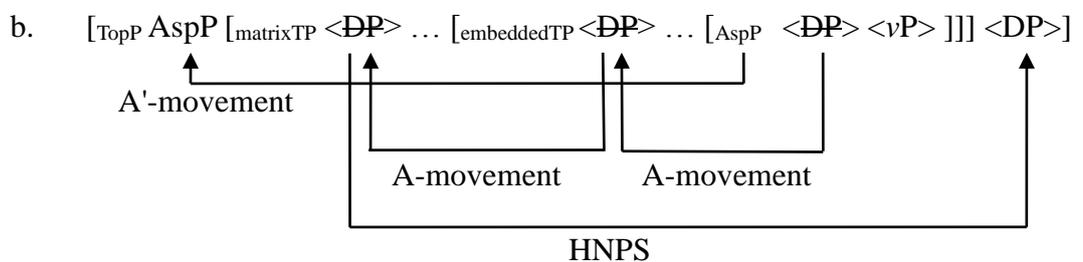
- (48) [They_i] are being tried separately by prosecutors, [Nomura and three former executives_i].

5.3.2. Empirical Supports

I have provided an analysis of the derivation of Participle Preposing. In this section I will show that the proposed analysis gets empirical supports from the syntactic behavior of Present Participle Preposing overviewed in section 5.2.1.

Firstly, let us consider the apparent A-properties that the preposed participle exhibits. Participle Preposing is compatible with the raising verb, as shown in (12a), which is repeated here as (49), and its derivation is expressed as (49b).

- (49) a. Undermining Abbey's confidence seemed to be the decline in value of Lloyds' shares. (Samko (2014a: 372))



AspP: undermining Abbey's confidence, DP: the decline in value of Lloyds' shares

The canonical subject *the decline in value of Lloyds' shares* is base-generated in the specifier of the embedded vP. Based on the standard assumption in the raising construction that the subject undergoes A-movement from the embedded infinitival clause to the matrix clause, *the decline in value of Lloyds' shares* moves from the specifier of the embedded vP via the specifier of the embedded TP to the specifier of the matrix TP. After receiving nominative

Case, it undergoes heavy NP shift to adjoin to the matrix TP. At the same time, a Top-marked phrase *undermining Abbey's confidence* is topicalized to the specifier of TopP.¹³ The participle phrase is fronted through A'-movement. The present analysis accounts for the grammaticality of (49a) without assuming the functional category PredP or the local topicalization that is postulated in Samko (2014a, b).¹⁴

Next, consider the A'-properties of the preposed participle. The canonical subject cannot be topicalized in Participle Preposing, as shown in (19a), repeated here as (50). In the present analysis, the progressive AspP *leading the way* is assumed to occupy the Top position, so that the canonical subject Jeff Maggert cannot undergo topicalization.

(50) * Jeff Maggert, leading the way is. (Samko (2014a: 373))

Participle Preposing does not form *wh*-questions or polar questions, as shown in (19b, c), repeated as (51a, b), respectively. Given the assumption that interrogative *wh*-phrases move to the specifier of FocP and interrogative auxiliaries move to the head of FocP (Radford (2009)), they are not allowed to precede the topicalized phrase because TopP is assumed to be positioned above FocP.

(51) a. * When_i were leading the group down Bombardier Inc. shares _{t_i}?
 b. * Was softening the blow the fact that Mirror Group's cable television account was one of the four pieces of business? (Samko (2014a: 373))

The impossibility of Participle Preposing in the ECM complement is also accounted for under the proposed analysis. Given the standard assumption that the ECM complement is TP, a Top-marked phrase *anchoring their prizes* in (52) cannot find the landing site, and

therefore, (52) is ungrammatical.¹⁵

(52) * I believe [_{TP} anchoring their prizes [_T to be pictures of former dictators]].

(Samko (2014a: 378))

5.4. The Phasal Status of Progressive AspectP

5.4.1. Phases and Ellipsis

It was suggested in the previous section that ν P or progressive Asp(ect)P is preposed in Participle Preposing. This section shows that the proposed analysis is supported in terms of the composition of phases proposed by Harwood (to appear), who claims that the progressive aspect is included in a phase but perfective ν P is not.¹⁶ Based on the assumption that phases are phonologically independent, and therefore are movable (Chomsky (2000), den Dikken (2007)), I will claim with Harwood that movement of progressive AspP as well as ν P is possible because of their phasal status.

Chomsky (2000: 106) defines CP and ν P as independent syntactic objects and call them phase. He takes them to be propositional in that CP is “a full clause including tense and force” and ν P is a verb phrase in which all theta roles are assigned. CP and ν P are independent in terms of the meaning side and the sound side; on the other hand, TP and VP are not independent and so they are not taken to be a phase. He implies that only phases can undergo movement like fronting, extraposition, pseudo-clefting and so on. Additionally, den Dikken (2007: 15) also points out the movable property of a phase: “phases are phonologically independent (prosodically isolable, movable).”

Let us in turn discuss the relationship between ellipsis and phases. It is often suggested in the literature that ellipsis is constrained by phases and the ellipsis site corresponds to phasal spell-out domains (Gengel (2007, 2008)). For instance, in sluicing (i.e.

TP ellipsis) the ellipsis site corresponds to spell-out domains of CP phases, as exemplified in (53a). In VP ellipsis (VPE), the ellipsis site corresponds to spell-out domains of ν P phases, as illustrated in (53b).

- (53) a. Pinocchio lied about something, but I don't know [_{CP} what [_{TP} ~~Pinocchio~~–
~~lied about~~]] (Harwood (to appear: 7))
- b. John wants to leave, and Bill would like [_{TP} to [_{VP} [_{VP} ~~leave~~]]], too.

However, recent studies indicate the possibility of the ellipsis of the entire phase. Harwood (to appear) and Bošković (2014) claim that ellipsis can be applied to either the phasal complement or the entire phase. Harwood (to appear) adduces two pieces of evidence for full phasal ellipsis. First, consider the instance in (54).

- (54) a. Although I don't know who Thomas will visit, I do know who Aga will
[visit t_{who}].
- b. *Although I don't know who Thomas will visit, I do know who Aga will do
[visit t_{who}]. (Baltin (2012: 13, 14))

The grammaticality of (54a), where VPE is applied, indicates that *wh*-object extraction out of the ellipsis site is possible. *Who* moves to the specifier of the embedded CP via the outer specifier of the embedded ν P which is not elided under VPE, and therefore, *who* survives the ellipsis. In contrast, (54b) is ungrammatical. According to Harwood, this is because the presence of British English *do* prevents *wh*-object extraction out of the ellipsis site.¹⁷ He assumes that *who* is not allowed to move to the specifier of the embedded CP from the outer specifier of the embedded ν P, because the embedded ν P including its outer specifier is elided

by VPE when British English *do* is present. This demonstrates that VPE targets the full ν P phase.

The second piece of evidence for full phasal ellipsis is provided in (55).

- (55) John said there were several people arrested last night, and indeed there
were (*several people) ~~arrested~~. (Harwood (to appear: 11))

When VPE is applied to a passive existential construction, the subject undergoes ellipsis. Given Chomsky's (2001) assumption that the subject lies in the ν P phase in a passive existential construction, the obligatory ellipsis of *several people* in (55) suggests that VPE targets the full ν P phase.

To summarize, phases are an independent syntactic object in terms of the meaning side and the sound side, and only phases are subject to movement. Ellipsis sites correspond not only to the phasal complement but also to the full phase.

5.4.2. Where is the Borderline of the Ellipsis Site in Multiple Aspectual Projections?

With the discussion in the previous subsection and our attempt to demonstrate the phasal status of progressive AspP as well as ν P in mind, let us look into the structure of a sentence in (56) with multiple aspectual projections intervening between TP and ν P.

- (56) Besty must have been being paid to keep quiet about the crime.
(Harwood (to appear: 1))

The sentence in (56) includes a modal auxiliary *must*, a perfective auxiliary *have*, a passive *been*, a passive progressive *being* and a past participle *paid*. When VPE is applied to

sentences like (56) with multiple aspectual projections, we see that the ellipsis site is as large as the passive progressive layer, but not larger (Harwood (to appear: 19)). This is accounted for as follows.

A passive progressive *being* or a copular *being* is obligatorily elided under VPE, as shown in (57a, b), respectively.

- (57) a. Goofy was being chastised, and Pluto was (*being) ~~chastised~~, too. (passive progressive)
- b. Goofy was being annoying, and Pluto was (*being) ~~annoying~~, too. (copular)
- (Harwood (to appear: 12))

A passive *been/be* or a copular *been/be* is optionally elided under VPE, as illustrated in (58, 59), respectively.

- (58) a. Roger has been framed, and Nixon has (been) ~~framed~~, too. (passive)
- b. Roger will be framed, and Nixon will (be) ~~framed~~, too. (passive)
- (59) a. Betty has been in the garden, and Sam has (been) ~~in the garden~~, too. (copular)
- b. Betty will be in the garden, and Sam will (be) ~~in the garden~~, too. (copular)
- (Harwood (to appear: 13, 14))

A progressive *been/be* is also optionally elided under VPE, as shown in (60, 61).

- (60) a. Roger has been questioning our motives, but Peter hasn't (been).

- b. Roger will be questioning our motives, but Peter won't (be).
- (61) Bob has been dying to meet you, even though he says that he hasn't (been)
~~dying to meet you.~~ (Harwood (to appear: 14, 15))

In contrast, non-finite perfect *have* generally is not elided, as shown in (62).¹⁸

- (62) a. This time next year Bob will have been to Rome, and Betsy will *(have)
~~been to Rome,~~ too.
- b. Betsy thinks that Bob might have been around the block a few times, and I
 also seem to think that he might *(have) ~~been around the block a few times.~~
- (Harwood (to appear: 16))

Given these facts, Harwood (to appear) concludes that in (56), repeated here as (63), there is a borderline of the ellipsis site between non-finite perfect *have* and a progressive or passive *been*.

- (63) Besty must have been being paid to keep quiet about the crime.

5.4.3. Fronting Phenomena

We have observed in section 5.4.1 that only phases are subject to movement and what is elided by VPE is the phasal complement or the entire phase, and in section 5.4.2 that a progressive *being/been/be* and a passive or copular *being/been/be* are elided by VPE but non-finite perfect *have* is not. This subsection shows with Harwood (to appear) that the site deleted obligatorily in VPE moves obligatorily in Participle Preposing, while the undeleted site in VPE is not allowed to move in Participle Preposing. It is also shown that this is the

case with VP fronting and pseudo-clefting. I claim that progressive AspP is a phase in light of the analysis proposed in (40, 46) because it is progressive AspP that is preposed.

Let us first look at an instance of Participle Preposing with multiple aspectual projections. The grammatical difference between (64a) and (64b) expresses that a progressive *being* is obligatorily preposed together with a lexical verb and its complement.

- (64) a. [Also being examined for body parts] is the tonnes of rubble being removed from the site.
- b. *[Also examined for body parts] is being the tonnes of rubble being removed from the site. (Harwood (to appear: 24))

The contrast between (65a) and (65b) indicates that non-finite perfect *have* is not preposed.

- (65) a. [Also examined for body parts] will have been the tonnes of rubble being removed from the site.
- b. *[Also have been examined for body parts] will the tonnes of rubble being removed from the site. (Harwood (to appear: 24, 25))

Recall the fact in (57) that a passive progressive *being* is obligatorily elided under VPE and the fact in (62) that non-finite perfect *have* is generally not allowed to be elided. Thus examples in (64) and (65) illustrate the generalization that the site deleted obligatorily in VPE moves obligatorily in Participle Preposing while the undeleted site in VPE is not permitted to move in Participle Preposing.

Given the assumptions in the section 5.4.1 that only phases are subject to movement and VPE elides the phasal complement or the entire phase, it would be plausible to assume

that the square bracketed part in (64a) *also being examined for body parts* and the square bracketed part in (65a) *also examined for body parts* would be a full phase because they are preposed. Furthermore, taking into consideration that the square bracketed part in (64a) corresponds to AspP in (46), and the square bracketed part in (65a) conforms to *vP* in (43), I claim that progressive AspP as well as *vP* is a phase.

The Present Participle Preposing sentence in (66b), which comes from (66a), is also acceptable.¹⁹ The grammatical difference between (66b) and (66c, d) also demonstrates that progressive AspP *being paid to keep quiet about the crime* is a phase because *being* is obligatorily preposed together with *paid to keep quiet about the crime* in Present Participle Preposing.²⁰

- (66) a. Besty must have been being paid to keep quiet about the crime.
 b. Being paid to keep quiet about the crime must have been Besty.
 c. *Paid to keep quiet about the crime must have been being Besty.
 d. *Have been being paid to keep quiet about the crime must Besty.

The phasal status of progressive AspP is also supported by VP fronting and pseudo-clefting. They show a syntactic fact similar to Participle Preposing, as exemplified in (67, 68) and (69, 70), respectively. Examples in (67a, b) express that a progressive *being* is obligatorily fronted together with a lexical verb in VP fronting; examples in (68a, b) represent that non-finite perfect *have* cannot be fronted in VP fronting.

- (67) If Darth Vader says that Han Solo was being frozen in carbonite, then...
 a. [being frozen in carbonite] he was.

- b. *[frozen in carbonite] he was being.
- (68) If Luke says he would have fought hard, then...
- a. [fought hard] he would have.
 - b. *[have fought hard] he would. (Harwood (to appear: 24))

Examples in (69a, b) also express that a progressive *being* must be fronted in pseudo-cleft sentences; examples in (70a, b) also represent that non-finite perfect *have* cannot be fronted in pseudo-cleft sentences.²¹

- (69) Elmer Fudd should be being criticised.
- a. No, [being praised] is what Elmer Fudd should be.
 - b. *No, [praised] is what Elmer Fudd should be being.
- (70) Elmer Fudd should have been criticised.
- a. No, [praised] is what Elmer Fudd should have been.
 - b. *No, [have been praised] is what Elmer Fudd should.
- (Harwood (to appear: 24))

5.5. Concluding Remarks

We have so far discussed the syntactic structure of Participle Preposing, especially focusing on Present Participle Preposing. In section 5.2, I clarified its syntactic and pragmatic properties, following up on Samko (2014a). With respect to syntactic properties, it was revealed that Participle Preposing shows both A- and A'-properties. On the one hand, preposed participles can occur in raising constructions. Participle Preposing does not show the WCO effect. A negative element in preposed participles can license an NPI in the canonical subject. On the other hand, topicalization, *wh*-questions and polar questions are

impossible in Participle Preposing, and preposed participle cannot occur in ECM complements. As for pragmatic properties, it was shown that the preposed participle is a topicalized element and the canonical subject undergoes HNPS. It was pointed out that there are two problems with the previous analyses: the prohibition of the local subject topicalization and the heaviness of the canonical subject.

In section 5.3, I proposed the syntactic structure to derive Participle Preposing. It was claimed that vP or progressive AspP is preposed to the specifier of TopP through A'-movement, and the canonical subject is moved to the TP-adjoined position via the specifier of TP. The latter movement is due to HNPS. The proposed analysis solved the first problem with the previous analyses and partly solved the second problem with it. However, it could not account for the absence of the WCO effect or the license of NPIs, both of which presuppose A-movement of the participle phrase to the specifier of TP.

In section 5.4, based on Harwood (to appear), I argued that progressive AspP as well as vP is a phase in terms of ellipsis and fronting phenomena. Under the assumption that only phases are subject to movement and what is elided by VPE is the phasal complement or the entire phase, it was claimed that progressive AspP in Participle Preposing is a phase because it corresponds to the site deleted obligatorily in VPE.

NOTES to Chapter 5

1. The term ‘preposing around *be* (PAB)’ is used in Emonds (1976). The term ‘Participle Preposing’ is used in Akmajian and Wasow (1975). Haegeman (2008) employs the term ‘predicate inversion’ to refer to PAB.
2. Adjective Preposing and Preposition Preposing do not usually allow a pronoun to occur in the canonical subject position, either, as shown in (i).

- (i) a. *Less fortunate was she/her.
b. *At the foot of the stairs was she/her. (Rochemont (1985: 31))

However, Rochemont (1985: 31) points out that (9) in the text and (i) are acceptable in a context where the pronoun has the deictic reference, and in such a case, an accusative Case marking is more natural than nominative Case marking. Lightfoot (1979) states that the preference of an accusative Case-marked pronoun over a nominative one is related to a historical reanalysis of word order; in languages that have SVO order, it is common to mark a postposed subject with the accusative Case.

3. Unlike Present Participle Preposing, LICs allow only for a nominative Case-marked DP in the post-verbal position.

- (i) In the garden sat {they/*them}! (Mikami (2010: 299))

4. The percent sign in (10b) expresses that some speakers do not accept the sentence.
5. According to Bern Samko (p.c.), NPIs in the post-verbal subject are marginal. However, the fact that the inverted word order in (ia) is far better than the uninverted word order in (ib) would show that NPIs are compatible with the participle preposing.

- (i) a. ?? Walking into none of the classrooms were any of the students.
b. *Any of the students were walking into none of the classrooms.

6. Present Participle Preposing seems to be compatible with unaccusative verbs such as

come, sit and so on other than the auxiliary *be*, as shown in (21d, 25a). However, as far as I know, verbs other than *be, come* and *sit* are not used in Present Participle Preposing.

7. As noted in the text, I understand that such a simple examination is not sufficient to ascertain whether the canonical subject in Present Participle Preposing is heavy or not, and so a comprehensive research needs conducting. This is left aside for my future research.
8. Masayuki Ohkado (p.c.) points out the possibility that the post-verbal canonical subjects in (24a, c) are postposed because they contain unfamiliar information as well as familiar information. For instance, the canonical subject in (24c) includes new information such as *another main suspect, Abraham Rubio Canales, was a onetime aide to Ruiz Massieu in Guerrero*.
9. One might suspect that the ungrammaticality of (35a) is due to the failure of the reflexive pronoun receiving nominative Case. Lasnik and Saito (1992) and Mikami (2010) argue that the anaphor can get nominative Case because the topicalization of the anaphor *himself* from the subject position is possible, as exemplified in (i).

(i) ?? John thinks that himself_i, Mary said *t*_i won the race.

(Lasnik and Saito (1992: 198))

Mikami (2010: 306) states that “the reflexive is in principle compatible with nominative Case valued by T.” However, it should be noticed that non-nominals can function indirectly as a subject or object when they are topicalized, as shown in (iib). A *that*-clause is not allowed to occur in the object position of the verb phrase *think of*, as shown in (iia), but it can appear in the position of topic. Given that *that*-clauses are non-nominals and are not assumed to get Case in English, their assumption that the reflexive can get nominative Case and serves as a subject might

need reconsidering.

(ii) a. *He didn't think of [that he might be wrong].

b. [That he might be wrong] he didn't think of *t*. (Bresnan (1994: 106))

In passing, the sentence in (i), where the deeply embedded subject *himself* is topicalized, is reasonably acceptable because the topicalization of *himself* is not string-vacuous.

10. Previous analyses with PAB do not give an explanation about the tag-questions. Samko's assumption that an expletive *there* is a default for tag questions is stipulative. As noted in the text, Participle Preposing and LICs are compatible with an expletive *there* in tag questions. Given that there are several studies of tag questions in LICs (Bowers (1976), Iwakura (1978) and Levine (1989)), it would be better to tackle the problem of tag questions with the analysis given to LICs. However, the problem on tag questions will not be undertaken here and will be set aside for my future research.

11. Akmajian and Wasow (1975: 223) illustrate that in VP-preposing (VP-fronting), the fronted VP can include a progressive form and its complement, as exemplified in (ia). Of course, if a progressive *be* is present, it must be fronted together with a lexical verb, as shown in (ib).

(i) a. They said he would be drinking rum all night and drinking rum he was.

b. I never dreamed that Mary was being treated by a psychiatrist, but being treated she was. (cf. Akmajian and Wasow (1975: 223))

12. VP-preposing including a past participle is also illustrated in Akmajian and Wasow (1975: 223).

(i) They promised that the prisoner would be examined by a doctor, and

examined by a doctor he was. (cf. Akmajian and Wasow (1975: 223))

13. A long distance topicalization in the raising construction is possible as illustrated in (i).
 - (i) John_i, Paul claims Mary seems to love *t_i*. (Mikami (2010: 317))
14. The present analysis cannot explain the absence of the WCO effect and the license of NPIs in Present Participle Preposing, because they presuppose A-movement of the participle phrase to the specifier of TP. This matter is left open for my future research.
15. There remains one problem concerning the pronominal subject. Participle Preposing is incompatible with a pronominal subject, as shown in (9), repeated here as (i). The present analysis would wrongly predict that an example with a nominative Case-marked pronominal subject *Standing in the doorway was he* is grammatical. I assume that this is related to the information structure; pronouns generally express old information and therefore would resist occupying the sentence-final position.
 - (i) * Standing in the doorway was he/him. (Rochemont (1985: 31))
16. Samko (2014a) suggests that she is also based on Harwood (to appear).
17. Baltin (2012) discusses peculiar syntactic behaviors of British English *do* in relation to the ellipsis phenomenon.
18. There are two competing analyses on the ellipsis of non-finite perfect *have*: one claims that it can never be deleted, and the other claims that it can. For detailed discussion, see Harwood (to appear: 15-19).
19. Samko (p.c.) states that the sentence in (66b) is acceptable in an appropriate context.
20. Although a progressive *been* is optionally elided under VPE, as shown in (60) and (61), *been being paid to keep quiet about the crime* cannot be preposed in (66a).

Harwood (to appear: 25) gives a theoretical account of this problem.

(i) * Been being paid to keep quiet about the crime must have Besty.

21 For the analysis of pseudo-clefting which is argued to involve fronting, see den
Dikken (2006) and references therein.

Chapter 6

Conclusion

This thesis has investigated the gerundive and participial constructions in English with special reference to their historical development within the framework of generative grammar. Chapter 2 outlined generative grammar. Chapter 2 discussed the syntactic structure of retroactive gerunds, focusing on the historical development of *worth* with retroactive gerunds. The syntactic structure of the gerundive complement of *worth* was analyzed under the framework of the recent minimalist program. Chapter 3 clarified the whole path of the development of present participles postmodifying nouns in the history of English and gave it a syntactic account within the framework of generative grammar. Chapter 4 discussed the syntactic and semantic properties of *with*-augmented ACs and argued for grammaticalization of *with* in *with*-augmented ACs in the twentieth century. Chapter 5 examined the syntactic structure of Participle Preposing, especially focusing on Present Participle Preposing and arguing for A'-movement of progressive AspP or ν P to the specifier of Topic.

This thesis will make a contribution to historical linguistics; we succeeded in making up for shortcomings in previous studies through the investigation with the corpora and the OED quotations. Chapter 2 demonstrated through the corpus survey that the gerundive complement of *worth* underwent the same reanalysis as gerunds in general; Chapter 3 clarified the period when participial relatives appeared in the history of English and the whole path of their historical development on the basis of the data obtained from the corpora;

Chapter 4 verified through the data obtained from the OED quotations that frequency of *with*-augmented ACs with an *-ing* predicate denoting time, cause, reason and so on other than manner and attendant circumstances increased in the twentieth century, and *with* of *with*-augmented ACs was argued to have been grammaticalized in the twentieth century.

The thesis will also make a contribution to theoretical linguistics; the syntactic or semantic properties of gerundive and participial constructions in English are adequately accounted for within the framework of generative grammar. This would be preferable in that theory was correctly linked with practice. As described in chapter 1, it seems that the recent minimalist program tends to put too much priority on a conceptual aspect and often make light of an empirical aspect. Given the widely accepted idea in natural science that theory should be carried on in parallel with practice, the current tendency to treat an empirical aspect lightly in the recent minimalist program would not be desirable. It would be necessary to place a high value on an empirical aspect as well as a conceptual aspect. I believe that this thesis would be relevant in that it combined theory with practice. In the rest of this thesis, we will summarize each chapter and point out remaining problems to be solved.

Chapter 1 outlined the thesis and described the gist of generative grammar, especially focusing on its theoretical changes. It also pointed out a problem with the recent minimalist program.

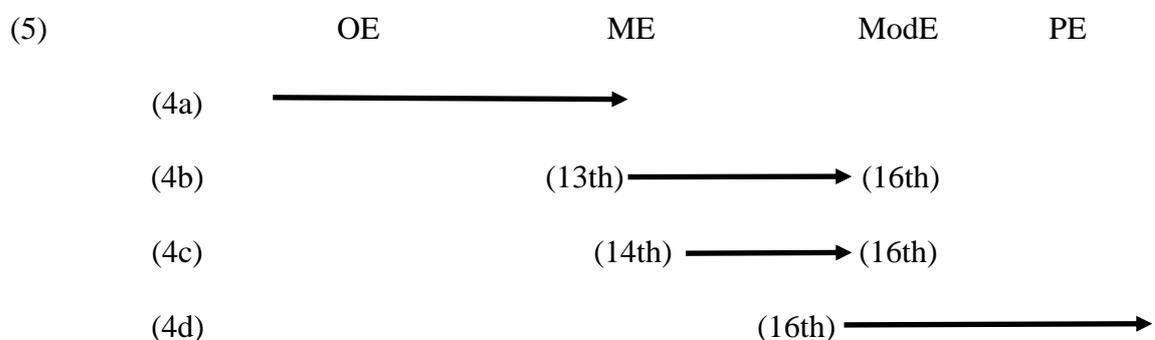
Chapter 2 proposed that the gerundive complement of *Worth* Type in Present-day English is v^*P , and that they involve A'-movement of the null operator to the outer specifier position of v^*P , which serves to establish the retroactive construal. The syntactic structure of the gerundive complement of *Worth* Type was shown in (1).

- (1) This issue_i is worth [v^*P Op_i [v^* PRO [v^* considering t_i]]].

Need Type and *Worth* Type in (3), and the retroactive construal would be yielded by thematic linking in the same way as in (2). Retroactive deverbal nominals show several peculiar behaviors.¹ Therefore it would be worth studying deeply in terms of syntax or semantics. Moreover, the historical study of retroactive deverbal nominals might provide us with new findings.

Chapter 3 revealed the whole path of the historical development of participial relatives. It is summarized as in (4) and (5).

- (4) a. [DP D [AP V-ende] [NP NP]] (OE~early ME)
 b. [DP D [VP Subj [v' [V-ende/-ing] [PP P DP]]]] (13th~16th)
 c. [DP D [vP Subj [v' v [VP V-ende/-ing DP]]]] (14th~16th)
 d. [DP D [AspP Subj_i [Asp -ing [vP t_i [v' v [VP V DP]]]]]] (16th~PE)



-Ende participles in OE were adjectives and therefore there was no participial relative in OE, as shown in (4a). In EME, because of the loss of a weak adjectival inflection *-an*, the suffix *-ende* of the *-ende* participle was reanalyzed from a derivational suffix to an inflectional one. As a result, the *-ende* participle was reanalyzed from adjectives into intransitive verbs in the thirteenth century and into transitive verbs in the fourteenth century. The syntactic structure of participial relatives from the thirteenth to sixteenth century is shown in (4b, c).

The suffix *-ende* in participial relatives was replaced by the gerundive suffix *-ing* in the end of the fourteenth century and almost disappeared by the beginning of the fifteenth century. This is because the present participle suffix *-ende* underwent phonological assimilation to the gerundive suffix *-ing* in late ME.

In ModE, participial relatives with the structure of (4b, c) were reanalyzed into those with (4d) in the sixteenth century on analogy with the progressive with the structure in (6).

(6) [TP Subj_i [T' T [AspP [Asp be-*ing* [_{vP} t_i [_{v'} V VP]]]]]]

The establishment of the peripheral progressive form in the fifteenth century indicates that the suffix *-ing* expressing the progressive aspect was hosted by an aspectual category. On analogy with (6), participial relatives that have the structure of (4d), where the present participle suffix *-ing* lies in the head of AspP, emerged in the end of the sixteenth century. Since then, the participial relative has the structure of (4d). I also argued for the head raising analysis of the participial relative.

There remain two problems here as well. I could not provide sufficient consideration of the internal structure of participial relatives. I adopted the head internal analysis (i.e. the head raising analysis) but did not show in what way the AspP analysis makes the head internal analysis possible. Apart from it, I did not deal with present participles premodifying nouns such as *fascinating* in (7). A study of present participles premodifying nouns would make it possible to accomplish a comprehensive study of present participles modifying nouns.

(7) a fascinating book

Chapter 4 proposed that *with* of Class II *with*-phrases was grammaticalized in the twentieth century. The increased frequency of Class II *with*-phrases in the twentieth century promoted the diversification of semantics of *with*, and then the meaning of *with* was bleached. *With* was reanalysed from a lexical item denoting manner or attendant circumstances to a functional item in the twentieth century; this is an instance of reanalysis from a preposition to a complementizer. The diversification of semantics of *with* would be partly due to the fact that Class II *with*-phrases with an *-ing* predicate occurred before the matrix clause in the end of the fourteenth century. Fronting of them enabled *with* to denote anteriority or simultaneity from pragmatic inference, which led to creation of other meanings like cause, reason, concession and so on. Fronting of Class II *with*-phrases with an *-ing* predicate would be on analogy with Class III *with*-phrases that appeared before the matrix clause. The whole path of the historical development of *with*-phrases in *with*-augmented ACs is summarized in (8).

- (8) a. Class I
 [PP [P *mid/with* [Subj + XP]]] (OE ~ PDE)
- b. Class II
 [PP [P *with* [Subj + XP]]] (the end of 14th ~ 19th)
 [CP [C *with* [TP Subj + XP]]] (20th ~)
- XP= a verb phrase with an *-ing* form, a past participle phrase, an adjectival phrase, an adverbial phrase, a prepositional phrase and so on.

Again, there remain two problems to be solved. First, I did not give the data about the historical development of Class II *with*-phrases without an *-ing* predicate, that is, those with a past participle phrase, an adjectival phrase, an adverbial phrase, a prepositional phrase and so

on. Therefore, the proposed analysis could be restrictive to Class II *with*-phrases with an *-ing* predicate. Second, the claim that *with* is a complementizer might be controversial. Then syntactic facts expressing that *with* occupies the head of CP would be required, apart from the possibility of sentence adverbs.

Chapter 5 proposed that in Participle Preposing, progressive AspP or ν P undergoes A'-movement to the specifier of Topic and the canonical subject undergoes HNPS to the adjunct position of TP. Based on the assumption that only phases are subject to movement and that ellipsis sites in VPE correspond not only to the phasal complement but also to the full phase, it was also claimed that the preposed phrase in Participle Preposing is a phase and therefore progressive AspP as well as ν P is a phase. This claim was supported by the fact that the site deleted obligatorily in VPE moves obligatorily in Participle Preposing, VP fronting and pseudo-clefting.

There remain three problems to be solved. Firstly, we have to solve the problem with some syntactic facts: the absence of the weak crossover (WCO) effect, the license of NPIs in the canonical subject and tag-questions. Since the first two require A-movement to the specifier of TP of the preposed participle, a new mechanism would need devising. Secondly, I could not give a consideration of Participle Preposing from the historical point of view. As far as I know, there is no study about the historical development of Participle Preposing. Thus it would be worth working on the historical survey of Participle Preposing. Thirdly, we will need to take into account adverbs fronted together with a present or past participle. The proposed analysis predicts that if progressive AspP is preposed in Present Participle Preposing, an adverb expressing an aspect can also be fronted together, whereas sentence adverbs cannot. Haegeman (2008) and Birner and Ward (1992) illustrate that various types of adverbs, including those expressing an aspect, are fronted in Participle Preposing, Adjective Preposing and Preposition Preposing, as shown in (9). Their analysis

might give an insight to the prediction.

- (9) a. Also giving evidence today is Pro, Nick Avery, a family friend, and two relatives, Sarah Pape and David Wilkins

(Guardian, 1.9.3, page 4, col 3)

- b. Sharply diving the class presidents was the issue of abortion – 50 % supported a woman’ right to terminate an unwanted pregnancy; 32.5 % opposed it.

(Philadelphia Inquirer, 3.9.1983)

- c. Also reported this week was that the girlfriend of Manchester United’s new recruit, Cristiano Ronaldo, has taken a ‘catty swipe’ at Victoria Beckham

(Guardian, G2, 21.8.3, page 5, col 4)

- d. Perhaps typical is his managing to get expelled from St Martins School of art new fewer than three times.

(Observer Magazine, 27.6.4 page 17 col 1)

- e. Usually on the agenda is the issue of how to educate the tourist to make more responsible choices.

(Independent review, 15.7.4 page 3 col 4)

(Haegeman (2008: 17, 18))

Note to Chapter 6

- 1 See Safir (1991: 109ff) for peculiar behaviors of retroactive derived nominal.

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