

TOPICS IN THE SYNTAX AND SEMANTICS OF
KOREAN EMBEDDED CLAUSES

BY

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The University of Kansas, 2009

Submitted to the Department of Linguistics
and the Graduate Faculty of the University of Kansas
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy.

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Date defended: January 12, 2009

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ACKNOWLEDGMENTS

There is a Korean proverb that says, “After three years at Sodang (a traditional school for children), even a school dog can chant poetry.” I have studied linguistics for a long time, and finally I have become a baby linguist. Despite having finished my graduate studies, I still lack in every aspect of linguistics, like a toddler who cannot even stand alone without his mother’s help. Like a school dog at Sodang, I can chant the linguistic theories stuffed into my brain. But I am not afraid to take the first step toward the long journey of becoming a fully developed teacher and scholar in linguistics.

First and foremost, I would like to express my deepest gratitude to Harold Torrence, my dissertation chair, who has spent much of his precious time helping me write my thesis. During the last two years, especially, we met together in his office every other week to discuss various topics in Korean syntax and semantics. These meetings were extremely useful in helping me to better understand not only Korean but also English linguistics, and ultimately in making it possible for me to complete my dissertation. Whenever I encountered difficulties in my analyses, he always directed me to the best way to overcome them. His vast knowledge of and keen insight into linguistic phenomena have guided me to become a linguist who knows how to collect the data of a language, scientifically analyze patterns in that data, and then develop a proper theory for them. He has a wonderful personality too. He was always generous to me and encouraged me to get through the most difficult times of

writing my dissertation. Without his active assistance, I could never have completed my dissertation. I thank God for providing such a person to assist me in the final stage of my studies. I am really proud to be his first fruit in the department of linguistics at KU.

My deepest gratitude also goes to Sara Rosen, my academic advisor and dissertation co-chair, who has supported me and encouraged me to complete my long journey in linguistic studies. She is an excellent scholar and teacher of syntax. Her brilliant teaching and research skills always exceeded everyone's expectations in class. Without question, she is my role model as a teacher and scholar in my future career. Her sharp and challenging comments about my ideas and language skills in the dissertation ultimately made me a much better scholar and helped me enhance my understanding of the Korean language. I was really happy as one of her syntax group members in the department of linguistics.

I am also very grateful for the other members of my dissertation committee. Clifton Pye is a respectful person who always showed me warm-hearted concern and kindness. Every time I met with him, I felt at ease because he was always prepared for my questions about linguistics. I really admire his breadth and depth in every field of linguistics. I was also lucky to have Jie Zhang as my minor paper advisor in 2004. He has an amazingly talent in phonology. When I was writing a minor paper, he helped me to polish it in every aspect. Sanae Eda, a delightful person whom I met in the department of East Asian Language and Culture at KU, has always showed keen interest in my teaching and studying. I also thank Tien Tsung Less for becoming my

ex-departmental committee member.

My life in the department of linguistics at KU has been filled with good memories, thanks to my colleagues in the “syntax group.” I am grateful to Maria Carmen Pafafita, Yan Ling, Khalaf Al-Shammiry, Osama Abdel-Ghafer, Maisoun Abu-Joudeh, Mohamed Galal, Mike Putnam, and Suk-ju Kim for their useful suggestions and comments on my works.

I must also thank Keith McMahon, Miwha Stevenson, and Kyo-im Yun in the department of East Asian Language and Literature, in which I taught Korean as a lecturer for six years. Thanks to their warm consideration and help, I have accumulated precious teaching experiences. I am also thankful to my teaching colleagues Kyungwon Choe and Sang-hyun Kim for their support.

I would like to extend my appreciation to Yafei Li, Müvet Enç, Andrew Sihler, Charles Scot, Marlys Macken, and Thomas Purnell, who taught me in various linguistics courses when I studied in the department of linguistics at the University of Wisconsin-Madison. Also, I want to thank Sang-hun Yoon, Dukkyo Chung, Young-in Choi, Sang-keun Lee, Hongkyu, Song, Kyung-sik Shin, Tae-hyung Baek, Il-ju Ha, Kyung-a Chung, You-kang Kim, and Won-hee Lee, whom I studied together with in the department.

I want to express my gratitude to the professors in the department of English at Sogang University, where I received my first master’s degree. As my academic advisor, Professor Hong-bae Lee showed much affection and love to me. He also gave me the great opportunity of serving as a graduate assistant in the department.

Professor Tae-ok Kim and Professor Sook-whan Cho always supported and encouraged me as well.

I must not fail to express my deep thanks to the professors in the department of English Language and Literature at Chungbuk National University. Professor Sung-wook Kim, the first person who guided me to the world of English linguistics, always showed me keen concern and encouragement. I recall that Professor Ki-sun Han was a wonderful teacher who always showed her hospitality to me during my college days. Professor Kye-byung Lee and Professor Dong-byuck Kwak taught me in various linguistic courses and mentored me in my development as a linguist. I can vividly remember all the fantastic English literature classes taught by Professor Young-nam Kim, Professor Yong-mook Im, Professor Yong-soo Park, Professor Yeon-cheol Ku, and Professor Jong-hwui Kim. I wish to express my gratitude to them for their warm encouragement and support. Interestingly, I was more of a student of literature than a student of linguistics during my earlier college days.

Finally, and most importantly, I wish to express my deep-hearted gratitude to my family. My wife, Yun-ok Park, was always there when I need comfort and peace. She is a wonderful partner of my life. My son, Jeremy Hyuck-Min Kwon, is always a source of laughter, relaxation, and joy. He is one of the most delightful people in the world. I must also thank my parents-in-law, Yun-seop Park and Ok-ja Nam, who have financially supported me. I dedicate this dissertation to my parents, Sang-ok Kwon and Chan-yang Kim, with my deepest love and gratitude.

ABSTRACT

This dissertation explores two specific topics in Korean syntax and semantics: *kes* constructions and scrambling of embedded clause constructions (i.e. CP scrambling). These two topics are related to each other in that *kes* constructions are a type of embedded clause construction.

In this dissertation, I arrive at two major conclusions. First, Korean *kes* constructions must be separated into two major types: head-internal relative clause (HiRC) vs. nominal complement clause (NCC) constructions, depending on the grammatical relationship between *kes* and its preceding embedded clause. In the HiRC construction, *kes* must be analyzed as an anaphoric pronoun, which is co-referential with the internal head of a HiRC. In contrast, *kes* in the NCC construction is regarded as a functional head of DP (i.e. D^0), linking a nominal complement (a *kes* NCC construction) to the matrix predicate of a sentence. Furthermore, *kes* NCC constructions can be further divided into two subtypes: propositional and perceptual, depending on the semantic relation between a *kes* NCC construction and the matrix predicate of a sentence. Syntactically, only a propositional NCC construction can be projected to a full CP node.

Second, in Korean, scrambling of embedded clause constructions (CP scrambling) is grammatically distinct from scrambling of simple noun phrases (DP scrambling) in that only the latter shows certain syntactic/semantic locality effects. Every scrambled embedded construction must be reconstructed to its base-generative

position for the syntactic and semantic interpretation. The PF-movement hypothesis (Zubizarreta 1998; Neeleman and Reinhart 1998; etc.) is suitable in explaining the ultimate nature of CP scrambling as semantically vacuous movement. In addition, CP scrambling reflects the change of the discourse-functional flow (e.g. focus) of a sentence.

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List of ABBREVIATIONS

Acc	accusative case
Adn	adnominal marker
Asp	aspect
Comp	complementizer
Cop	copular verb
Dat	dative
Dec	declarative sentence ending
Fut	future tense
Gen	genitive case
Imprf	imperfective aspect
Loc	locative case
Neg	negation
Nml	nominalizer
Nom	nominative case
Pas	passive voice
Pres	present tense
Pst	past tense
Prf	perfective aspect
Q	question sentence ending
Rel	relativizer
Top	topic marker

CHAPTER 1

Introduction

1.1 Overview

This dissertation is a theoretical and empirical study of the two specific topics in Korean syntax and semantics: *kes* constructions and scrambling of embedded clause constructions. These two topics are, especially, related to each other in that *kes* construction is a type of embedded clause construction. In this dissertation, I draw two major conclusions. First, according to the grammatical relationship between *kes* and its preceding embedded clause, Korean *kes* constructions cannot be explained in a unified way; rather, they must be grammatically separated into two major types: “head-internal relative clause (HiRC)” vs. “nominal complement clause (NCC)” constructions. In addition, the *kes* NCC constructions can be further divided into two subtypes: “propositional” vs. “perceptual,” depending on the semantic relation between the matrix verb of a sentence and its nominal complement (i.e. *kes* NCC construction). Second, unlike DP extraction from an embedded clause construction, scrambling of the entire embedded clause construction does not show any syntactic and semantic locality effects, and thus it must be analyzed as PF-movement.

1.1.1 Korean *Kes* Constructions

In this dissertation, my primary concern goes to the syntactic and semantic nature of Korean *kes* constructions. I argue here that Korean *kes* constructions can be

classified as three types, as demonstrated in (1):¹

(1) a. Head-internal Relative Clause (HiRC) Construction

na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] kes]-ul
I-Top cat-Nom fish-Acc steal-Rel KES-Acc

cap-ass-ta
catch-Pst-Dec

‘I caught the cat while it was stealing the fish.’

b. *Propositional* Nominal Complement Clause (NCC) Construction

na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] kes]-ul
I-Top cat-Nom fish-Acc steal-Adn KES-Acc

al-ass-ta
know-Pst-Dec

‘I knew that the cat was stealing the fish.’

c. *Perceptual* Nominal Complement Clause (NCC) Construction

na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] kes]-ul
I-Top cat-Nom fish-Acc steal-Adn KES-Acc

po-ass-ta
see-Pst-Dec

‘I saw that the cat was stealing the fish.’

The *kes* construction in (1)a is distinct from other *kes* constructions in (1)b and (1)c in that it shows the properties of a “head-internal (or internally headed)” relative clause in certain grammatical respects. First, *kes* structurally occurs in the same linear position as the external head noun of a “head-external (or externally headed)” relative

¹ In the dissertation, I assume that embedded clauses preceding *kes* can be classified into two types: relative clauses and nominal complement clauses. These clauses must end in the verbal suffixes such as *-nun* or *-(u)n*. These verbal suffixes, occurring in relative clauses or nominal complement clauses, are called either “relativizers” or “adnominal” suffixes (Sohn 1999). Here, I will distinguish them as either relative markers (i.e. *Rel*) or adnominal markers (i.e. *Adn*), depending on the grammatical relationship between *kes* and its preceding embedded clauses.

clause, as shown in (2):

(2) Head-external Relative Clause (HeRC) Construction

na-nun	[[e _i	sayngsen-ul	hwumchi-nun] _{RC}	koyangi _i]-ul
I-Top		fish-Acc	steal-Rel	cat-Acc

cap-ass-ta
catch-Pst-Dec

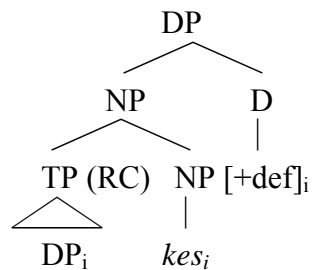
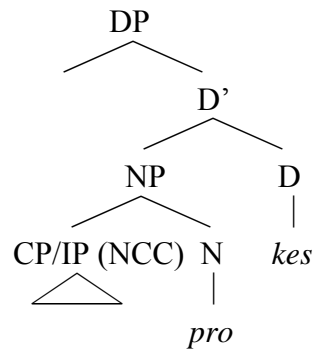
‘I caught the cat that was stealing the fish.’

Second, even though *kes* is syntactically placed in the external head position of a relative clause, the “semantic (or internal)” head of the relative clause occurs within the clause. This is a typical cross-linguistic property of head-internal relative clauses. Third, *kes* is semantically co-referential with the semantic head occurring in the preceding relative clause. That is, *kes* plays the role of the *expletive* head of a relative clause in (1)a. I call this type of *kes* construction a *head-internal relative clause* (HiRC) construction. On the other hand, (1)b and (1)c include different types of *kes* constructions compared with (1)a in that the embedded clauses appearing in the *kes* constructions cannot be analyzed as modifiers of *kes*. Furthermore, unlike *kes* in (1)a, *kes* in (1)b and (1)c cannot be co-referential with any preceding elements in the sentence. Rather, it seems to play the role of a functional head of DP (i.e. D⁰), introducing the entire *kes* construction as a complement of the matrix verb. I call this type of *kes* construction a *nominal complement clause* (NCC) construction. Thus, in this dissertation, while addressing the grammatical differences between the *kes* constructions given in (1), I argue that the embedded clause preceding *kes* in (1)a must be analyzed as a head-internal relative clause (HiRC), while the embedded

clauses preceding *kes* in (1)b and (1)c are nominal complement clauses (NCC).

Kes constructions as shown in (1) have been actively discussed in the recent Korean literature (among others, J. Jo 2004; M. Kim 2004; Cha 2005; J. Lee 2006). Traditionally, the grammatical category of *kes* in (1) has been identified as either a complementizer or a nominalizer. For example, H. Lee (1970), Yang (1975), and Jhang (1994) assume that *kes* is a complementizer since its grammatical role is similar to the English complementizer *that*. On the other hand, Cook (1968), N. Kim (1984), and J. Yoon (1995) assume that *kes* is a nominalizer because the construction containing it functions simply as a noun phrase. Here, I argue against the traditional analyses of *kes* as complementizer or nominalizer, because both can cause serious empirical problems. More recent studies on the nature of *kes* try to present a unified analysis of Korean *kes* constructions. For example, J. Lee (2006) argues that every use of *kes* is a head noun semantically related to the preceding embedded clause. In this dissertation, I argue against a unified analysis of *kes*. I argue that *kes* in the HiRC construction is distinct from *kes* in the NCC construction in certain grammatical respects. Based on the grammatical relationship between *kes* and its preceding embedded clause, I propose two different structures for the *kes* constructions in (1)a and (1)b/(1)c, as illustrated in (3):

(3) a. Proposed Structure of the HiRC Construction

b. Proposed Structure of the *Kes* NCC Construction

In the HiRC construction (3)a, I follow the traditional assumption that the structure of a relative clause is an NP-adjunction. *Kes* is a syntactic head of the preceding HiRC, and it is semantically linked to the internal head (i.e. DP_i). Cross-linguistically, the head of an HiRC must be interpreted as definite (or specific) (Culy 1990; Jhang 1994). In the same vein, I assume that in (3)a, *kes* as the head of an HiRC receives a definite (or specific) feature from the null head D^0 . Also, I assume that in Korean, the HiRC preceding *kes* cannot be projected to a fully-inflected CP node, but an IP which lacks certain speech-level or illocutionary-force suffixes. On the other hand, in the *kes* NCC structure (3)b, *kes* is a functional head (i.e. D^0) of DP, and it plays a functional role linking the entire *kes* construction as a nominal complement into the matrix predicate

of a sentence. In addition, I argue for the existence of *pro* in the N^0 position given the fact that *kes* NCC constructions follow the same pattern with other types of NCC constructions (e.g. free nominal NCC constructions). Moreover, I argue that in (3)b, according to the semantic relation between the *kes* NCC construction and its following matrix verb, *kes* NCC constructions involve either an embedded CP (in the perceptual NCC) or an embedded IP (in the propositional NCC). The properties of the three *kes* constructions that I propose in this thesis are as follows:

(4) Table 1.1 Three Types of Korean *Kes* Constructions

<i>Kes</i> Constructions	Head-internal Relative Clause (HiRC)	Nominal Complement Clause (NCC)	
		Perceptual	Propositional
status of <i>kes</i>	anaphoric pronoun	a functional head of DP (i.e. D^0)	a functional head of DP (i.e. D^0)
structure of the embedded clause	TP adjunct	IP complement	CP complement
DP scrambling	conditional	free	free

1.1.2 Scrambling of Korean Embedded Clause Constructions

Another major focus of this dissertation goes to scrambling of Korean embedded clause constructions. In Korean, not only phrase-level scrambling but also clause-level scrambling is available. To compare the two types of scrambling, look at the *kes* constructions in (5):

(5) a. *In-situ Kes* NCC Construction

John-un [Mary-ka ku coyangi-lul cwui-n] kes-ul an-ta
 J-Nom M-Nom that cat-Acc kill-Adn Kes-Acc know
 ‘John knows that Mary killed the cat.’

b. DP Scrambling from *Kes* NCC Construction

ku coyangi-lul_i John-un [_{CP} Mary-ka **t_i** cwui-n] **kes-ul**
 that cat-Acc J-Nom M-Nom kill-Adn Kes-Acc

an-ta
 know

‘As for the cat, John knows that Mary killed it.’

c. Scrambling from *Kes* NCC Construction (CP scrambling)

[[_{CP} **Mary-ka** **ku coyangi-lul** **cwui-n**] **kes]-ul_i** John-un **t_i**
 M-Nom that cat-Acc kill-Adn Kes-Acc J-Nom

an-ta
 know

‘That Mary killed the cat, John knew it.’

Example (5)a represents a default word order in Korean. In (5)b, the embedded object, *ku koyangi* ‘cat’, is scrambled from the *kes* construction to the initial position of the sentence, and I refer to this type of scrambling as DP scrambling. On the other hand, in (5)c, the entire *kes* construction can be scrambled to the sentence-initial position. I call this type of scrambling CP scrambling here, as opposed to DP scrambling.² That is, CP scrambling not only refers to scrambling of embedded clauses, but also includes scrambling of embedded clause constructions (e.g. complex noun phrases).

In addition to *kes* constructions, in Korean, CP scrambling can be found in other types of embedded clause constructions. For example, the square-bracketed

² In my terminology, CP scrambling refers not only to scrambling of CP-labeled (i.e. complement) clauses, but also to scrambling of DP-labeled complex noun phrases containing embedded clauses. The reason why complex noun phrases are put into the field of CP scrambling is that like a complement clause, a complex noun phrase occurs in the semantic selectional domain of the matrix verb across its highest node, DP. On the other hand, over CP scrambling, DP scrambling refers just to scrambling of simple DPs, which do not contain any embedded clauses in them.

embedded clauses in (6) represent a complement clause, a relative clause and a nominalized clause, respectively:

(6) a. Complement Clause

na-nun [Swuni-ka sakwa-lul mekess-ta-ko] mit-ess-ta
 I-Top Swuni-Nom apple-Acc eat-Pst-Dec-Comp believe-Pst-Dec
 ‘I believed that Swuni ate apples.’

b. Relative Clause

John-i [Mary-ka sa-n] chayk-ul ilknunta
 J-Nom M-Nom buy-Rel book-Acc read
 ‘John is reading the book which Mary bought.’

c. Nominalized Clause

John-un [Mary-ka Bill-uy cip-ey ka]-ki-lul palanta
 J-Top M-Nom B-Gen house-Loc go-Nml-Acc hope
 ‘John hopes Mary’s visiting to Bill’s house.’

In (6), all the embedded clauses precede the matrix predicate of a complex sentence since Korean is a SOV language in which a matrix predicate always occupies the final position of a sentence. Also, an embedded clause may or may not end in an inflectional suffix, which manifests its subtype of embedding. In particular, the complement clause in (6)a ends in the declarative suffix *-ta* followed by the typical clausal complementizer *-ko*. The relative clause in (6)b is sealed by the adnominal (or relative) marker, *-(nu)n*. However, the nominalized clause in (6)c is easily distinguished from the other two embedded clauses in that it usually ends in a verbal stem, which is followed by the nominalizer *-ki* (Nml), which takes the case marker. Each of these embedded clauses can undergo CP scrambling under certain circumstances, as demonstrated in (7):

(7) a. Complement Clause Scrambling

[Swuni-ka sakwa-lul mek-ess-ta-ko]_i na-nun **t_i** mit-ess-ta
 Swuni-Nom apple-Acc eat-Pst-Dec-Comp I-Top believe-Pst-Dec
 ‘I believed that Swuni ate apples.’

b. Relative Clause Scrambling

[[Mary-ka sa-n]_i chayk]-ul_i John-i **t_i** ilknunta
 M-Nom buy-Rel book-Acc J-Nom read
 ‘John is reading the book which Mary bought.’

c. Nominalized Clause Scrambling

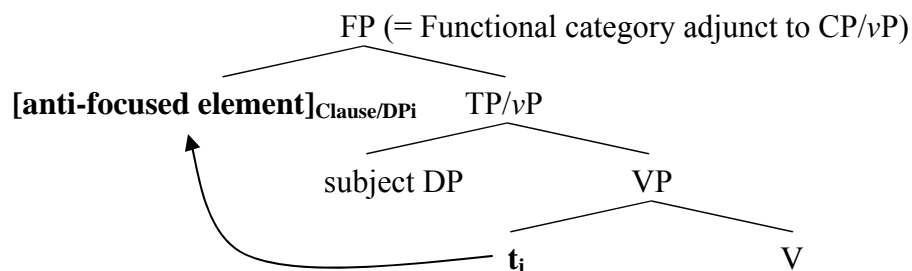
[[Mary-kaBill-uy cip-ey ka]-ki]-lul_i John-un **t_i** palanta
 M-Nom B-Gen house-Loc go-Nml-Acc J-Top hope
 ‘John hopes Mary’s visiting to Bill’s house.’

Note that scrambling of the relative clause and the nominalized clause must move together with their syntactic heads (e.g. the noun *chayk* ‘book’ in (6)b or the nominalizer *-ki* in (6)c). That is, an embedded clause cannot scramble out of complex noun phrases such as *kes* clauses, relative clauses, and nominalized clause constructions.

In this dissertation, I argue that CP scrambling is distinct from DP scrambling in that only the latter shows certain syntactic/semantic locality effects. For example, I show that DP scrambling from a *kes* construction is subject to certain locality effects, while scrambling of the entire *kes* construction is not. Scrambling in the other types of embedded clause constructions also follows the same pattern as *kes* constructions. Based on the differences between CP and DP scrambling, I suggest here that scrambled CPs must be “radically” reconstructed in the spirit of Saito (1989, 1992). In other words, every scrambled embedded clause construction must be interpreted as in its base-generated position. In pursuing some possible theoretical accounts for the

radical reconstruction effect of Korean CP scrambling, I introduce here two well-known hypotheses from the literature: the “PF-movement” hypothesis (Zubizarreta 1998; Aoun & Benmamoun 1998; Sauerland & Elbourne 2002; Sabel 2005; etc., also cf. Saito 1989, 2004) and the “discourse-oriented movement” hypothesis (Neeleman & Reinhart 1998; Abraham & Molnarfi 2002). According to the PF-movement hypothesis, CP scrambling can be treated as semantically vacuous movement because it operates at the PF interface, not in core syntax. This approach is based on the assumption that scrambling cannot be driven by a syntactic operation since there is no formal feature checking process (e.g. EPP or Topic/Focus), which is commonly assumed in syntactic analyses. Moreover, I assume that CP scrambling as PF-movement is a prosodic (e.g. destressing) movement operation, motivated by the change of the discourse-function of a sentence. Adopting the discourse-oriented movement hypothesis (Neeleman & Reinhart 1998; Abraham & Molnarfi 2002), I suggest that a heavy discourse-functional weight (e.g. focus) falling on the matrix subject DP triggers the PF-movement of an “anti-focused” embedded clause construction out of the default “nuclear stressed position” of a sentence, as illustrated in (8):

(8) Discourse-oriented Movement Hypothesis



In (8), the “defocalized (or anti-focused)” element (i.e. the entire embedded clause construction) of a sentence moves out of its base-generated preverbal position to the left periphery in order to avoid a default nuclear stress, which usually falls on the preverbal element (e.g. object) in a SOV language. This suggestion is based on the assumption that CP scrambling reflects on the discourse configurationality of Korean at PF, not LF. Thus, Korean CP scrambling is regarded as PF-movement, a stress shift process (i.e. destressing), triggered by the reconsideration of the discourse information (e.g. focus) of a sentence.

1.2 Organization

The organization of this dissertation is as follows: Chapter 2 addresses the grammatical distribution of *kes*. I argue here that *kes* constructions must be treated as complex noun phrases sharing common nominal properties, and that in *kes* constructions, *kes* is part of DP, not CP. Chapter 3 explores the head-internal relative clause (HiRC) construction. I suggest here that *kes* in the HiRC construction be analyzed as a syntactic head of the HiRC, and that it is semantically associated with an internal head of the relative clause. In Chapter 4, based on the syntactic and semantic differences between the HiRC and NCC constructions, I argue that *kes* in the NCC construction be considered as a functional head of DP (i.e. D^0), linking a nominal complement (i.e. the *kes* NCC) into the matrix verb of a sentence. In addition, I show that depending on the semantics of a matrix verb, *kes* NCC constructions can be further divided to two subtypes: propositional vs. perceptual. I show here that

scrambling is an important tool to distinguish *kes* NCC constructions from HiRC constructions. Chapter 5 discusses the grammatical nature of Korean CP scrambling. In particular, I demonstrate here that compared with DP scrambling, CP scrambling does not show any syntactic/semantic locality effects. In analyzing CP scrambling, I bring out two well-known hypotheses (i.e. PF-movement and discourse-oriented movement) in order to account for the reconstruction effect of CP scrambling. Chapter 6 is a summary and conclusion.

CHAPTER 2

Distribution of *Kes*

2.1 Introduction

The main purpose of this chapter is to explore the grammatical distribution of *kes* shown in (1). In order to present a proper analysis of various *kes* constructions, we first need to examine the distribution of *kes*. In Korean, *kes* can occur in various simple or complex noun phrases, as demonstrated in (1):

- (1) a. *ku kes* ‘the/that thing (it)’, (Demonstrative+ *Kes*)
i kes ‘this thing (this)’,
ce kes ‘that thing over there (that)’
- b. *khun kes* ‘a big thing, something big’ (Adjective + *Kes*)
say kes ‘a new thing, something new’
yeppun kes ‘a pretty thing, something pretty’
- c. na-nun [[*koyangi-ka sayngsen-ul hwumchi-nun*] *kes*]-ul
I-Top cat-Nom fish-Acc steal-Rel KES-Acc
cap-ass-ta (HiRC)
catch-Pst-Dec
‘I caught the cat while it was stealing the fish.’
- d. na-nun [[*koyangi-ka sayngsen-ul hwumchi-nun*] *kes*]-ul
I-Top cat-Nom fish-Acc steal-Adn KES-Acc
al-ass-ta (Propositional NCC)
know-Pst-Dec
‘I knew that the cat was stealing the fish.’

- e. na-nun [[*koyangi-ka* *sayngsen-ul* *hwumchi-nun*] *kes*]-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc
- po-ass-ta (Perceptual NCC)
 see-Pst-Dec

‘I saw that the cat was stealing the fish.’

In (1)a and (1)b, *kes* is treated as a bound noun, which cannot occur without any prenominal (or adnominal) modifiers such as demonstratives or adjectives. *Kes* has a specific lexical meaning ‘thing’ or ‘object’, in these simple noun phrases. The *kes* constructions in (1)c, (1)d and (1)e are complex noun phrases containing an embedded clause in them (Cook 1968; H. Lee 1970; I. Yang 1972; N. Kim 1984; Jhang 1994; Sohn 1999; M. Kim 2004; Cha 2005, etc.). To accomplish chapter’s purpose of explaining the grammatical distribution of *kes*, I will make three points. First, while discussing its morpho-syntactic properties, I will argue that *kes* in (1)a and (1)b is grammatically different from the one in (1)c, (1)d and (1)e in that the former is lexically interpreted while the latter must be functionally (or generically) interpreted. Second, while considering its various nominal properties, I will argue here that *kes* constructions in (1)c, (1)d, and (1)e must be treated as complex noun phrases. Third, regarding the occurrence of *kes* occurring in the complex noun phrases, I will argue that it cannot be part of the embedded clause (i.e. CP); rather, I will argue that it is part of the higher DP. This chapter presents necessary background on *kes*. (1)c and (1)d (and (1)e) are the focus of Chapter 3 and 4, respectively. Throughout this dissertation, I refer to head-internal relative clause (HiRC), propositional and perceptual nominal complement clause (NCC) constructions as “*kes*

constructions.” These have in common the presence of *kes* on their right edge.

This chapter is organized as follows. In Section 2.2, I will examine various grammatical properties of *kes* as a bound (or dependent) noun, and whether it can be treated as either a ‘lexical (or non-generic)’ or ‘functional (or generic)’ noun. In Section 2.3, I will explore *kes* constructions in Korean. Considering their grammatical properties especially, I will argue that they must be treated as noun phrases. In Section 2.4, I will focus on the status of *kes* in the complex noun phrases, and then I will argue that *kes* is part of DP, not CP. Section 2.5 is a summary and conclusion of this chapter.

2.2 The Grammatical Characteristics of *Kes*

In this section, I address the morphological, syntactic and semantic properties of the Korean bound noun, *kes*. Meanwhile, it will be argued that *kes* as a bound noun is distinct from other bound nouns in the sense that only *kes* can be interpreted as either lexical or functional. The lexicality of *kes* is an important clue to help us open the discussion about Korean *kes* constructions.

Kes as a bound noun is very distinct from other bound nouns in Korean. A free noun refers to a noun that can stand alone. In contrast, a bound noun is defective (or dependent) in the syntactic sense that it cannot occur without being preceded by a determiner, a complement clause, or another noun. Thus, *salam* ‘person’ in (2)a is a free noun, as it can occur by itself. (2)b, (2)c and (2)d show that *salam* can also occur with demonstratives, adjectives, or adnominal clauses, respectively:

(2) Free Noun: *salam* ‘person’

- a. *salam* ‘a person, the person, persons, the persons’ (FN only)
- b. *ku salam* ‘the person’ (Demonstrative + FN)
i salam ‘this person’,
ce salam ‘that person over there’
- c. *khun salam* ‘a tall person’ (Adjective + FN)
say salam ‘a new person’
yeppun salam ‘a pretty person’
- d. [*nucke o-n*] *salam* ‘the person who came late’ (Adnominal clause + FN)

Kes has the properties of a bound noun, as it cannot stand by itself in (3)a:

(3) Bound Noun: *kes* ‘thing, fact’

- a. **kes*
- b. *ku kes* ‘the/that thing (it)’, (Demonstrative+ *Kes*)
i kes ‘this thing (this)’,
ce kes ‘that thing over there (that)’
- c. *khun kes* ‘a big thing, something big’ (Adjective + *Kes*)
say kes ‘a new thing, something new’
yeppun kes ‘a pretty thing, something pretty’
- d. [*nucke sa-n*] *kes* ‘something that (someone) bought late’ (Adnominal clause + BN)

In (3)b, (3)c, and (3)d, like a free noun, *kes* can also occur with demonstratives, adjectives, or adnominal clauses, respectively. The term “adnominal clause” occurred in (2)d and (3)d is identical with the term “nominal complement clause” (or NCC) in this thesis. “Adnominal clause” simply refers to the prenominal clause that ends in a verbal suffix (or adnominal marker) such as a *-nun*, *-(u)n*, or *-(l)ul*. The most distinct

feature of Korean bound nouns is that each of them is subject to its own grammatical restrictions on the elements that it can follow. In other words, a bound noun has its own specific constraints on the preceding elements (e.g. demonstratives, adjectives, or nominal complement clauses), depending on its lexical properties. In this respect, there are two subtypes of bound nouns in Korean. One type of bound nouns allows both demonstratives and other pronominal elements to precede them, whereas the other type does not allow demonstratives to precede at all, but only other elements (e.g. nominal complement clauses and adjectives). For example, bound nouns such as *kes* ‘thing, fact, event’, *swu* ‘ability, possibility’, *ttay* ‘time’, *cen* ‘before’, etc. can be preceded by demonstratives, adjectives or adnominal clauses. However, other bound nouns such as *chek* ‘pretense’, *cwul* ‘method’, *ci* ‘whether, since’, *li* ‘reason’, etc., can be preceded by adjectives or nominal complement clauses, but not by demonstratives:

(4) Bound Nouns: *chek* ‘pretense’

- a. **chek*
- b. **ku chek*, **i chek*, **ce chek* (Demonstrative + BN)
- c. *khun chek* ‘pretense of being big’ (Adjective + BN)
alumdawun chek ‘pretense of being beautiful’
- d. [*ca-nun chek*] ‘someone’s pretense of sleeping’ (Adnominal clause + BN)

Like *kes*, in (4)a *chek* as a bound noun cannot stand by itself, and in (4)c and (4)d it can be modified by adjectives or adnominal clauses. However, unlike *kes*, it cannot be modified by demonstratives in (4)b.

Another difference is that while other bound nouns can occur only with a very

restricted and unproductive class of verbs, *kes* can occur with various classes of verbs. For example, the bound noun, *swu* ‘ability, possibility’ in (5) can occur only with a class of existential verbs such as *issta* ‘exist’ or *epsta* ‘do not exist’, and the bound noun *chek* ‘pretense’ in (6) must be associated only with the verb *hata* ‘do’. However, the bound noun *kes* (7) is not restricted in this way and can occur with various classes of verbs:

- (5) a. na-nun [yenge-lul ilk-ul] **swu(-ka)** **eps-ta**
 I-Top English-Acc read-Adn BN(possibility)-Nom not.exist-Dec
 ‘I cannot read English (= I do not have the ability to read English).’
- b. *na-nun [yenge-lul ilk-ul] **swu(-lul)** **hay-ss-ta**
 I-Top English-Acc read-Adn BN(possibility)-Acc do-Pst-Dec
- (6) a. na-nun [yenge-lul ilk-nun] **chek(-ul)** **hay-ss-ta**
 I-Top English-Acc read-Adn BN(pretense)-Acc do-Pst-Dec
 ‘I pretended to read English.’
- b. *na-nun [yenge-lul ilk-nun] **chek(-i)** **eps-ta**
 I-Top English-Acc read-Adn BN(pretense)-Nom not.exist-Dec
- (7) a. na-nun [amwukes-to ilk-nun] **kes-i** **eps-ta**
 I-Top nothing-even read-Adn Kes-Nom not.exist-Dec
 ‘I have nothing to read.’
- b. na-nun [yenge-lo ilk-nun] **kes-man-ul** **hay-ss-ta**
 I-Top English-by read-Adn Kes-only-Acc do-Pst-Dec
 ‘I did only reading in English (but not writing in English)’
- c. na-nun [yenge-lul ilk-nun] **kes-ul** **an-ta**
 I-Top English-Acc read-Adn Kes-Acc know-Dec
 ‘I know how to read English.’
- d. na-nun [yenge-lul ilk-nun] **kes-ul** **coahan-ta**
 I-Top English-Acc read-Adn Kes-Acc like-Dec
 ‘I like to read English.’

Most Korean bound nouns (e.g. *cen* ‘before’, *cwul* ‘method’, or *li* ‘reason’, etc.) are strictly limited to a certain class of verbs as seen in (5) and (6), while *kes* in (7) is relatively free from such constraints on the verb types that can select for it. Another noticeable feature of *kes* in (5), (6), and (7) is that *kes* is obligatorily followed by case markers (i.e. nominative or accusative), while for other bound nouns (in (5) and (6)), case markers occur optionally.

Furthermore, most Korean bound nouns show certain restrictions on tense markers when they occur with CP modifiers, while *kes* does not have any restrictions on it. These include *-nun*, *-(u)n* and *-(u)l*. The tense marker *-(u)l* is arguably a future tense marker, *-nun* is present, and *-(u)n* is past tense. For instance, *swu* must be preceded by the future tense marker *-(u)l*:

- (8) a. na-nun [yenge-lul ilk-**ul**] swu(-ka) eps-ta
 I-Top English-Acc read-VM BN-Nom not.exist-Dec
 ‘I cannot read English (= I do not have the ability to read English).’
- b. *na-nun [yenge-lul ilk-**nun/un**] swu(-ka) eps-ta
 I-Top English-Acc read-VM BN-Nom not.exist-Dec
 (Intended) ‘I do/did not have any ability to read English.’

However, *chek* must be preceded by either *-nun* or *-(u)n*, but not by *-(u)l*:

- (9) a. na-nun [yenge-lul ilk-**nun/un**] **chek**(-ul) hay-ss-ta
 I-Top English-Acc read-Adn BN-Acc do-Pst-Dec
 ‘I pretend/pretended to read English.’
- b. *na-nun [yenge-lul ilk-**ul**] **chek**(-ul) hay-ss-ta
 I-Top English-Acc read-Adn BN-Acc do-Pst-Dec
 (Intended) ‘I will not pretend to read English.’

But *kes* has no such restriction on the tense markers, and hence it can be preceded by any of the markers:

- (10) a. na-nun [amwukes-to ilk-**nun/un**] **kes-i** eps-ta
 I-Top nothing-even read-Adn BN-Nom not.exist-Dec
 ‘I have/had nothing to read.’
- b. na-nun [amwukes-to ilk-**ul**] **kes-i** eps-ta
 I-Top nothing-even read-Adn BN-Nom not.exist-Dec
 ‘I will not have anything to read.’

Thus, the bound noun *kes* is different from other bound nouns since it can be suffixed by every adnominal marker.

Finally, *kes* is distinct from other bound nouns in that it can have a “long verbal form nominal complement clause” (henceforth, long form NCC). However, other bound nouns such as *swu* and *chek* cannot have a long form NCC, but only a “short verbal form nominal complement clause” (henceforth, short form NCC), as shown in (11), (12), and (13), respectively:

- (11) a. Short Form NCC
 na-nun [yenge-lul ilk-**ul**] **swu(-ka)** eps-ta
 I-Top English-Acc read-Adn BN-Nom not.exist-Dec
 ‘I cannot read English (= I do not have the ability to read English).’
- b. Long Form NCC
 *na-nun [yenge-lul ilk-**nun-ta-ul**] **swu(-ka)** eps-ta
 I-Top English-Acc read-Prs-Dec-Adn BN-Nom not.exist-Dec
- (12) a. Short Form NCC
 na-nun [yenge-lul ilk-**nun**] **chek(-ul)** hay-ss-ta
 I-Top English-Acc read-Adn BN-Acc do-Pst-Dec
 ‘I pretend to read English.’

b. Long Form NCC

*na-nun [yenge-lul ilk-**nun-ta-nun**] **chek**(-ul) hay-ss-ta
 I-Top English-Acc read-Prs-Dec-Adn BN-Acc do-Pst-Dec

(13) a. Short Form NCC

na-nun [yenge-ka elye-**un**] **kes**-Acc an-ta
 I-Top nothing-even difficult-Adn BN-Nom know-Dec
 ‘I know that English is difficult.’

b. Long Form NCC

na-nun [yenge-ka elyep-**ta-nun**] **kes**-Acc an-ta
 I-Top nothing-even difficult-Dec-Adn BN-Nom know-Dec
 ‘I know that English is difficult.’

Compared with the *swu* and *chek* bound noun constructions in (11) and (12) which take only short verbal forms, the *kes* constructions in (13) can take either a short or long verbal form. Thus, in this aspect, *kes* as a bound noun is distinct from other bound nouns.

A question that arises with respect to the morpho-syntactic status of *kes* is why *kes* is distinct from other bound nouns. I conjecture that this is due to the “functional” use of *kes*, in contrast to the “lexical” use of other bound nouns. As we have seen in the various examples, Korean bound nouns are tightly restricted to certain verbs that subcategorize for them. The limited use of the bound nouns in relation to certain verbs seems to be due to their specific lexical properties. This is exactly why Korean bound noun constructions are traditionally treated as idiom chunks that are inseparable from the verbs. However, like a free noun, *-kes* is relatively free from such selectional restrictions imposed by verbs. Therefore, I assume here that *kes* can be either a lexical bound noun or a functional bound noun.

The lexical bound noun *kes* has its specific lexical content, ‘thing’ or ‘object’, as we have already seen in (1)a and (1)b. In contrast, the functional marker *kes* does not carry any specific lexical meaning and is therefore similar to an expletive or a functional maker such as a complementizer or a nominalizer, as seen in (1)c and (1)d.

This contrast can be seen in the following:

- (14) a. [koyangi-ka ca-nun] **kes- \emptyset** **i-ess-ta**
 cat-Nom sleep-Adn KES be-Pst-Dec
 ‘It was cat’s sleeping.’
- b. [koyangi-ka ca-nun] **kes-i** **iss-ess-ta**
 cat-Nom sleep-Adn KES-Nom exist-Pst-Dec
 ‘There was something that a cat was sleeping in.’

Only the *kes* occurring in the existential verb construction (14)b has a lexical meaning (i.e. ‘thing’). *Kes* in (14)a carries no such lexical meaning; rather, it looks like a complementizer in the sense that it occurs between a matrix verb and its embedded clause. Thus, compared with the other bound nouns such as *-swu* and *-chek* that are always interpreted lexically, *kes* as a bound noun can be interpreted as either lexical or functional depending on the preceding modifier.³ By this classification of *kes*, for example, *kes* in (1)a and (1)b is distinguished from the one in (1)c, (1)d, and (1)e because the former carries the lexical content, ‘thing’ or ‘object’, in it while the latter is functionally interpreted without any specific lexical meaning.

In sum, *kes* as a bound noun is grammatically distinct from other Korean

³ The dichotomy between functional and lexical nouns is based on descriptive grammatical theory, in which only lexical nouns have descriptive content. In contrast, functional nouns do not have such descriptive force. According to this distinction, for example, expletives or pronouns that are not contentive are classified as functional.

bound nouns since it can be used functionally as well as lexically. The difference between *kes* and other bound nouns is summarized in the following table:

(15) Table 2.1 Differences between *Kes* and Other Bound Nouns

Restriction on ...	<i>Kes</i>	Other bound nouns (e.g. <i>swu</i> or <i>chek</i>)
preceding adnominal markers	No	Yes
verbal form of the preceding clause	Long or Short Form	Short Form only
following verb	No	Yes

I argue in this thesis that the two types of *kes* are found in similar, but distinct, constructions.

2.3 *Kes* Constructions as Complex Noun Phrases

In this section, I argue that all the *kes* constructions in (1)c, (1)d, and (1)e share a certain common syntactic property; that is, they must be analyzed as complex noun phrases (i.e. DP). Since they follow the same pattern with respect to this property, here I will exemplify only the propositional NCC construction shown in (1)d.

First, in Korean, noun phrases, adverbial phrases, clausal complements and *kes* constructions can be all scrambled to the sentence-initial position, as shown in (16):

- (16) a. Scrambled Simple Noun Phrase
inhyennng-ul Mary-ka **t_i** sa-ss-ta
 doll-Acc Mary-Nom buy-Pst-Dec
 ‘The doll, Mary bought it.’

b. Scrambled Adverbial Phrase

kakkumssik Mary-ka t_i inhyeng-ul sa-ss-ta
 occasionally Mary-Nom doll-Acc buy-Pst-Dec
 ‘Occasionally, Mary bought the doll.’

c. Scrambled Clausal Complement (i.e. CP)

[**Mary-ka hakkyo-ey o-ass-ta**]-ko nay-ka t_i
 M-Nom school-Loc come-Pst-Dec-Comp I-Nom

sayngkakha-n-ta
 think-Prs-Dec

(lit) ‘That Mary came to school, I think.’

d. Scrambled *Kes* Construction

[**Mary-ka hakkyo-ey o-n**]-kes-ul nay-ka t_i
 M-Nom school-Loc come-Adn-Kes-Acc I-Nom

al-ass-ta
 think-Pres-Dec

(lit) ‘That Mary came to school, I knew.’

But only noun phrases can take the topic marker *-nun* in the sentence-initial scrambled position, as shown in (17)a. Likewise, the scrambled *kes* construction can be marked by the topic marker *-nun*, as shown in (17)d:

(17) a. Scrambled Simple Noun Phrase

inhyeng-un Mary-ka t_i sa-ss-ta
 doll-Acc Mary-Nom buy-Pst-Dec
 ‘As for the doll, Mary bought it.’

b. Scrambled Adverbial Phrase

***kakkumssik-un** Mary-ka t_i inhyeng-ul sa-ss-ta
 occasionally-Top Mary-Nom doll-Acc buy-Pst-Dec
 (Intended) ‘Occasionally, Mary bought the doll.’

c. Scrambled Clausal Complement

*[**Mary-ka** **hakkyo-ey** **o-ass-ta**]-**ko-nun** nay-ka **t_i**
 M-Nom school-Loc come-Pst-Dec-Comp-Top I-Nom

sayngkakha-n-ta
 think-Prs-Dec

(Intended) (lit) ‘That Mary came to school, I think.’

d. Scrambled *Kes* Construction

[**Mary-ka** **hakkyo-ey** **o-n**]-**kes-un** nay-ka **t_i**
 M-Nom school-Loc come-Adn-Kes-Top I-Nom

al-ass-ta⁴
 know-Pres-Dec

‘(lit) The thing that Mary came to school, I knew.’

In (17)b and (17)c, neither the adverbial phrase *kakkumssik* ‘occasionally’ nor the clausal complement marked by *-ko* can take the topic marker *-nun* in its scrambled position. But the *kes* construction in (17)d can take the topic marker, and thus it must be analyzed as a noun phrase.

Second, in Korean, only noun phrases can occur in the pseudo-cleft construction, formed by placing them in the pre-copula position, as demonstrated in (18)b:

(18) a. Mary-ka **inhyeng-ul** sa-ss-ta
 M-Nom doll-Acc buy-Pst-Dec
 ‘Mary bought a/the doll.’

b. Mary-ka sa-n kes-un **inhyeng** i-ta
 Mary-Nom buy-Adn Kes-Top doll Cop-Dec
 (lit) ‘The thing that (= what) Mary bought is a/the doll.’

⁴ In Korean, the topic marker *-(n)un* cannot co-occur with case markers such as the nominative *-ka/-i* and the accusative *-(l)ul*. Thus, the topic marker *-un* replaces the accusative case-marker *-ul* in (17)c.

The sentence (18)b is regarded as the pseudo-cleft construction derived from (18)a.

The noun phrase *inhyeng* ‘doll’ in (18)b is placed in the pre-copular position and is assigned a focus reading. The clausal complement marked by the complementizer *-ko* cannot occur in the pseudo cleft position, as given in (19)b:

(19) a. na-nun [**Mary-ka inhyeng-ul sa-ss-ta-ko**] sayngkakha-n-ta
 I-Top M-Nom doll-Acc buy-Pst-Dec-Comp think-Pres-Dec
 ‘I think that Mary bought a/the doll.’

b. *nay-ka sayngkakha-nun kes-un [**Mary-ka inhyeng-ul**
 I-Nom think-Adn Kes-Top M-Nom doll-Acc

sa-ss-ta-ko] i-ta
 buy-Pst-Dec-Comp Cop-Dec

(Intended) ‘The thing that (= what) I think is that Mary bought a/the doll.’

However, *kes*-constructions can occur in the pseudo-cleft construction, as shown in

(20)b:

(20) a. na-nun [**Mary-ka inhyeng-ul sa-n kes**]-ul a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Pres-Dec
 ‘I know that Mary bought a/the doll.’

b. nay-ka a-nun kes-un [**Mary-ka inhyeng-ul sa-n kes**]
 I-Nom know-Adn Kes-Top M-Nom doll-Acc buy-Adn Kes

 i-ta
 Cop-Dec

(lit) ‘The thing that (= what) I know is the thing that Mary bought a/the doll.’

Thus, *kes* constructions must be analyzed as noun phrases since they can occur in the pseudo-cleft construction.

Third, in Korean, there are two types of coordinating conjunctions. That is, the coordinative conjunction, *-(k)wa* ‘and’, occurs only between two noun phrases, while the coordinative conjunction, *-ko* ‘and’, occurs only between two sentences or verbal phrases, as follows:

(21) a. Mary-ka [[**inhyeng**]-**kwa** [**lipon**]]-ul sa-ss-ta
 M-Nom doll-and ribbon-Acc buy-Pst-Dec
 ‘Mary bought the doll and the ribbon.’

b. *Mary-ka [[**inhyeng**]-**ko** [**lipon**]]-ul sa-ss-ta
 M-Nom doll-and ribbon-Acc buy-Pst-Dec

(22) a. *Mary-ka [[**ece** **inhyeng-ul** **sa-ass**]-**kwa**
 M-Nom yesterday doll-Acc buy-Pst-and

[**onul** **lipon-ul** **sa-ass-ta**]
 today ribbon-Acc buy-Pst-Dec

(Intended) ‘Mary bought a/the doll yesterday and bought a/the ribbon today.’

b. Mary-ka [[**ece** **inhyeng-ul** **sa-ass**]-**ko**
 M-Nom yesterday doll-Acc buy-Pst-and

[**onul** **lipon-ul** **sa-ass-ta**]
 today ribbon-Acc buy-Pst-Dec

‘Mary bought a/the doll yesterday and bought a/the ribbon today.’

In (21)b, the verbal (or clausal) conjunction, *-ko* ‘and’, cannot occur between two noun phrases, *inhyeng* ‘doll’ and *lipon* ‘ribbon’, while the nominal conjunction, *-kwa* ‘and’, cannot occur between two verbal phrases in (22)b. Interestingly, two *kes* constructions must be conjoined by the nominal coordinating conjunction *-kwa*, not the clausal coordinative conjunction *-ko*, as shown in (23):

- (23) a. na-nun [[ece Mary-ka inhyeng-ul sa-n-kes]-kwa
 M-Nom yesterday M-Nom doll-Acc buy-Adn-Kes-and
 [onul lipon-ul sa-n-kes]]-ul a-n-ta
 today ribbon-Acc buy-Adn-Kes-Acc know-Pres-Dec
 ‘Mary bought a/the doll yesterday and bought a/the ribbon today.’
- b. *na-nun [[ece Mary-ka inhyeng-ul sa-n-kes]-ko
 M-Nom yesterday M-Nom doll-Acc buy-Adn-Kes-and
 [onul lipon-ul sa-n-kes]]-ul a-n-ta
 today ribbon-Acc buy-Adn-Kes-Acc know-Pres-Dec

In (23)a, the coordinating conjunction marker *-kwa* occurs between two *kes* constructions while the *-ko* cannot. Thus, *kes* constructions must be analyzed as noun phrases.

Finally, in Korean, noun phrases are usually followed by case-markers such as *-ka/-i* (nominative) or *-(l)ul* (accusative), but ordinary complement clauses cannot be followed by any case-marker, as shown in (24)b:

- (24) a. na-nun [Mary-ka inhyeng-ul sa-n] kes-**ul** a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Pres-Dec
 ‘I know that Mary bought a/the doll.’
- b. *na-nun [Mary-ka inhyeng-ul sa-ss-ta]-ko-**lul** sayngkakha-n-ta
 I-Top M-Nom doll-Acc buy-Pst-Dec-Comp-Acc think-Pres-Dec
 ‘I think that Mary bought a/the doll.’

In (24)a, the accusative case-marker *-(l)ul* is obligatory in the *kes* construction. In contrast, the ungrammaticality of (24)b shows that the complement introduced by the complementizer *-ko* cannot take any case-marker, further demonstrating *kes*

constructions must be treated as noun phrases.

In sum, we have seen in this section that *kes* constructions show various nominal properties. Accordingly, they must be treated as complex noun phrases, which have an embedded clause in them. The following table 2.2 shows the nominal properties of *kes* constructions, compared with the complement clauses marked by the complementizer *-ko*:

(25) Table 2.2 *Kes* Constructions vs. *-Ko* Complementizer Clauses (i.e. CP)

Nominal Features	<i>Kes</i> Construction	Complement Clause
can occur with the topic marker <i>-(n)un</i>	Yes	No
can occur in the pseudo-cleft	Yes	No
can occur with the coordinating conjunction particle <i>-kwa</i>	Yes	No
takes case-markers	Yes	No

2.4 *Kes* Constructions as an Internal Argument

In this section, I argue that as a complex noun phrase, a *kes* construction plays a grammatical function as an internal (or external) argument of a predicate. The active and passive construction pair, in particular, will be used to examine whether or not a *kes* construction can be a verbal argument. In addition, an internal argument of a predicate can be substituted for by either an overt resumptive pronoun (i.e. *kukes* 'it') or a covert resumptive pronoun (i.e. *pro*) in Korean.

In Korean, noun phrases can occur in the passivization construction, in which the internal argument (i.e. object) of an active transitive verb is placed in the subject position and the verb takes a passive intransitive verbal form. A noun phrase, which is

an internal argument (i.e. object) of a predicate in an active sentence, occurs in the subject position in the passivized sentence, as given in (26)b:

- (26) a. Active Sentence
 Mary-ka **inhyeng-ul** phal-ass-ta
 M-Top doll-Acc sell-Pst-Dec
 ‘Mary sold a/the doll.’
- b. Passive Sentence
inhyeng-i phal-li-ess-ta
 doll-Nom sell-Pas-Pst-Dec
 ‘A/the doll was sold.’

In Korean passivization constructions, the verbs take one of the four passive suffixes such as *-i*, *-hi*, *-li*, and *-ki*, depending on the syllable structure of a preceding verbal stem. In addition, certain verbs in the passivization constructions (e.g. *al-ta* ‘know’, *po-ta* ‘see’, *nwulu-ta* ‘press’, etc.) can take the complex passive form, in which a verb consist of a verbal stem and a passive suffix followed by the verbal complementizer *e/-a* and the inchoative verb *-cita* ‘become’ or ‘get to be’, as in (26)b:

- (27) a. Active Sentence
 na-nun [**Mary-ka inhyeng-ul sa-n kes**]-ul a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Prs-Dec
 ‘I know that Mary bought a/the doll.’
- b. Passive Sentence
 [**Mary-ka inhyeng-ul sa-n kes**]-i (na-ekey)
 M-Nom doll-Acc buy-Acc Kes-Nom I-Dative
- al-li-e-ci-ess-ta
 know-Pas-Comp-become-Pst-Dec
- (lit) ‘The thing that (= what) Mary bought a/doll) was known to me.’

The passive sentence (27)b strongly suggest that a *kes* construction can be an internal argument of a predicate in an active sentence. Also, the complement clause marked by *-ko* is regarded as an internal argument (i.e. CP argument) of a verb, and it can occur in the passivization construction:

- (28) a. Active Sentence
 na-nun [**Mary-ka inhyeng-ul sa-ss-ta-ko**] sayngkakha-n-ta
 I-Top M-Nom doll-Acc buy-Pst-Dec-Comp think-Prs-Dec
 ‘I think that Mary bought a/the doll.’
- b. Passive Sentence
 [**Mary-ka inhyeng-ul sa-ss-ta-ko**] (motwu-ekey)
 M-Nom doll-Acc buy-Pst-Dec-Comp all-Dative
- al-li-e-ci-ess-ta
 know-Pas-Comp-become-Pst-Dec
- (lit) ‘That Mary bought a/doll) was known to everybody.’

In (28)b, the CP complement marked by the complementizer *-ko* can occur in the passivization construction. Thus, either *kes* constructions (i.e. DP) or clausal complements (i.e. CP) can take an internal argument as a predicate in Korean.

In addition, an internal argument of a verb can be replaced by either an overt or covert resumptive pronoun in Korean, as follows:

- (29) a. Mary-ka **inhyeng-ul** sa-ss-ta
 M-Nom doll-Acc buy-Pst-Dec
 ‘Mary bought a/the doll.’
- b. Mary-ka **kukes-ul** sa-ss-ta
 M-Nom it-Acc buy-Pst-Dec
 (lit) ‘Mary bought that thing (= it).’

- c. Mary-ka *pro* sa-ss-ta
 M-Nom buy-Pst-Dec
 (lit) ‘Mary bought (it).’

Either the overt resumptive pronominal (i.e. *kukes* ‘it’) in (29)b or the covert resumptive pronominal (i.e. *pro*) in (29)a can replace the internal argument, *inhyeng* ‘doll’, headed by the predicate, *sa-ta* ‘buy’, in (29)a. In the same vein, a *kes* construction as an argument of a verb can be replaced by either an overt or a covert resumptive pronoun, as in (30)b and (30)c:

- (30) a. na-nun [**Mary-ka inhyeng-ul sa-n kes**]-ul a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Pres-Dec
 ‘I know that Mary bought a/the doll.’
- b. na-nun [**kukes**]-ul a-n-ta
 I-Top it-Acc know-Pres-Dec
 (lit) ‘I know the thing (= it).’
- c. na-nun [*pro*] a-n-ta
 I-Top know-Pres-Dec
 ‘I know (it).’

Also, the CP complement marked by *-ko* can be replaced by a resumptive pronoun, and thus it can be treated as an argument of a verb, as in (31):

- (31) a. John-un [**Mary-ka inhyeng-ul sa-ss-ta-ko**] malhay-ess-ta
 J-Top M-Nom doll-Acc buy-Pst-Dec-Comp say-Pres-Dec
 ‘I said that Mary bought a/the doll.’
- b. na-nun [**kukes**]-ul malhay-ess-ta
 I-Top it-Acc say-Pst-Dec
 (lit) ‘I said the thing (= it).’

- c. na-nun [*pro*] malhay-ess-ta
 I-Top say-Pr-Dec
 ‘I said (it).’

Thus, the CP complement (31)a, as well as the *kes* construction in (30)a, must be treated as an internal argument of a verb, since it can be substituted for by a resumptive pronoun.

In sum, through the “passivization” and the “pronominalization” tests, I have argued that both the *kes* constructions and the complement clauses by marked by *-ko* can be analyzed as an internal argument of a predicate. Thus, *kes* constructions have the distribution of DPs.

2.5 The Syntactic Position of *Kes* in *Kes* Constructions

In this section, I will discuss the syntactic position of *kes* appearing in *kes* constructions. Traditionally, *kes* has been treated as a complementizer, which corresponds to English *that* (Cook 1968; H. Lee 1970; Yang 1972, etc.). In recent research, however, it has been generally accepted that *kes* is part of DP dominating *kes* constructions (N. Kim 1984; Sohn 1999; M. Kim 2004; Cha 2005; and many others). Following them, I argue here that *kes* in the *kes* constructions is syntactically part of DP, not part of CP that *kes* constructions include. That is, I provide empirical evidence that the syntactic position of *kes* is under DP, not under CP.

First, in the *kes* construction, *kes* must be immediately preceded by an adnominal (or adjectival) marker such as *-nun*, *-(u)n*, or *-(u)l*, which always occur in the pre-nominal position in Korean. These verbal suffixes are used to conjugate a

verb to an adjectival (or adnominal) category, which modifies a nominal, as follows:

- (32) a. *alumtap-ta* ‘to be beautiful’ → *alumta-un salam* ‘a beautiful person’
 yeppu-ta ‘to be pretty’ → *yeppu-n salam* ‘a pretty person’
- b. *malha-ta* ‘to say’ → *malha-nun salam* ‘a talking person’
 ket-ta ‘to walk’ → *ket-nun salam* ‘a walking person’

Both the descriptive verbs in (32)a and the action verbs in (32)b become adjectives when they can be suffixed by the adnominal markers *-nun* or *-(u)n*. These suffixes can also be followed by the nominalizers such as *-ki* and *-(u)m* to change a verb into a noun phrase, as shown in (33):

- (33) a. *alumtap-ta* ‘to be beautiful’ → *alumta-um* ‘beauty’
 yeppu-ta ‘to be pretty’ → *yeppu-m* ‘prettiness’
- b. *malha-ta* ‘to say’ → *malha-ki* ‘talking’
 ket-ta ‘to walk’ → *ket-ki* ‘walking’

However, they cannot be followed by the clausal complementizer *-ko*, as shown in (34):

- (34) a. *John-un [Mary-ka inhyeng-ul sa-ss-ta-**un**]-ko malhay-ess-ta
 J-Top M-Nom doll-Acc buy-Pst-Dec-Adn-Comp say-Pres-Dec
 ‘I said that Mary bought a/the doll.’
- b. *John-un [Mary-ka inhyeng-ul sa-**n**]-ko malhay-ess-ta
 J-Top M-Nom doll-Acc buy-Adn-Comp say-Pres-Dec
 ‘I said that Mary bought a/the doll.’

That is to say, the adnominal suffixes cannot be followed by any non-nominal elements. In this regard, *kes* constructions must be treated as nominal elements since

the adnominal suffixes are obligatorily followed by *kes*, as demonstrated in (35):

- (35) a. na-nun [Mary-ka inhyeng-ul sa*(-n) kes]-ul a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Pres-Dec
 ‘I know that Mary bought a/the doll.’
- b. na-nun [Mary-ka inhyeng-ul sa*(-nun) kes]-ul a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Pres-Dec
 ‘I know that Mary is buying a/the doll.’

In (35)a and (35)b, the adnominal suffixes *-(u)n* and *-nun* must occur immediately before *kes*. This strongly suggests that *kes* constructions must be treated as a nominal since *kes* is obligatorily followed by an adnominal suffix. The adnominal suffixes must occur in all the *kes* constructions in Korean.

Second, in Korean, adnominal modifiers such as demonstratives or adjectives can precede a nominal element (e.g. noun, pronoun, or nominalizer), but not a CP complementizer. Accordingly, the complement clause marked by the complementizer *-ko* cannot be replaced by adnominal modifiers such as a demonstrative or a demonstrative + adjective modifier:

- (36) a. John-un [Mary-ka inhyeng-ul sa-ss-ta]-ko malhay-ess-ta
 J-Top M-Nom doll-Acc buy-Pst-Dec-Comp say-Pres-Dec
 ‘I said that Mary bought a/the doll.’
- b. *John-un [ku]-ko malhay-ess-ta
 J-Top Dem-Comp say-Pres-Dec
- c. *John-un [ku cayminan]-ko malhay-ess-ta
 J-Top Dem interesting-Comp say-Pres-Dec

However, in the *kes* construction, the embedded clause preceding *kes* can be replaced

by adnominal modifiers, as follows:

- (37) a. na-nun [**Mary-ka inhyeng-ul sa-n**] *kes-ul* a-n-ta
 I-Top M-Nom doll-Acc buy-Adn Kes-Acc know-Pres-Dec
 ‘I know that Mary bought a/the doll.’
- b. na-nun [**ku**] *kes-ul* a-n-ta
 I-Top Dem Kes-Acc know-Pres-Dec
 (lit) ‘I know that thing (= it).’
- c. na-nun [**ku cayminan**] *kes-ul* a-n-ta
 I-Top Dem interesting Kes-Acc know-Pres-Dec
 (lit) ‘I know that interesting thing (= the interesting thing).’

In (37)b and (37)c, the *kes* construction can be replaced by either the demonstrative, *ku* ‘that’, or the demonstrative + adjective combination, *ku caminan* ‘that interesting’. That is, an adnominal modifier can be followed by *kes*. If *kes* occurs within the preceding clause, *kes* cannot occur with any adnominal modifiers. Thus, *kes* must be treated as a nominal element (e.g. N or D) since it can be followed by an adnominal modifier.

Finally, in certain *kes* constructions (i.e. HiRCs), a plural marker such as *-tul* can follow *kes* while it cannot follow the complementizer *-ko*, as shown in (38)a and (38)b, respectively:

- (38) a. na-nun [Mary-ka inhyeng-ul myech kay sa-n] *kes-tul-ul*
 I-Top M-Nom doll-Acc some NC buy-Adn Kes-Pl-Acc
 pal-ass-ta
 sell-Pres-Dec
 ‘Mary bought a few dolls_i and I sold them_i.’

b. *na-nun [Mary-ka inhyeng-ul myech kay sa-ss-ta]-**ko-tul**
 I-Top M-Nom doll-Acc some NC buy-Pst-Dec-Comp-Pl

pal-ass-ta
 sell-Pres-Dec

In addition, the plural marker *-tul* must be attached to a (pro)nominal, not to a nominalizer. Accordingly, the plural marker *-tul* cannot be followed even by the nominalizers *-ki* or *-um*, as demonstrated in (39):

(39) a. *na-nun [Mary-ka inhyeng-ul myech kay sa]-**ki-tul-ul**
 I-Top M-Nom doll-Acc some NC buy-Nml--Pl-Acc

pala-n-ta
 hope-Pres-Dec

(Intended) ‘I hope Mary’s buying a few dolls.’

b. *na-nun [Mary-ka inhyeng-ul myech kay sa]-**m-tul-ul**
 I-Top M-Nom doll-Acc some NC buy-Nml--Pl-Acc

al-ass-ta
 know-Pst-Dec

(Intended) ‘I knew Mary’s buying a few dolls.’

This indicates that in certain *kes* constructions, *kes* cannot be analyzed as either a nominalizer or a CP complementizer since it cannot be suffixed by the plural marker *-tul*, as in (38)b, (39)a, and (39)b,

In sum, in this section, I have argued that in *kes* constructions, *kes* must be a (pro)nominal; that is, it is part of DP, not CP.

2.6 Conclusion

In this chapter, I have argued that depending on the phrase, *kes* can be interpreted either lexically or functionally. For example, *kes* in (1)a and (1)b is interpreted as a lexical bound noun since it has its own semantic content such as ‘thing’ or ‘object’. In contrast, *kes* in (1)c, (1)d and (1)e must be interpreted as functional since it has no specific semantic content. I have also shown that *kes* constructions such as (1)c, (1)d, and (1)e have various nominal properties in common, and thus they must be treated as noun phrases. I have argued that *kes* in *kes* constructions is part of DP, not part of CP. This is why people have attempted to analyze *kes* constructions (e.g. (1)c, (1)d, and (1)e) as all the same constructions. However, in Chapter 4, I will argue that the status of *kes* is not the same in all the *kes* constructions, even though *kes* constructions consistently distribute like noun phrases.

CHAPTER 3

Korean Head-internal Relative Clause Constructions

3.1 Introduction

In the traditional view, as a type of embedded clause, a relative clause is distinct from a complement clause in that the former is an embedded clause modifying the nominal head of a noun phrase while the latter is an embedded clause complementing the head of a higher projection (Chomsky 1977; Browning 1991). That is, a relative clause is a modifier of a head (adjunction relation) while a complement clause is a complement of a head (i.e. sisterhood relation). From this perspective, a relative clause is generally assumed to be adjoined to NP, a higher projection of the nominal head that it modifies, and the nominal head of a relative clause is external to the clause. Cross-linguistically, on the other hand, another type of relative clause has been observed in some languages such as Korean, Japanese, Quechua, and Lakota (Culy 1990; Jhang 1994).⁵ In this type of relative clause, especially, the nominal head that a relative clause modifies is contained within the clause, rather than external to it. This is generally called a head-internal (or internally

⁵ Jhang (1994:9) categorizes a number of languages into three subtypes, based on the data from Culy (1990), Keenan (1985), and others about various relative clauses:

- (i) a. A-type languages (head-external relative clauses only): English, French, and other Indo-European Languages (SVO)
- b. B-type languages (head-internal relative clauses only): Dogon (SOV), Lakota (SOV)
- c. C-type languages (head-internal and head-external relative clauses): Diegueño (SOV), Navajo (SOV), Japanese (SOV), Quechua (SOV), Mparntwe Arrernte (SOV), Dagbani (SVO), Mooré (SVO), American Sign Language (SVO)

According to Jhang's categorization, Korean (SOV) is regarded as a C-type language.

headed) relative clause (HiRC), in contrast to a head-external (or externally headed) relative clause (HeRC). It has been suggested and developed in many recent studies that in Korean certain types of *kes* constructions, which we have seen in Chapter 2, are HiRC constructions (Jhang 1994; M. Kim 2004; J. Lee 2006; and many others). Following them, in this chapter I will discuss the grammatical nature of Korean HiRC constructions as a type of *kes* construction. In particular, in analyzing HiRC *kes* constructions, I set three specific goals. My first goal is to address the distinct properties of HiRC constructions, compared with HeRC constructions that are not marked by *kes*. The second goal is to propose an internal structure of Korean HiRC constructions, based on the grammatical properties I will provide here. And my final goal is to explore DP scrambling from HiRC constructions.

To distinguish the two types of Korean relative clauses, compare the following examples:

- (1) a. HiRC
 na-nun [[_{RC} **koyangi**_i-ka sayngsen-ul hwumchi-nun] **kes**_i]-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc
 cap-ass-ta
 catch-Pst-Dec

‘I caught the cat_i while it_i was stealing the fish.’

- b. HeRC
 na-nun [[_{RC} e_i sayngsen-ul hwumchi-nun] **koyangi**]-ul
 I-Top fish-Acc steal-Adn cat-Acc
- cap-ass-ta
 catch-Pst-Dec

‘I caught the cat that was stealing the fish.’

In the *kes* construction (1)a, the embedded clause preceding *kes* is treated as a relative clause. However, it is somewhat different from the other relative clause (1)b in that it has no “gap” (or trace) of the moved head. The typical relative clause as in (1)b is always “defective” in the sense that an argument (or adjunct) of the clause is absent within the clause, appearing instead in the “external head” position of the relative clause. However, the relative clause in (1)a is grammatically saturated itself, and thus there is no argument (or adjunct) missing. *Kes* in (1)a plays the role of an external syntactic head of the relative clause. In addition to the external syntactic head *kes*, the relative clause in (1)a also contains a “semantic (or internal)” head, which is co-referential to *kes*. In (1)b, there is always a missing argument in the relative clause, and the head noun which the relative clause modifies is external to the clause. In this HeRC construction, the external head of the relative clause (i.e. *koyangi* ‘cat’) must be co-indexed with the gap, not any overt element in the clause. Recent work focuses on morpho-syntactic differences between the HiRC and HeRC (e.g. M. Kim 2004; J. Lee 2006). Along the same lines with them, I argue here that the HiRC in (1)a is different from the HeRC in (1)b.

On the other hand, semantic head appearing in the HiRCs can be represented

as a null argument (i.e. *pro*) if it is recoverable from a previous context, as illustrated in (2):

(2) a. HiRC

na-nun [[_{RC} **koyangi**_i-ka sayngsen-ul hwumchi-nun] **kes**_i]-ul
I-Top cat-Nom fish-Acc steal-Rel KES-Acc

cap-ass-ta
catch-Pst-Dec

‘I caught the cat_i while it_i was stealing the fish.’

b. Gappy HiRC

na-nun [[_{RC} *pro*_i **sayngsen**_j-ul hwumchi-nun] **kes**_{i/j}]-ul
I-Top fish-Acc steal-Rel KES-Acc

cap-ass-ta
catch-Pst-Dec

(i) ‘I caught something_i while (it)_i was stealing the fish.’

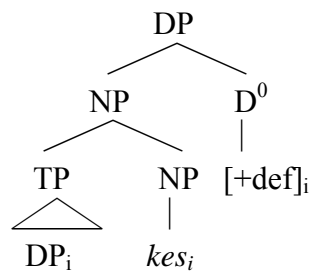
(ii) ‘I snatched the fish when (someone or something) was stealing it.’

In (2)a, the typical HiRC does not have any syntactic gap such as *trace* or *pro* in it. Since Korean is a *pro*-drop language, however, an argument (e.g. subject) can be freely dropped in the surface representation. When a *pro* is in a clause, it looks like a gap in the surface representation. This is exactly why an HiRC including a null argument (i.e. *pro*) is often called a “gappy HiRC” (Cha 2005). However, the gap in HiRCs is different from that in HeRCs in that, as shown in the second reading of (2)b, *kes* is not necessarily co-indexed with the gap in the preceding relative clause. Note that the external head of HeRCs in (1)b, *koyangi* ‘cat’, must be co-indexed with the gap in the preceding relative clause. Thus, the gap in an HiRC is a null argument (i.e. *pro*), and it cannot be the same as the gap in an HeRC. As a matter of fact, the term

“gappy” often misleads us to assume that an argument is absent there by some movement operation. In a gappy HiRC, however, a relative clause itself can be grammatically saturated, as opposed to the HeRC, which cannot be fully defined because of a missing argument. Thus, there are two subtypes of Korean HiRCs: the gapless HiRC in (2)a and the gappy HiRC in (2)b. Note that as in (2)a and (2)b, Korean HiRC constructions always occur with *kes* as their syntactic head, regardless of whether they are gapless or gappy. A gappy HiRCc contains a *pro* argument, while an ordinary HiRC contains only overt arguments/adjuncts. Therefore, the gappy HiRC has a clause-internal silent argument, while an HeRC contains a trace of movement.

For Korean HiRC constructions, in this chapter I will propose the following structure:

(3) Korean Head-internal Relative Clause (HiRC) Construction



In (3), like the traditionally assumed HeRC structure, an HiRC is adjoined to NP, which dominates the syntactic head of the clause, *kes*. I argue here that the HiRC cannot be a fully-inflected CP, but TP. The structure (3) is based on the idea that the internal head of the HiRC stays in its base-generated position but its semantic

interpretation is linked to the matrix predicate in an indirect way. In other words, the structure in (3) includes *kes*, an “anaphoric” pronoun base-generated in the HiRC-external syntactic head position. As the syntactic head of a relative clause, *kes* is co-referentially linked to the internal (or semantic) head of the HiRC. Cross-linguistically, the internal head of an HiRC is semantically interpreted as “specific” (or definite) (Culy 1990). I assume that this definiteness effect is licensed by the feature [+def] dominated by D^0 , a covert head of DP, not by its own inheritance (cf. M. Kim 2004; J. Lee 2006), and I show that the internal head DP can scramble out of the entire HiRC construction here.

This chapter is structured as follows. Section 3.2 begins with the introductory section about the general properties of the HiRC constructions. Section 3.3 discusses the morpho-syntactic properties of Korean HiRC constructions, and section 3.4 addresses their semantic-discourse properties of them. In both sections, I show in detail the differences between Korean HiRC and HeRC constructions in detail. Section 3.5 suggests an internal structure for Korean HiRC constructions. In this section, my first concern goes to the grammatical status of *kes* in HiRC constructions. I argue for the NP-adjunction analysis that both HiRC and HeRC are adjuncts of their syntactic head (e.g. *kes* or free nouns), not complements. Furthermore, I show in section 3.5.3 that a gappy HiRC is minimally different from a gapless HiRC, but it is very different from an HeRC in terms of the grammatical properties of a gap. Section 3.6 discusses DP scrambling from Korean HiRC constructions. Section 3.7 is a summary and conclusion of the chapter.

3.2 The General Properties of Korean HiRC Constructions

A relative clause is a subtype of embedded clauses that appear in complex sentences and it modifies the nominal head of a higher projection. It is cross-linguistically assumed that there are at least two types of relative clauses, depending on the position of a semantic head: namely, Head-external Relative Clauses (HeRC) and Head-internal Relative Clauses (HiRC) (Culy 1990; Jhang 1994; M. Kim 2004; Cha 2005; J. Lee 2006; and many others). In the HeRC, an externally-positioned head noun is modified by a clause containing a gap. Unlike the HeRC, a head noun in the HiRC is internally placed within a modifying clause but nevertheless is semantically interpreted as an external head. In this section, I focus on the typological properties of Korean HiRC constructions.

Korean relative clauses do not contain relative pronouns corresponding to English *who*, *whose*, *which*, or *that*, but they are connected by means of “relativizer (or adnominal)” suffixes such as *-nun*, *-(u)n*, and *-(u)l*, as demonstrated in (4):⁶

- (4) a. John-i [Mary-ka e_i sa-**nun**] chayk_i-ul ilk-nun-ta
 J-Nom M-Nom buy-Rel book-Acc read-Pres-Dec
 ‘John is reading the book which Mary buys.’

⁶ In Japanese, on the other hand, there is no grammatical element that corresponds to Korean *-(u)n*. Instead, the Japanese relativizer is realized as a zero morpheme (i.e. \emptyset), as follows:

- (i) a. HeRC
 Taroo-wa [e_i nige-ru]- \emptyset doroboo_i-o tukamaeta
 T-Top run.away-Rel thief-Acc caught
 ‘Taroo caught the thief who was running away.’
- b. HiRC
 Taroo-wa [doroboo_i-ga nige-ru]- \emptyset no_i-o tukamaeta
 T-Top thief-Nom run.away-Rel No-Acc caught
 ‘Taroo caught the thief who was running away.’

- b. John-i [Mary-ka e_i sa-**n**] *chayk_i-ul* ilk-nun-ta
 J-Nom M-Nom buy-Rel book-Acc read-Pres-Dec
 ‘John is reading the book which Mary bought.’
- c. John-i [Mary-ka e_i sa-**l**] *chayk_i-ul* ilk-nun-ta
 J-Nom M-Nom buy-Rel book-Acc read-Pres-Dec
 ‘John is reading the book which Mary will buy.’

As a matter of fact, the exact grammatical status of Korean relativizer suffixes in (4) is still controversial among Korean linguists (Choe 1988; J. Yoon 1990; Sohn 1999; M. Jo 2002; J. Jo 2004; M. Kim 2004; J. Lee 2006; etc.). Here, along the lines of Sohn (1999), I will refer to them as a relativizer suffix.⁷ According to Sohn’s (1999) classification of Korean embedded clauses, there are at least two subtypes of embedded clauses modifying a nominal head: namely, adnominal (or relative) clauses and nominal complement clauses (henceforth, NCC). The relative and complement clauses are represented as modifiers and complements of their head nouns, respectively. The primary morpho-syntactic function of the verbal suffixes such as *-nun*, *-(u)n*, or *(u)l* occurring between an embedded clause and a head nominal is either to adjoin a modifying clause to a (external) nominal head or to connect a complement clause to a head noun. Currently, there are two competing analyses regarding these relativizer suffixes. They have traditionally been treated as tense markers, since *-nun* is used for the present tense, *-(u)n* (or *-tun* and *-esstun*) for the past tense, and *-(l)ul* for the future (Choe 1988; Jhang 1994; and others). More recently, however, they are often regarded as a portmanteau morpheme fused by past

⁷ In Chapter 4, these suffixes will be glossed as “adnominal” in another type of *kes* NCC construction, compared with HiRC constructions.

tense and perfective aspect since, except for the tense information, *-nun* receives the semantic interpretation of ‘imperfective’ aspect while *-(u)n* carries ‘perfective’ aspect (M. Kim 2004; J. Lee 2006; and others).

In the next section, I will discuss a variety of morpho-syntactic and semantic characteristics of HiRC constructions compared with HeRC constructions, a preliminary step toward analyzing the structure of the HiRC construction, a subtype of Korean *kes* construction.

3.3 The Morpho-Syntactic Properties of Korean HiRC Constructions

In this section, I address the morpho-syntactic characteristics of Korean HiRCs, which are significantly different from those of HeRCs, and I argue that the dissimilarity of HeRC and HiRC directly implies their structural difference.

There are at least three morpho-syntactic differences between HeRCs and HiRCs in Korean. First, HeRC constructions are characterized by the presence of a gap within a relative clause, but there is no gap in HiRC constructions. Also, the existence of *kes* is another remarkable feature in Korean HiRC constructions. Compare (5)a and (5)b, which instantiate the HeRC construction and the HiRC construction, respectively:⁸

- (5) a. HeRC
 John-i [Mary-ka e_i sa-n] chayk_i-ul ilk-nun-ta
 J-Nom M-Nom buy-Rel book-Acc read-Pres-Dec
 ‘John is reading the book which Mary bought.’

⁸ In Japanese relative clauses, *no* takes the same grammatical role as Korean *kes*.

b. HiRC

John-i [Mary-ka chayk_i-ul sa-n] kes_i-ul ilk-nun-ta
 J-Nom M-Nom book-Acc buy-Rel Kes-Acc read-Pres-Dec
 ‘John is reading the book which Mary bought.’

In (5)a the head of the head-external relative clause is externally placed to it and there is a gap in the relative clause, which is co-indexed with the external head noun. On the other hand, there is not such a gap in the head-internal relative clause construction (5)b, and the external head position co-indexed with the semantic head noun within the relative clause is occupied by the dummy bound nominal *kes*. The grammatical status of *kes* in (5)b is purely syntactic in the sense that the understood semantic head of the relative clause (5)b is *chayk* ‘book’, but not *kes*. Although the exact grammatical status of *kes* is still controversial among Korean scholars (cf. Choe 1988; Jhang 1994; J. Jo 2004; M. Kim 2004; Cha 2005; J. Lee 2006), it has been generally proposed that *kes* is grammatically “functional” and coreferent to the semantic head appearing in a relative clause. That is, *kes* in the HiRC construction functions as the syntactic head of a relative clause, but it has no lexical meaning and it is “anaphorically” linked into the “internal (or semantic)” head inside the relative clause.

The second difference between the two types of Korean relative clauses is related to the genitive case-marking appearing in the relative clause construction. In Korean, the genitive case-marked DP of a relative clause construction is generally assumed to be a possessive determiner, and thus it cannot be part of the relative clause, but belongs (e.g. in the specifier position of DP) higher than the whole relative

clause, as instantiated in (6)b:⁹

- (6) HeRC
- a. John-un [DP [*Mary-ka* e_{cey} e_i sa- \emptyset -un]_{RC} chayk_i-lul
 J-Nom M-Nom yesterday buy-Rel book-Acc
- ilk-ess-ta
 read-Pst-Dec
- ‘John read the book that Mary bought yesterday.’
- b. John-un [DP *Mary-uy* [*pro* e_{cey} e_i sa- \emptyset -un]_{RC} chayk_i]-lul
 J-Nom M-Gen yesterday buy-Rel book-Acc
- ilk-ess-ta
 read-Pst-Dec
- (i) *‘John read the book that Mary bought yesterday.’
 (ii) ‘John read Mary’s book that (somebody) bought yesterday.’

The only felicitous interpretation of (6)b is that ‘John read the book possessed by Mary as she bought it yesterday’. In terms of truth-conditional semantics, this

⁹ It is well-known that in Korean and Japanese, the subject of the relative clause can be marked by either a nominative case or a genitive case. Compared with the interchangeableness of case markers in Japanese (i), the alternative case-marking mechanism between nominative and genitive case is much more restricted in Korean, as illustrated in (ii):

- (i) a. John-**uy** sa-n/*po-n chayk (Korean)
 John-Gen buy-Rel/see-Rel book
 ‘the book that John bought/*saw’
- b. e_{cey} John-**i/*-uy** sa-n chayk (Korean)
 yesterday John-Nom/-Gen buy-Rel book
 ‘the book that John bought yesterday’
- (ii) a. Taroo-**ga/-no** katta- \emptyset hon (Japanese)
 Taroo-Top/-Gen buy-Rel book
 ‘the book that Taroo bought’
- b. kinoo Taroo-**ga/-no** katta- \emptyset hon (Japanese)
 yesterday Taroo-Top/-Gen buy-Rel book
 ‘the book that Taroo bought yesterday’

possessive interpretation in (6)b is not identical with that in (6)a, in which the interpretative focus is placed on the book purchased by Mary, but not Mary's possession. Accordingly, a genitive-marked argument DP cannot occur within a relative clause in Korean. It is interesting to note that a genitive case-marking DP never occurs in the HiRC constructions, as demonstrated in (7):

(7) HiRC

- a. John-un [*Mary-ka/*-uy* chayk_i-lul (ecey) sa-n kes_i]-lul
 J-Nom M-Nom/-Gen book-Acc yesterday buy-Rel Kes-Acc

ilk-ess-ta
 read-Pst-Dec

‘Mary bought the book (yesterday) and John read it.’

- b. John-un [*Mary-ka/*uy* ku coyangi_i-lul cwuki-n kes_i]-lul
 J-Nom M-Nom/-Gen that cat-Acc kill-Rel Kes-Acc

ssuleykithong-ey peri-ess-ta
 trash.box-into threw.away

‘Mary killed the cat and John threw it away into the trash box.’

In (7)a and (7)b, no genitive marked DPs (either an argument or a possessive determiner) are available in the HiRCs. Thus, the unavailability of the genitive case-marking supports that HiRC constructions are different from HeRC constructions,.

The third notable difference between HeRC and HiRC in Korean is related to the so-called “reported speech construction,” which always takes a fully-inflected verbal form, including tense and sentence force markers.¹⁰ Compare the HeRC

¹⁰ Sohn (1999) calls this expression an indirective quotative construction.

construction (8)a with (8)b:

(8) a. Short Form HeRC

na-nun [John-i e_i phathi-ey kacyeo-**n**] wain_i-ul masiessta
 I-Top J-Nom party-to bring-Rel wine-Acc drank
 ‘I drank the wine that John brought to the party.’

b. Long Form HeRC (Reported Speech)

na-nun [John-i e_i phathi-ey kacyeo-**ass-ta-nun**] wain_i-ul
 I-Top J-Nom party-to bring-Pst-Dec-Rel wine-Acc

masiessta
 drank

‘I drank the wine that (it is said that) John brought to the party.’

The truth-conditional values of the above two sentences are different in terms of “evidentiality.” While (8)a must be interpreted as direct speech (i.e. ‘I drank the wine that (I directly witnessed that) John brought to the party.’), (8)b must be interpreted as indirect speech (i.e. ‘I drank the wine that John brought to the party although I am not sure whether John brought it or not.’). I will call the former a “short form” relative clause and the latter a “long form” relative clause since only the latter displays a fully inflected verbal form inside the relative clause. As shown in (9)b, however, the long form relativization is not acceptable in the HiRC:

(9) a. Short Form HiRC

na-nun [John-i wain_i-lul phathi-ey kacyeo-**n**] kes_i-ul masiessta
 I-Top J-Nom wine-Acc party-to bring-Rel Kes-Accdrank
 ‘John brought a wine to the party and I drank it.’

b. Long Form HiRC (Reported Speech)

*na-nun [John-i wain_i-lul phathi-ey kacyeo-**ass-ta-nun**] kes_i-ul
 I-Top J-Nom apple-Acc party-to bring-Pst-Dec-Rel Kes-Acc

masessta
 drank

(Intended) (lit) ‘I drank the wine that (it is said that) John brought to the party.’

However, very interestingly, gappy HiRCs can occur with short or long verbal forms, as follows:

(10) a. Short Form Gappy HiRC

na-nun [John-i *pro*_i phathi-ey kacyeo-**n**] kes_i-ul masessta
 I-Top J-Nom party-to bring-Rel Kes-Acc drank
 ‘I drank something_i that John brought [*e*_i] to the party.’

b. Long Form Gappy HiRC

?na-nun [John-i *pro*_i phathi-ey kacyeo-**ass-ta-nun**] kes_i-ul
 I-Top J-Nom party-to bring-Pst-Dec-Rel Kes-Acc

masessta
 drank

‘I drank something_i that (it is said that) John brought [*e*_i] to the party.’

Both (10)a and (10)b contain null arguments (i.e. *pro*). At any rate, it seems to me that the null arguments of the HiRCs in (10) are a crucial factor in taking a long form HiRC. In contrast, a reported speech (or long form) construction is not available in a gapless HiRC, as shown in (9)b. Thus, with respect to the long form relative clause, the HeRC and the gappy HiRC are similar to each other, but distinct from the gapless HiRC. This strongly suggests that the structure of the gapless HiRC cannot be a fully inflected clause (i.e. CP), but an IP, while the structures of the HeRC and gappy

HiRC can.

Finally, it is interesting to note that the HeRC construction can occur as the subject of a sentence while the HiRC construction cannot, as illustrated in (11):

(11) a. HeRC

[[e _i	Bill-ul	coch-ko	iss-nun]	Mary _i]-ka	John-ul
	B-Acc	chase-Comp	be-Rel	M-Nom	J-Acc

cap-ass-ta
catch-Pst-Dec

‘Mary who was chasing Bill caught John.’

b. HiRC

*[[Mary _i -ka	Bill-ul	coch-ko	iss-nun]	kes _i]-i	John-ul
	M-Nom	B-Acc	chase-Comp	be-Rel	Kes-Nom
					J-Acc

cap-ass-ta
catch-Pst-Dec

(Intended) ‘Mary caught John while she was chasing Bill.’

In (11)a and the HeRC can occur as the subject of the sentence. In (11)b, however, the gapless HiRC cannot be the subject of the sentence. That is, only the HiRC shows certain subject-object asymmetry in the sense that it cannot occur in the subject position of a sentence. It seems that there is some grammatical restriction on the subject position of a sentence, and that only an HiRC as a subject is sensitive to that restriction. Since it is not predicted from my analysis, it is not clear to me how the subject-object asymmetry of the HiRC construction arises.

In sum, we have seen three differences between Korean HeRC and HiRC constructions in the morpho-syntactic respect, as shown in the following table:

(12) Table 3.1 HeRC vs. HiRC constructions

Properties	HeRC construction	HiRC construction	
		Gapless	Gappy
the existence of a gap (<i>pro</i> or <i>trace</i>)	Yes	No	Yes
the availability of a genitive DP	Yes	No	No
the long form relativization	Yes	No	Yes
the subject of a sentence	Yes	No	Yes ¹¹

The clear distinction between the two types of Korean relative clause constructions suggests that we need to provide two separate structures for the Korean HeRC and HiRC constructions. The unavailability of the long form relativization of the HiRC construction, especially, suggests that the structure of the HiRC is IP, not CP.

3.4 The Semantic-Discourse Properties of Korean HiRC Constructions

In this section, in comparison to the HeRC constructions, I address four distinctive semantic-discourse properties of the HiRC constructions, relatively well observed in the Korean (and Japanese) literature (Jung 1995; Hoshi 1995; Shimoyama 1999; M. Kim 2004; J. Lee 2006; and many others).

The first well-known semantic distinction between Korean HeRC and HiRC is

¹¹ Interestingly, it seems that the gappy HiRC can occur in the subject position of a sentence:

- (i) gappy HiRC
 ?[[*pro*_i Bill-ul coch-ko iss-nun] kes_i]-i John-ul cap-ass-ta
 B-Acc chase-Comp be-Rel KES-Nom J-Acc catch-Pst-Dec
 ‘Something caught John while it was chasing Bill.’

In the above gappy HiRC, the null argument (i.e. *pro*) co-referential with *kes* refers to something that can catch a person, but it cannot refer to someone. This semantic restriction on the null argument as a subject is also unpredictable in my analysis.

the “exhaustiveness” effect of the HiRC. To examine this effect, compare (13)a and (13)b, which represent the HeRC construction and the HiRC construction, respectively:

(13) a. HeRC

John-un	[e _i tomangka-nun]	sey-myeng-uy	totwuk _i -ul
J-Top	run.away-Rel	three-NC-Gen	thief-Acc

capassta
caught

‘John caught three thieves (among many thieves) who were running away.’

b. HiRC

John-un	[	sey-myeng-uy	totwuk _i -i	tomangka-nun]	kes _i -ul
J-Top		three-NC-Gen	thief-Nom	run.away-Rel	Kes-Acc

capassta
caught

‘Three thieves were running away and John caught all of them.’

While (13)a is felicitous in the context where there were more than three thieves running away and three of them were caught by John, (13)b is felicitous only in the context where there were only three thieves running away and all of them were caught by John. In other words, the floating quantifier, *sey-myeng* ‘three-persons’, in (13)b must be interpreted as exhaustive.¹² This shows that the truth-conditional semantics of an HiRC is not the same as that of an HeRC, whose semantic interpretation is not restricted to the “exhaustiveness” interpretation. In addition, the semantic property observed in (13) conforms to Culy’s (1990) cross-linguistic

¹² The exhaustiveness reading is also preserved in the gappy HiRC construction.

observation that the internal (or semantic) head of HiRCs is always interpreted as definite (or specific). Particularly, as I have described the semantic difference between them, the internal head in (13)b must be interpreted as specific, while the external head in (13)a can be interpreted as either specific or non-specific. As we have already seen in the examples (1)a and (1)b in Chapter 2, *kes* as a bound noun can be interpreted as definite or indefinite (e.g. *khun kes* ‘a big thing’ or ‘the big thing’). But the *kes* in (13)b must be interpreted as definite because it is semantically associated with the definite internal head, *seomyung-uy totwuk* ‘the three thieves’. This strongly suggest that *kes* in (13)b is grammatically distinct from the *kes* as a bound noun introduced in Chapter 2. Accordingly, I follow M. Kim (2004) and J. Lee (2006) in assuming that *kes* in the HiRC must be interpreted as definite (or specific) since it is semantically linked to the definite internal head.

Second, it is also well known in Korean that the internal (or semantic) head of an HiRC is syntactically “indeterminate” (Watanabe 1992; Hoshi 1995; Kim 2004; Lee 2006; and many others). To understand the indeterminacy of a head, compare the HeRC (14)a and HiRC (14)b:

- (14) a. HeRC
 John-un [e_i Bill-ul coch-ko iss-nun] Mary_i-lul
 J-Nom B-Acc chase-Comp be-Rel M-Acc

 capassta
 caught

‘John caught Mary who was chasing Bill.’

b. HiRC

John-un [	Mary-ka	Bill-ul	coch-ko	iss-nun]	kes-ul
J-Nom	M-Nom	B-Acc	chase-Comp	be-Rel	Kes-Acc

capassta
caught

- (i) ‘Mary was chasing Bill and John caught Mary’
- (ii) ‘Mary was chasing Bill and John caught Bill.’
- (iii) ‘Mary was chasing Bill and John caught Mary and Bill.’

In (14)a, the external syntactic head *Mary* is semantically associated with the syntactic gap (i.e. e_i) in the relative clause. However, *kes*, the syntactic head of the HiRC in (14)b, can be semantically associated with one of the multiple candidates in the relative clause. In other words, (14)b is semantically ambiguous because within the relative clause there are two potential candidates (i.e. *Mary* and *Bill*) for serving as an internal (semantic) head associated with the external head *kes*. In particular, if the subject argument of the relative clause is salient in the discourse, then *Mary* will be the semantic head and the sentence receives the reading that *John caught Mary*, but did not catch *Bill*. On the contrary, if the object argument of the relative clause is salient in the discourse, then *Bill* will be the semantic head and the sentence receives the reading that *John caught Bill*. More strikingly, if both the subject and the object are simultaneously salient in the discourse, both *Mary* and *Bill* can be the semantic heads of the relative clause at the same time and the sentence carries the reading that

*John caught Mary and Bill.*¹³ Thus, at least three different interpretations are possible in the HiRC (14)b because its internal head is not determined syntactically, but contextually.¹⁴

The third noticeable distinction between HeRCs and HiRCs is that pragmatic or discourse-driven factors can affect the reading of an HiRC. For example, while the semantic interpretation of HeRCs is more or less independent of pragmatic factors, multiple interpretations based on various pragmatic factors such as ‘temporal precedence’, ‘causation’, and ‘concession’ are possible in the HiRC (15) and (16):

(15) a. HeRC

John-un [e_i cal ik-un] ppang_i-ul mekessta
 J-Top well cook-Rel bread-Acc ate
 ‘John ate the bread that was cooked well.’

b. HiRC

John-un [ppang_i-i cal ik-un] kes_i-ul mekessta
 J-Top bread-Nom well cook-Rel Kes-Acc ate

- (i) ‘John ate the bread when it was cooked well.’ (a temporal reading)
 (ii) ‘John ate the bread because it was cooked well.’ (a causation reading)

¹³ This reading will be much more evident when a floating quantifier such as *twulta* ‘both’ is inserted into the matrix clause of the following sentence:

- (i) John-un [Mary-ka Bill-ul coch-ko iss-nun] kes-ul twulta capassta
 J-Nom M-Nom B-Acc chase-Comp be-Rel Kes-Acc both caught
 ‘Mary was chasing Bill and John caught both of them.’

¹⁴ Interestingly, the subject of a HiRC is likely to become a default semantic head over other arguments of the HiRC if there is no discourse context is given. That is, the subject is selected as a semantic head of the HiRC over the object if there is no special contextual circumstance. The asymmetry of subject and object in a HiRC can be accounted for by the so-called “Accessibility Hypothesis” (Keenan and Comrie 1977). According to the Accessibility Hypothesis, an object of a relative clause is more difficult to process than a subject of the clause, because the former is syntactically deeper than the latter. This hypothesis directly reflects the psychological ease of comprehension (Keenan and Comrie 1977:88).

(16) a. HeRC

John-un [e_i tel ik-un] ppang_i-ul mekessta
 J-Top yet cook-Rel bread-Acc ate
 ‘John ate the bread that was not cooked yet.’

b. HiRC

John-un [ppang_i-i tel ik-un] kes_i-ul mekessta
 J-Top bread-Nom yet cook-Rel Kes-Acc ate

(i) ‘John ate the bread when it was not cooked yet.’ (a temporal reading)

(ii) ‘John ate the bread even though it was not cooked yet.’

(a concession reading)

In (15)a and (16)b, the interpretation of the HeRCs has no secondary information, and thus they must be treated as restrictive relative clauses. In (15)b and (16)b, the truth-conditional semantic interpretation of the HiRC is the same as that of the corresponding HeRC constructions; that is, *John ate the uncooked bread*. However, only the HiRC constructions can include various supplementary (e.g. temporal, causative, or concessive) readings depending on the contexts. The various semantic interpretations of the above HiRC constructions are very similar to the free adjunct construction in English (M. Kim 2004:176-178). The English free adjunct constructions in (17) are semantically ambiguous in relation to discourse-driven factors, as follows:¹⁵

(17) a. Talking about his mother, John cried a lot.

(i) *When he talked about his mother*, John cried a lot. (temporal relation)

(ii) *Whenever he talked about his mother*, John cried a lot. (causation)

¹⁵ According to Stump (1985), the semantic variability of English free adjunct constructions is closely related to the predicate of a free adjunct construction. In particular, he suggests that the interpretation of English free adjunct constructions can vary depending on the types of embedded predicates in the sense of Carlson (1977): i.e., *individual-level* vs. *stage-level* predicates. For more detailed information about the multiple interpretations of English free adjunct constructions, see Stump (1985).

- b. Being alone in the room, John studied hard.
 (i) *While he was alone in the room*, John studied hard. (temporal relation)
 (ii) *Because he was alone in the room*, John studied hard. (concession)

The interpretative interchangeability of the HiRC constructions based on various pragmatic factors is clearly different from the fixed semantic interpretation of the HeRC.

Finally, the semantic interpretation of an HiRC is closely related to the predicate of the matrix clause. As we have seen in the HiRC construction (14), there can be several potential heads within a relative clause depending on the context, and thus an HiRC construction can receive more than one interpretation. The semantic property of the matrix predicate restricts the denotation of the internal head. To illustrate this, compare the HiRC examples in (18) and (19) (matrix predicate in bold):

- (18) a. John-un [Mary-ka ppang-ul mantu-nun] kes-ul **kkwucicessta**
 J-Top M-Nom bread-Acc make-Rel Kes-Acc scolded
 (i) ‘Mary_i was cooking the bread and John scolded her_i because of that.’
 (ii) *‘Mary was cooking the bread_i and John scolded it_i.’
- b. John-un [Mary-ka ppang-ul mantu-n] kes-ul **mekessta**
 J-Top M-Nom bread-Acc make-Rel Kes-Acc ate
 (i) *‘Mary_i cooked the bread and John ate her_i because of that.’
 (ii) ‘Mary cooked the bread_i and John ate it_i.’

(19) a. John-un [koyangi-ka sayngsen-ul mek-nun] kes-ul **ttayriessta**
 J-Top M-Nom bread-Acc make-Rel Kes-Acc hit

(i) ‘A/The cat was eating the fish and John hit the cat.’

(ii) *‘A/The cat was eating the fish and John hit the fish.’

b. John-un [koyangi-ka sayngsen-ul mek-n] kes-ul **pelyessta**
 J-Top M-Nom bread-Acc make-Rel Kes-Acc throw.away

(i) *‘A/The cat ate the fish and John threw away the cat.’

(ii) ‘A/The cat ate the fish and John threw away the fish.’

The semantic interpretations are not ambiguous in relation to the semantic head of the HiRC constructions in (18) and (19) since the matrix predicates determine their own semantic heads of the relative clauses. For example, the internal head in (18) can be theoretically construed either as *Mary* or as *ppang* ‘bread’ according to the indeterminacy of the semantic head of HiRC. However, the semantic property of the matrix predicate *kkwucicessta* ‘scolded’ in (18)a must be connected to the potential head *Mary*, but not *ppang* ‘bread’, since John could scold *Mary*, but not the bread. Similarly, the semantic property of the matrix verb of (18)b, *mekta* ‘eat’, causes the external head *kes* to be semantically associated with the internal head, *ppang* ‘bread’ among the possible internal heads in the HiRC. In the same vein, the internal head of the HiRCs in (19)a and (19)b must be selected depending on the semantic properties of the matrix predicates. The matrix verb in (19)a, *ttaylita* ‘hit’, must be semantically connected to the internal head *koyangi* ‘cat’, whereas the matrix verb in (19)b, *pelita* ‘throw away’, must be semantically connected to the internal head of the HiRC, *sayngsen* ‘fish’. Thus, in terms of a potential semantic head, the unambiguous interpretation in (18) and (19) represents the semantic relation between an HiRC and

a matrix predicate.

In sum, the following table shows the semantic-discourse differences between HeRCs and HiRCs:

(20) 3.2 HeRC vs. HiRC Constructions

Properties	HeRC construction	HiRC construction
exhaustiveness effects	No	Yes
multiple candidates for the internal head	No	Yes
secondary informations.	No	Yes
selectional restriction of the internal head of a relative clause by the semantics of matrix predicates	No	Yes

The first property in table 3.2 suggests that the internal head of the HiRC must be interpreted as definite, namely, a “definiteness effect.” The second and third properties also suggest that the HiRC must be interpreted as a “non-restrictive” relative clause. In the next section, based on the grammatical properties of the HiRC constructions that differ from the HeRC constructions, I will propose a structure for the HiRC construction.

3.5 The Structure of Korean HiRC Constructions

The structure of the HiRC construction has been researched by a number of linguists in Korean and Japanese (e.g. Kim 1984; Jhang 1994; Chung and Kim 2003; M. Jo 2002; J. Jo 2004; M. Kim 2004; Cha 2005; J. Lee 2006 for Korean; Kuroda 1975; Murasugi 1991, 2000; Hoshi 1995; Simoyama 1999; Kitagawa 2005 for Japanese). Even though their analyses vary depending on their grammatical grounds

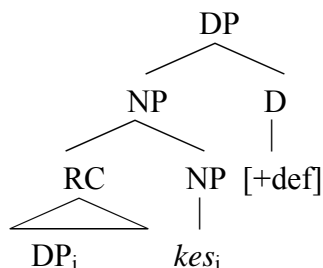
and theories, there are three common issues surrounding Korean HiRCs:

(21) The common issues in relation to Korean HiRCs

- a. The structure of HiRCs
- b. The syntactic position of HiRCs
- c. The LF-representation of HiRCs

The first issue is related to the highest node of a relative clause; that is, an HiRC is considered as IP, not CP (e.g. M. Jo 2002, M. Kim 2004, etc.). The second issue is related to the long-lasting controversy issue with respect to the syntactic status of an HiRC; e.g. *NP-adjunction* vs. *Antisymmetric structure* hypotheses (e.g. M. Jo 2002; Kayne 1994; Murasugi 2000, etc.). The final issue is related to the semantic relationship between HiRCs and their internal heads. In this section, while reconsidering various morpho-syntactic and semantic properties of the HiRC constructions already introduced in the previous sections, I argue that *kes* must be grammatically treated as a syntactic head of a relative clause, and then I propose the following structure for Korean HiRC constructions, as retained from (3):

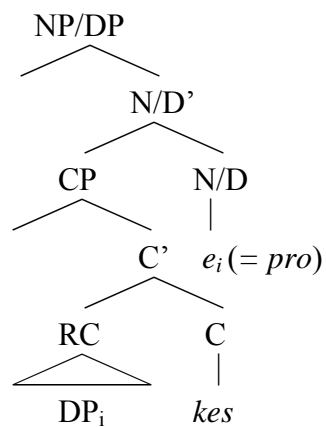
(22) Proposed Structure of Korean HiRC Construction (= (3))



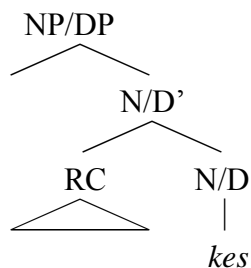
3.5.1 The Status of *Kes* in the HiRC construction

The first concern about the structure of Korean HiRC constructions is related to the syntactic position of *kes* in Korean. The most traditional view of this matter is that *kes* is treated as either a complementizer or a nominalizer (e.g. Jhang 1994; Sohn 1999 for complementizer, N. Kim 1984; Chung and Kim 2003; J. Jo 2004 for nominalizer, as given in (23)):

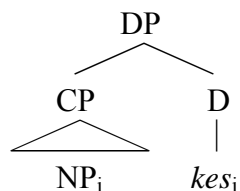
(23) a. *Kes* as a Complementizer (D.Yang 1975; Jhang 1994)



- b. *Kes* as a Nominalizer (Kim 1984; J. Yoon 1990; Chung and Kim 2003; J. Jo 2004)¹⁶



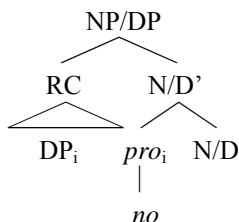
- c. *Kes* as a Determiner (J. Lee 2006)



The traditional view of the status of *kes* as either complementizer or nominalizer is based on the observation that *kes* is not a lexical category but a functional category. However, there are certain non-trivial reasons against adopting this view. In the

¹⁶ M. Kim (1984) claims that *kes* directly selects for a relative clause as its complement. On the other hand, Shimoyama (1999) assumes that Japanese *no* corresponding to *kes* in Korean selects for *pro*, a null pronominal, not RC. Rather, in this structure, the relative clause is base-generated in the specifier position of the DP, as illustrated here:

- (i) Shimoyama's Structure of the HiRC Construction



Shimoyama argues that *pro* as a sister of the nominalizer *no* is an "E-type" pronoun, which is co-indexed with its preceding antecedent. At any rate, in her analysis, *no* is treated as nominalizer, as shown in (i).

following subsection, while reconsidering the previously existing arguments about the morpho-syntactic status of *kes*, I argue against the assumption that *kes* is a complementizer or a nominalizer (e.g. (23)a and (23)b). In addition, I argue against the assumption that *kes* is a determiner, which has an inherited definiteness (e.g. (23)c).

3.5.1.1 The Analysis of *Kes* as a Complementizer

In this subsection, I will argue that *kes* cannot be treated as a complementizer, but as a referential pronominal (or noun). However, I will not follow the existing familiar accounts provided by M. Kim (2004) and J. Lee (2006); rather, I will provide my own arguments in favor of the assumption that *kes* is not a complementizer.

D. Yang (1975) assumes, without offering any in-depth arguments for it, that *kes* in HiRC constructions is a complementizer. That is, *kes* in the HiRC construction is similar to the English complementizer *that*. If *kes* were regarded as a CP complementizer, Korean HiRC constructions would be very similar to English free relatives (e.g. ‘John ate [what Mary cooked].’ or ‘John saw [who Mary loved].’) in that there are no overt nominal heads of the relative clauses. In Chapter 2, I have already discussed that *kes* in complex noun constructions cannot be part of CP, but of DP. Following that discussion, I continue to argue that *kes* cannot be analyzed as a CP complementizer. Let us first examine the morpho-syntactic properties of *kes* that are distinct from the typical Korean complementizers first. The most frequently cited argument in the literature against *kes* as a complementizer is that while *kes* is attached

by a case marker such as an accusative case marker *-lul*, or a nominative case marker *-ka/i*, neither the typical Korean clausal complementizers such as *-ko* and *-tolok* nor the verbal complementizers such *-e/a*, *-key*, and *-ko* can be suffixed by any case markers at all (Chung and Kim 2003; M. Kim 2004; Cha 2005 and others). For example, in the structure (23)a suggesting that *kes* is a clausal complementizer, the syntactic head of the HiRC is assumed to be an empty category such as *pro*. In this structure, however, an empirical question arises with respect to the covert syntactic head of the HiRC. Since a complementizer cannot be suffixed by a case marker in Korean, one assumes that instead of the complementizer *kes*, the empty category (i.e. *e*) in (23)a would be attached by a case marker. If this is true, *pro* (or a null resumptive pronoun) as an empty category could be attached by a case marker. But this prediction is not borne out in Korean, as exemplified in the dialogue (24):

- (24) A: ecey na-nun sakwa_i-lul mekessta
 yesterday I-Nom apple-Acc ate
 ‘Yesterday I ate apples.’
- B: **pro*_i-lul manhi mekess-ni?
 -Acc a lot ate-Q
 ‘(Did you) eat (the apples) a lot?’

Korean is a *pro*-drop language and the DP, *sakwa* ‘apple’, in (24) can be dropped in speaker B’s sentence, since it can be easily recoverable from the previous context. Accordingly, the ungrammaticality of the sentence (B) in (24) is due to the fact that a case marker as a bound morpheme cannot stand alone as long as its stem is not overtly realized. This implies that the syntactic head of an HiRC cannot be an empty

category because it can occur with a case marker. Otherwise, we have to assume that since *pro* cannot take a case marker, the entire HiRC construction containing a head, *pro*, takes a case marker. In this regard, in (23)a, the analysis of *kes* as a complementizer appears to be implausible unless we assume that there is a *pro* in the HiRC construction.

Another argument is that unlike the typical Korean complementizers, *kes* can be substituted for by certain elements such as a free nominal, a demonstrative, or an adjective. The nominal or pronominal elements replacing *kes* are instantiated in (25):

(25) *Kes* vs. Free Noun

- a. na-nun [totwuk-i pang-eyse nao-nun] **kes-ul** capassta
 I-Top thief-Nom room-from come.out-Rel Kes-Acc caught
 ‘A thief_i was coming out of the room and I caught him_i.’
- b. na-nun [totwuk-i pang-eyse nao-nun] **cangmyen-ul** capassta
 I-Top thief-Nom room-from come.out-Rel scene-Acc caught
 ‘I caught the scene of a thief coming out of the room.’

(25)a and (25)b are not the same kind of construction if narrowly examined in terms of their semantic interpretations. For example, *kes* in (25)a is anaphoric in the sense that it is co-indexed with a preceding noun phrase (i.e. *totwuk* ‘thief’) of the embedded clause. However, the *cangmyen* ‘scene’ in (25)b does not refer to any overt or covert element of the embedded clause. Regarding the two different constructions, in Chapter 4 I will analyze the *kes* clause in (25)a as an HiRC construction and the free nominal clause in (25)b as a type of NCC construction. In addition to my observation that (25)a and (25)b are different *kes* constructions, I also argue here that (25)a is semantically ambiguous. In other words, (25)a can be also interpreted as a

nominal complement clause (henceforth, NCC) *kes* construction as well as an HiRC *kes* construction. The interpretation of the *kes* NCC construction is semantically different from that of the *kes* HiRC construction, as revisited in (26):

- (26) na-nun [totwuk-i pang-eyse nao-nun] **kes-ul** capassta
 I-Top thief-Nom room-from come.out-Rel Kes-Acc caught
- (i) ‘A thief_i was coming out of the room and I caught him_i.’ (an HiRC reading)
 (ii) (lit) ‘I witnessed the thing that a thief was coming out of the room.’
 (a NCC reading)

In the first HiRC reading, *kes* semantically refers to the internal head, *totwuk* ‘thief’. However, in the second NCC reading, *kes* is not semantically associated with any element in the embedded clause.¹⁷ The second reading of (26) is almost identical with (25)b, in which the free noun *cangmyen* ‘scene’ appears. In terms of the second reading, the only structural difference between (25)b and (26) is that *kes* occurs in (25)b instead of the free noun *cangmyen* ‘scene’. Concerning the second reading (i.e. a NCC reading) of (26), it appears that *kes* can be replaced by a free noun. However, *kes* of the first reading (i.e. an HiRC construction interpretation) of (26) cannot be replaced by any noun, as follows:

¹⁷ In Chapter 4, I propose that in the NCC structure, a pronominal expletive (or a morpho-phonemically realized *pro*) occurs in the head position (i.e. N) of the embedded clause and can be replaced by a free noun. In this view, *kes* cannot be replaced by a free noun. Rather, *pro* can be replaced by a free noun.

(27) * na-nun [totwuk-i pang-eyse nao-nun]
 I-Top thief-Nom room-from come.out-Rel

totwuk/ku/manca/salam-(l)ul capassta
 thief/he/man/person-Acc caught

(intended) ‘A thief_i was coming out of the room and I caught him_i.’

The free nouns in (27) replacing *kes* cannot occur in the HiRC reading. In this regard, the replacement of *kes* by a free noun is possible only when it is interpreted as a head of a NCC. Therefore, the argument that *kes* is not a complementizer since it can be replaced by a free noun is not necessarily true. Rather, the free noun substitution appears to be possible in the NCC interpretation. Thus, I stand against M. Kim’s (2004) argument that *kes* in the HiRC construction can be replaced by a free lexical noun, as shown in (25)b.

On the other hand, M. Kim (2004), Cha (2005), and J. Lee (2006) argue that *kes* can be modified by a demonstrative or an adjective, and thus it cannot be a complementizer. It is true that as shown in (28)b and (29)b, demonstratives and adjectives can occur independently or together before *kes* in the examples such as *kukes* ‘that thing’, *ikes* ‘this thing’, *ssekun kes* ‘a rotten thing’, *masissnun kes* ‘a tasty thing’, *ku ssekun kes* ‘that rotten thing’, or *i masissnun kes* ‘this tasty thing’, etc.:

(28) *Kes* vs. Demonstrative Pronoun

a. na-nun [John-i sakwa-lul takca-ey tu-(u)n] **kes-ul** mekessta
 I-Top J-Nom apple-Acc table-at put-Rel Kes-Acc ate
 ‘John put the apple on the table and I ate it.’

- b. na-nun [John-i sakwa-lul takca-ey tu-(u)n] **kukes-ul** mekessta
 I-Top J-Nom apple-Acc table-at put-Rel that-Acc ate
 ‘John put the apple on the table and I ate that.’

(29) *Kes* vs. Det+Adjective

- a. na-nun [John-i sakwa-lul takca-ey tu-(u)n] **kes-ul** mekessta
 I-Top J-Nom apple-Acc table-at put-Rel Kes-Acc ate
 ‘John put the apple on the table and I ate it.’
- b. na-nun [John-i sakwa-lul takca-ey tu-(u)n] **ku ssekun kes-ul**
 I-Top J-Nom apple-Acc table-at put-Rel that rotten Kes-Acc
- mekessta
 ate
- ‘John put the apple on the table and I ate the rotten one.’

In (28)b and (29)b, the surface position of *kes* can be replaced by a demonstrative pronoun, *ku kes* ‘that’, and an adjective, *ssekun* ‘rotten’, respectively. The observation that *kes* can be replaced by a noun or pronoun is an argument that *kes* is not a complementizer, because a typical complementizer can be neither replaced by any nominal or pronominal elements nor modified by any demonstratives or adjectives. Rather, it would be reasonable to argue that *kes* can be categorized as a pronominal according to this grammatical aspect. However, I argue again against the argument provided by M. Kim (2004), Cha (2005), J. Lee (2006). That is, *kes* in the HiRC construction cannot be replaced by any nominal or pronominal elements and cannot be modified by any demonstrative or adjectival elements. In fact, it is not quite certain to me whether or not the bold-marked *kes* string in (28)b and (29)b is part of the HiRC construction. To illustrate this problem, compare (28)b and (29)b with the following examples in (30):

(30) HiRC

- a. na-nun [John-i sakwa-lul takca-ey tu-(u)n] (**kes**) **kukes**-ul
 I-Top J-Nom apple-Acc table-at put-Rel Kes that-Acc

mekessta
 ate

(lit) ‘John put the apple on the table and I ate it, the one.’

- b. na-nun [John-i sakwa-lul takca-ey tu-(u)n] (**kes**) **ku ssekun kes**-ul
 I-Top J-Nom apple-Acc table-at put-Rel Kes that rotten thing-Acc

mekessta
 ate

(lit) ‘John put the apple on the table and I ate it, the rotten one.’

The demonstrative or demonstrative + adjective *kes* strings can be preceded by another *kes* in (30). Furthermore, the *kes* followed by the determiner or demonstrative + adjective *kes* strings is optional in both (30)a and (30)b. I argue here that the determiner + *kes* string in (30)a is not part of the preceding HiRC construction; rather, it functions as an “emphatic repetitive expression” of the preceding *kes*. I say this because a primary focal stress always falls in the determiner *kes* string in (30)a and (30)b, and there is always a pause before the determiner *kes* string. This kind of emphatic repetitive expression is shown in the HeRC examples too, as follows (a focal stress in bold):

- (31) HeRC
 a. na_i -nun [pro_i e_j pankwun tta-n] (sakwa_j) **ku sakwa_j/kes_j-lul**
 I-Top right.now pick-Rel apple that apple-Acc

coahanta
 like

(lit) ‘I like the apples, the ones that I picked up a moment ago.’

- b. na_i -nun [pro_i e_j pankwun tta-n] (sakwa_j)
 I-Top right.now pick-Rel apple

ku masissnun sakwa_j/kes_j-lul coahanta
 that tasty apple-Acc like

(lit) ‘I like the apples, the tasty ones that I picked up a moment ago.’

In (31), the emphatic repetitive expressions can be either *kes* or a nominal. Like *kes* in the HiRC construction, the external head (i.e. *sakwa* ‘apple’) of the HeRC construction is optional in (31) when the emphatic repetitive expressions occur. In this regard, in (28)b and (29)b, the demonstrative or the demonstrative + adjective is not part of the preceding HiRC construction, but part of the following emphatic repetitive expression. The repetitive *kes* is not the same as the *kes* in the HiRC construction, since it is just a discourse-functional (e.g. focus) repetition of the preceding *kes*, which is optionally realized. Thus, the argument that *kes* is not a complementizer since it can be replaced by certain prenominal modifiers such as demonstratives or adjectives is not plausible at all.¹⁸

Up to this point, I have argued against Kim’s (2004), Cha’s (2005), and Lee’s (2006) argument that *kes* is not a complementizer because it can be modified by either

¹⁸ For more detailed analysis of emphatic repetitive expressions, see the appendix to this chapter.

a demonstrative or an adjective. Nevertheless, I still agree to their assumption that *kes* is not a complementizer, but a pronominal (or noun). For example, *kes* can be followed by a plural marker, as given in (32):

- (32) na-nun [John-i sakwa_i-lul takca-ey tu-(u)n] **kes(-tul)**_i-ul
 I-Top J-Nom apple-Acc table-at put-Rel Kes-Pl-Acc
- mekessta
 ate
- ‘John put the apples_i on the table and I ate them_i.’

The plural marker *-tul* can occur after *kes* in (32). But the plural marker *-tul* cannot be attached to the typical complementizers such as *-ko* and *-ci* in Korean, as follows:

- (33) a. na-nun [John-i sakwa-lul mek-ess-ta]-**ko(*-tul)** sayngkakhanta
 I-Top J-Nom apple-Acc eat-Pst-Mod-Comp-Pl think
 ‘I think that John ate the apples.’
- b. na-nun [John-i sakwa-lul mek-ess-nun]-**ci(*-tul)** kwungkumha-ta
 I-Top J-Nom apple-Acc eat-Pst-Mod-Comp-Pl wonder-Dec
 ‘I am wondering whether John ate the apples (or not).’
- c. John-i amwukesto mek-**ci(*-tul)** anh-ass-ta
 J-Nom anything come-Comp-Pl Neg-Pst-Dec
 ‘John did not eat anything.’

In (33), none of the three types of complementizers (e.g. *-ko*, *-ci*, and the negative *-ci*) can occur with the plural marker *-tul*. Thus, it is difficult to assume that *kes* in the HiRC construction is a functional category since it can take a plural suffix. Rather, it must be treated as a noun or pronominal. In addition, *kes* in the HiRC and HeRC constructions is obligatorily followed by a case marker such as the accusative case

marker *-(l)ul*. In Korean, CP complementizers cannot be followed by case-makers at all. Thus, *kes* in the HiRC construction has nominal properties, not functional properties.

In sum, I have argued that *kes* is treated as a nominal (e.g. NP/DP), not as a complementizer (i.e. C^0). In doing so, I have rejected the existing familiar account provided by M. Kim (2004), Cha (2005), and J. Lee (2006), providing instead my own arguments for it. That is, *kes* shows certain nominal properties. For example, *kes* can optionally take a plural marker *-tul* and it takes case markers obligatorily. In the next subsection, I will argue in favor of the assumption that *kes* in the HiRC construction is not a nominalizer either.

3.5.1.2 The Analysis of *Kes* as a Nominalizer

Following the previous subsection, here I continue to argue that *kes* in the HiRC is a nominal. In Chapter 2, we have seen in brief differences between nominalizers (or complementizers and *kes*. Beside them, here, I add more empirical arguments supporting that *kes* in the HiRC construction cannot be treated as a nominalizer.

N. Kim (1984) and J. Jo (2004) claim that *kes* can be treated as a nominalizer in the HiRC construction.¹⁹ According to their analyses, *kes* as a nominalizer changes the whole relative clause into a noun phrase and can get a case marker. In this

¹⁹ This approach also corresponds to the analysis of Japanese HiRC *-no* constructions developed by Horie (2003), Hoshi (1995), Shimoyama (1999), and Kitagawa (2005), where *no* is treated as a nominalizer.

approach, *kes* corresponds to the English *-ing* which changes a verb into a noun. However, this approach still has an empirical problem. For example, nominalizers cannot take a plural marker, as shown in (34):

- (34) a. *na-nun [John-i sakwa-lul mek-**ki-tul**]-lul palanta
 I-Top J-Nom apple-Acc eat-Nml-Pl-Acc wish
 ‘I want John to eat the apples.’
- b. *na-nun [John-i sakwa-lul mek-ess-**um-tul**]-ul alassta
 I-Top J-Nom apple-Acc eat-Pst-Nml-Pl-Acc knew-Dec
 ‘I knew that John ate the apples.’

The typical nominalizers *-ki* and *-um* in (34)a and (34)b cannot occur with a plural marker in Korean. Accordingly, if *kes* in the HiRC were a nominalizer, it would not occur with the plural marker *-tul*. However, this is not the case in (34). Unlike the nominalizers, *kes* in the HiRC can take the plural marker *-tul*, as we have already seen in (33). That is, *kes* shows a property distinct from typical nominalizers.

Unlike *kes* in the HiRC construction, Korean nominalizers such as *-ki* and *-(u)m* are not referentially related to any arguments or adjuncts in the preceding verbal or clausal construction. As a matter of fact, as a functional category, neither complementizers nor nominalizers can refer to any elements in the preceding verbal or clausal domain. To illustrate this property, let us compare the following nominalizer construction and HiRC construction, respectively:

- (35) a. Nominalized Clause
 na-nun [**John-i** cip-ulo ka-**ki**]-lul palanta
 I-Top J-Nom house-to go-Nml-Acc wish
 ‘I want John to go home.’

b. HiRC

na-nun [John_i-i cip-ulo ka-nun] kes_i-ul capassta
 I-Top J-Nom house-to eat-Rel Kes-Acc caught
 ‘John was going home and I caught him (at that moment).’

In (35)a the nominalizer *-ki* cannot be coreferential to the subject *John* in the preceding embedded clause, but it just changes the embedded clause into a nominal category which can get a case marker. On the other hand, *kes* in (35)b semantically refers to the subject *John* in the preceding clause, and at the same time it satisfies the semantic requirement of the matrix predicate *capta* ‘catch’. More specifically, the semantic property of the matrix verb *capta* ‘catch’ requires ‘someone’ or ‘something’ as its argument of the action of catching, and *kes* syntactically functions as the argument of the matrix verb. At the same time, *kes* is semantically associated with the subject of the relative clause in the way that the patient caught by me is *John*, but not others. In this way, the “true semantic” complement of the matrix predicate *capta* ‘catch’ is *John*, but its “formal syntactic” complement is *kes* in (35)b. That is, the grammatical role of *kes* in the HiRC construction is a formal complement of the matrix predicate, and it also serves as a syntactic head of the relative clause. Therefore, through the above findings, I suggest that *kes* is neither complementizer nor nominalizer, but it is a referential pronominal.

In sum, the following table shows certain grammatical differences between *kes* and nominalizers:

(36) 3.3 *Kes* vs. Nominalizers (*-ki* and *-(u)m*)

	<i>kes</i>	<i>-ki</i>	<i>-(u)m</i>
plural maker <i>-tul</i>	optional	*	*
case marker	obligatory	optional	obligatory

3.5.2 Proposal: The Structure of the HiRC Construction

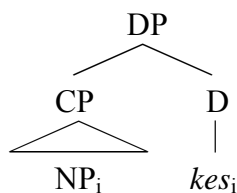
Following the arguments about the status of *kes* in the HiRC construction, in this subsection I argue for the proposed structure of Korean HiRC constructions in (22) (and also in (3)), which includes *kes* as a bound (and semantically referential) pronominal appearing in the syntactic head position of a relative clause.

The HiRC structure in (22) is very similar to the typical HeRC structure, in which the relative clause is an adjunct of the external head noun. Instead of the external head noun in the HeRC, *kes* appears under the node NP in (22), and it is co-indexed with the internal (or semantic) head, DP. This structure appears to have a number of advantages in explaining the general or specific properties of the HiRC constructions. In particular, the structure (22) can account for the so-called “definiteness (or specificity)” effect created by the “non-restrictive” interpretation of a relative clause (cf. Culy 1990). As mentioned earlier in section 3.4 of this chapter, it is well known that HiRC constructions show an “exhaustiveness (or maximality)” effect, by which the whole DP dominating a head-internal relative clause must be interpreted as a “definite” (cf. for Korean, Kim 2004; Lee 2006; for Japanese, Hoshi 1995; Shimoyama 1999; Kitagawa 2005). In the structure (22), the definiteness results from the head of DP (i.e. D^0), which is a phonetically null category that has a [+def] feature. In fact, this idea is identical to that of M. Kim (2004), who argues that

the definiteness effect of the HiRC+*kes* constructions comes from a null definite D^0 . The relative clause as an adjunct of *kes* in (22) is interpreted as “non-restrictive” since it modifies *kes*, which is featured as [+def] under a D^0 .

Regarding the structure (22), on the other hand, an indispensable question arises. Why does *kes* appear under NP as a sister of D^0 , not directly under D^0 ? That is to say, how do we know that *kes* is an NP, but not a D^0 ? As an alternative of (22), in fact, Lee (2006:109) suggests the following structure where *kes* is a pronominal that occupies the head of DP (i.e. D^0):²⁰

(37) *Kes* as a Determiner

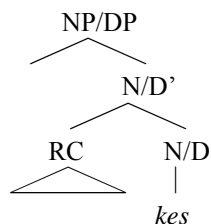


In (37), *kes* is a “definite referential” by itself and the relative clause (i.e. CP) modifies it. The only difference between (37) and (23)b is the status of *kes*; that is,

²⁰ As a matter of fact, if there is no co-indexation between *kes* and NP, the structure (37) is similar to the *kes* NCC structure, which I will suggest in chapter 4. That is, *kes* in NCC constructions will be assumed as a functional head occupying D^0 .

kes in (37) is a definite determiner while *kes* in (23)b is a nominalizer.²¹ The *kes* of structure (37) has the inherent definiteness as a pronominal, compared with my proposed structure (22) in which *kes* is derived from the feature [+def] of a null category, D⁰ and *kes* does not have any “inherent” definiteness. A problem with respect to the structure (37) is that there is no evidence that *kes* has an inherent definiteness. For example, without a determiner, *kes* in the adjective + *kes* constructions such as *ssekun kes* ‘a/the rotten thing’ or *masissun kes* ‘a/the tasty thing’ is interpreted as definite or indefinite depending on its context. If one assumes that only the *kes* in the HiRC construction has inherent definiteness, it is nothing but a stipulation to account for the definiteness effect of the HiRC construction. In addition, there is a theoretical advantage with respect to the structure (22). That is, *kes* does not c-command the internal head of an HiRC in (22). As we have assumed earlier, *kes* is co-referential to the internal head of an HiRC (cf. Kitagawa 2005, Lee 2006). In this approach, one of the most serious problems is a potential violation of the Condition C of Binding Theory by which R-expressions cannot be bound by any co-indexed pronominal element. The only way to avoid this problem is an adjunct structure. For example, *kes* as an anaphoric pronominal in (22) does not c-command the internal

²¹ The *kes* structure in (23)b revisited here is based on the nominalizer analysis of *kes* (N. Kim 1984; for the Japanese *no*, Shimoyama 1999, Kitagawa 2005):



head of an HiRC (i.e R-expression) because every node dominating *kes* does not c-command the internal head of the relative clause.

In sum, in this section, it has been argued for the structure of the HiRC construction, as shown in (22). In the following section, I will analyze the “gappy” HiRCs, which contain a phonetically null argument (i.e. *pro*) inside the relative clause. This is also helpful to understand the characteristics and structure of the HiRC constructions.

3.5.3 Gappy Head-internal Relative Clause Constructions

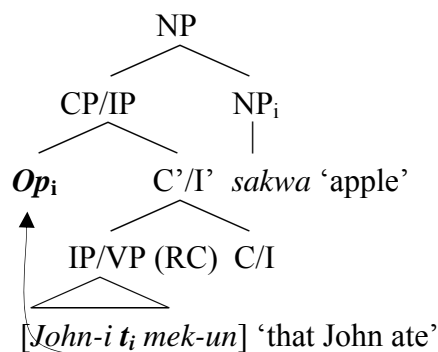
In this section, I investigate the “gappy” HiRC constructions in Korean. Usually, an HiRC has no gap since it includes an internal head within the relative clause. I argue here that while a gap in an HeRC is a trace introduced by relativization, a gap in an HiRC is not such a syntactic gap derived by movement, but a *pro*.

There is convincing evidence in favor of the assumption that the gap in an HiRC is different from the gap in an HeRC. In the case of an HeRC, the gap of a relative clause cannot be replaced by an overt resumptive pronoun, as illustrated again:

- (38) a. [John-i e_i mek-un] sakwa_i
 J-Nom eat-Rel apple
 ‘the apple that John ate’
- b. *[John-i kukes_i-ul mek-un] sakwa_i
 J-Nom that-Acc eat-Rel apple
 ‘the apple that John ate’

In (38)b, the gap in the HeRC cannot be substituted for by the resumptive pronoun, *kukes* ‘that thing’. This is the reason why the standard analysis of Korean HeRC constructions relies on the movement-based theory (cf. D. Yang 1989; N. Kim 1984; Jhang 1994). According to the standard analysis, while leaving a trace, the null operator base-generated in the gap position moves to the specifier position of CP (or IP depending on the analysis) in (38)a, which is the highest functional category of a relative clause adjunct to NP:²²

(39) The Structure of Korean HeRC Constructions (D. Yang 1989; N. Kim 1984)



In (39), the external head NP is base-generated in the syntactic head position of the HeRC constructions and is coreferent to the moved null operator in the relative clause (e.g. CP). That is, the gap is a trace in the HeRC. On the other hand, in the gappy HiRC constructions the gaps can be replaced by either a free noun or an overt resumptive pronoun, as illustrated in (40):

²² For the IP-based analysis of a HeRC construction, see M. Jo (2002) and M. Kim (2004).

- (40) a. Gappy HiRC
 [**e_i** tomangka-nun] **kes_i-ul** nay-ka capassta
 run.away-Rel Kes-Acc I-Nom caught
 ‘(someone/something)_i was running away and I caught him/it_i.’
- b. Gapless HiRC
 [**totwuk_i-i** tomangka-nun] **kes_i-ul** nay-ka capassta
 thief-Nom run.away-Rel Kes-Acc I-Nom caught
 ‘The thief_i was running away and I caught him_i.’
- c. Gapless HiRC
 [**ku_i-ka** tomangka-nun] **kes_i-ul** nay-ka capassta
 he-Nom run.away-Rel Kes-Acc I-Nom caught
 ‘He_i was running away and I caught him_i.’

The gap in the gappy HiRC (40)a can be substituted for by either the free noun, *totwuk* ‘thief’, in (40)b or the resumptive pronoun, *ku* ‘he’, in (40)c. If a gap can alternate with either a resumptive pronoun or a free noun in a relative clause, it cannot be a trace. This strongly suggests that the gap in the HiRC construction is significantly different from the gap in the HeRC construction; that is, the former is a *pro* (a null argument) while the latter is a trace. In other words, the semantic interpretation of the gap in an HiRC has already been established in the previous context, and hence it is interpreted as “presupposed.” This also implies that gappy RCs are insensitive to syntactic islands for movement since the gaps are not relevant to any movement operation.

There is another argument that the gap in the gappy HiRCs is not a trace, but a *pro*. It is well known that Korean relative clauses are related to the so-called “unbounded dependency” of relativization (Jhang 1994). Unbounded dependency refers to the long-distance relationship between a gap in a relative clause and an

external head of the relative clause, which is co-indexed with the gap. In general, Korean HeRC constructions display this long-distance dependency of relativization, as illustrated in (41):²³

(41) HeRC Double Relative Clause

a. [[e_i e_j choykune_y kuli-n] **kulim_j**-i inki-ka
lately paint-Rel picture-Nom popularity-Nom

iss-nun] **miswulka_i**
have-Rel artist

(lit) ‘the artist who the picture that (he/she) painted lately is popular’

b. [[e_i e_j censiha-nun] **kulim_j**-ul nay-ka coaha-nun] **miswulka_i**
exhibit-Rel picture-Acc I-Nom like-Rel artist

(lit) ‘the artist who I know the picture that (he/she) displays.’

The above constructions are often called “double relative clauses” because a sentence includes two separate relativization processes. According to the GB-based theory of relativization, the rightmost relativized elements (i.e. *miswuka* ‘artist’) are considered to be derived from the most embedded relative clause by movement (cf. D. Yang 1989). However, the grammaticality of the double relative clause constructions in (41)a and (41)b is a big challenge to the movement-based theory of relativization because without violating any island constraints, the rightmost element cannot be moved out of the most embedded relative clause, which is a blocking domain for extraction. As an alternative, many analyses assume that there is no trace in the most embedded relative clause, but a base-generated null resumptive pronoun (or *pro*),

²³ The parentheses in the gloss stand for the position of an invisible element in the surface representation.

which is semantically associated with the rightmost relativized element (Lee 2004; Han and Kim 2004; and many others). In particular, the gap associated with the rightmost element can be substituted for by an overt resumptive pronoun, as follows:

(42) HeRC Double Relative Clauses

- a. [[**ku pwun**_i-i **e**_j choykuney kuli-n] **kulim**_j-i
 the person-Nom lately paint-Rel picture-Nom

in*ki*-ka iss-nun] **miswulka**_i
 popularity-Nom have-Rel artist

(lit) ‘the artist who the picture that (he/she) painted lately is popular’

- b. [[**ku pwun**_i-i **e**_j censiha-nun] **kulim**_j-ul nay-ka coaha-nun]
 the person-Nom exhibit-Rel picture-Acc I-Nom like-Rel

miswulka_i
 artist

(lit) ‘the artist who I like the picture that (he/she) displays.’

In (42)a and (42)b, the gaps of the embedded clauses associated with the rightmost external head, *miswulka* ‘artist’, can be placed by the resumptive pronoun, *ku pwun* ‘the person’. This suggests that the rightmost head of the double relative clause (e.g. *miswulka* ‘artist’) is not derived by movement; rather it is base-generated in its position. It seems to be true that the gaps associated with the rightmost elements of the double relative clause constructions are distinct from the other gaps in the same HeRCs (i.e. (e_j)) of (42)a and (42)b, which are assumed to be a trace (Yoon 1990; Jhang 1994). For example, the trace gaps in the HeRCs, which are driven by the relativization movement, cannot be replaced by an overt resumptive pronoun, as illustrated:

(43) HeRC Double Relative Clause

a. *[[**e_i** **ku kes_j-ul** choykuney **kuli-n]** **kulim_j-i**
 that-Acc lately paint-Rel picture-Nom

inki-ka iss-nun] **miswulka_i**
 popularity-Nom have-Rel artist

(lit) ‘the artist who the picture that (he/she) painted lately is popular’

b. *[[**e_i** **ku kes_j-ul** censiha-nun] **kulim_j-ul** nay-ka coaha-nun]
 that-Acc exhibit-Rel picture-Acc I-Nom like-Rel

miswulka_i
 artist

(lit) ‘the artist who I know the picture that (he/she) displays.’

In (43), the gap associated with the external head, *kulim* ‘picture’, cannot be replaced by the resumptive pronoun, *ku kes* ‘that thing’. This means that the external head *kulim* is derived by a relativization movement operation leaving a trace in the embedded clause. Thus, there are two distinctive types of silent entries in double relative clause constructions. The first type of gap (e.g. (e_i)) in (41) is regarded as a base-generated *pro* because it can be replaced by a resumptive pronoun as in (42), while the second type of gap (e.g. (e_j)) in (41) must be treated as a trace which cannot be substituted for by a resumptive pronoun, as in (43).

Let us turn to the corresponding HiRC double relative clause constructions. Although they do not correspond to each other in the same way, compare the HiRC double relative clause constructions in (44) with the HeRC double relative constructions in (43):

(44) HiRC Double Relative Clause Construction

a.?[[John-i **ku kes_i-ul** han ip mek-un] **kes_i-ul** Mary-ka
 J-Nom the thing-Acc one mouth eat-Rel Kes-Acc M-Nom

ssuleykitong-ey peliess-ten] **sakwa_i**
 trash.box-in throw.awy-Rel apple

‘the apple that John took one bite (of it) and Mary threw away into the trash box’

b.?[[John-i Bill-eykey **ku kes_i-ul** cwu-n] **kes_i-ul** Mary-ka
 J-Nom B-Dat the thing-Acc give-Rel Kes-Acc M-Nom

tenci-n] **sakwa_i**
 throw-Rel apple

‘the apple that John gave (it) to Bill and Mary threw’

In (44), the gaps in the embedded clause of the double HiRC constructions can be all replaced by the resumptive pronoun, *kukes* ‘that thing (= it)’. The gap in (44) is distinct from that in (43) in that only the former can be replaced by a resumptive pronoun. That is, in (44), the gap must be treated as a *pro*, not a trace. Recall that this type of HiRC is called a “gappy” HiRC because it has a phonetically null element (Cha 2005). Thus, the gap in the HiRC is not a trace but a *pro* (or “null resumptive” pronoun), whose semantic property is established (i.e. “presupposed”) in the previous discourse domain.

In sum, I have argued in this section that the gappy HiRC is just a *pro*-dropped version of the HiRC, and that it is different from the HeRC since the syntactic properties of the gap in the gappy HiRCs are different from those of HeRCs. See table 3.1 in relation to the differences between HeRCs and HiRCs (gappy and gapless) in (12).

3.6 Scrambling from HiRC Constructions

In the previous sections, we have seen the various grammatical properties of the HiRC constructions. Based on these properties, I proposed the structure of the HiRC construction, as illustrated in (22) (= (3)). In this section, I discuss scrambling of an argument DP from HiRC constructions.²⁴ It will be shown that while DP scrambling from HeRC constructions is not possible at all, DP scrambling from HiRC constructions is possible if and only if the scrambled DP meets two grammatical conditions. First, the scrambled DP must be the internal (or semantic) head of the relative clause; second it must be an argument, not an adjunct, of the embedded verb in the relative clause. In terms of DP scrambling, the HiRC construction differs from the HeRC construction in Korean.

In general, in Korean, scrambling of any constituent from an HeRC construction is ungrammatical while scrambling of a whole relative clause including an external head noun is quite acceptable, as illustrated in (45):

(45) HeRC

- | | | | | | | |
|----|---|-------------------------|-------------------------|------------------------|---------------|------------|
| a. | John-i | [[Mary-ka | sa-n] _{RC} | chayk]-ul | ilk-nun-ta | |
| | J-Nom | M-Nom | buy-Rel | book-Acc | read-Pres-Dec | |
| | ‘John is reading the book which Mary bought.’ | | | | | |
| b. | * Mary-ka_i | John-i | [[t_i | sa-n] | chayk]-ul | ilk-nun-ta |
| | M-Nom | J-Nom | buy-Rel | book-Acc | read-Pres-Dec | |
| c. | *[Mary-ka | san]_i | John-i | [t_i | chayk]-ul | ilk-nun-ta |
| | M-Nom | buy-Rel | J-Nom | book-Acc | read-Pres-Dec | |

²⁴ In this section, scrambling refers to long (distance) scrambling unless there is specific notification.

- d. ***chayk-ul_i** John-i [[Mary-ka sa-n] **t_i**] ilk-nun-ta
 book-Acc J-Nom M-Nom buy-Rel read-Pres-Dec
- e. [[**Mary-ka san**] **chayk**]-ul_i John-i **t_i** ilknunta
 M-Nom buy-Rel book-Acc J-Nom read
 ‘John is reading the book which Mary bought.’

In (45), the subject DP of the relative clause in (45)b, the relative clause not containing an external head noun in (45)c, and the external head noun in (45)d cannot be scrambled from the external relative clause construction, *Mary-ka san chayk* ‘the book that Mary bought’. But only the whole relative clause construction can undergo scrambling as in (45)e. In contrast, scrambling of a constituent from an HiRC construction is relatively freer than the corresponding HeRC one, as given in (46) and (47):²⁵

(46) HiRC

- a. John-un [[Mary-ka ku coyangi-lul cwui -un]_{RC} kes]-lul
 J- Top M-Nom that cat-Acc kill- Rel Kes-Acc
- ssuleykithong-ey peri-ess-ta
 trash.box-into threw.away
- ‘Mary killed the cat and John threw it away into the trash box.’

²⁵ According to J. Jo (2004:183), scrambling from an NCC construction is not sensitive to syntactic island conditions, while scrambling from an HiRC or complex noun phrase construction is subject to (weak) island conditions. In terms of acceptability, I agree with her in that scrambling from an HiRC construction is not as good as scrambling from an NCC *kes* construction in certain examples. However, it is also true that scrambling of an internal head from an HiRC is not worse than an NCC *kes* construction; thus, it may not violate any island conditions. In my intuition, both (46)b and (47)b can be treated as grammatical.

- b. **ku coyangi-lul_i** John-un [[_{CP} Mary-ka t_i cwui -un] kes]-lul
 that cat-Acc J- Top M-Nom kill-Rel Kes-Acc
- ssuleykithong-ey peri-ess-ta
 trash.box-into threw.away

‘The cat, Mary killed it and John threw it away into the trash box.’

(47) HiRC

- a. John-un [[Mary-ka ku coyangi-lul cwui-un]_{RC} kes]-lul
 J-Top M- Nom that cat-Acc kill-Rel Kes-Acc
- cwuci-ess-ta
 scold-Pst-Dec

‘Mary killed the cat and John scolded her (because of it).’

- b. ?**Mary-ka_i** John-un [[_{CP} t_i ku coyangi-lul cwui-un] kes]-lul
 M-Nom J- Top M-Nom kill-Rel Kes-Acc
- cwuci-ess-ta²⁶
 scold-Pst-Dec

‘Mary, she killed the cat and John scolded her (because of it).’

In (46)b and (47)b, the subject *Mary-ka* and the object DP *ku coyangi-lul* are scrambled from their argument positions in the HiRCs as in (46)a and (47)a to the sentence-initial position. They cannot be base-generated in the matrix sentence since the traces left by movement cannot be replaced by an overt resumptive pronoun. Furthermore, if the object *Mary-lul* were an internal argument of the matrix verb,

²⁶ It is interesting to note that although both are acceptable, scrambling of a subject argument is less acceptable than that of an object argument from an HiRC. Thus, in terms of acceptability, (46)b is a little bit better than (47)b. This asymmetry may be related to the parsing process of a complex sentence. For example, if a subject-marked argument occupying the beginning of a complex sentence tends to be interpreted as the subject of a matrix clause. In the case of (47)b, it could be wrongly interpreted by accident as ‘John killed the cat and Mary scolded John (because of it)’ in the first of parsing. Accordingly, the scrambled embedded subject would be difficult to parse quickly and correctly.

pelita ‘throw away’, the verb would have two internal arguments in (46)b: namely, *Mary-lul* and the HiRC construction. This cannot be true theoretically. Accordingly, *Mary-lul* must be treated as a scrambled embedded object. In the case of (47)b, the topic-marked subject, *John-un*, cannot be the embedded subject, but the matrix subject, since a topic phrase is not allowed in the relative clause in Korean (J. Jo 2002), and thus *Mary-ka* must be treated as a scrambled embedded subject. Interestingly, in (46)b and (47)b, the subject *Mary-ka* and the object DP *ku coyangi-lul* can be scrambled out of the HiRC if and only if it is considered an internal head.²⁷ Otherwise, scrambling out of the HiRC *kes* construction is quite degraded grammatically, as follows:

(48) HiRC

- a. **ku coyangi-lul**_i John-un [[_{CP} Mary-ka **t_i** cwui -un]_{RC} kes_i]-lul
 that cat-Acc J- Top M-Nom kill-Rel Kes-Acc
- ssuleykithong-ey peri-ess-ta
 trash.box-into threw.away

‘The cat, Mary killed it and John threw it away into the trash box.’

²⁷ More interestingly, the scrambled subject DP, *Mary*, in (47)b can get an accusative case marker *-lul* instead of the original nominative marker *-ka*, as follows (accusative case marker in bold):

- (i) **Mary-lul**_i John-un [_{CP} t_i ku coyangi-lul cwui-un] kes-lul cwuci-ess-ta
 M-Nom J-Nom M-Nom kill-Rel kes-Acc scold-Pst-Dec
 ‘Mary, she killed the cat and John scolded her (because of it).’

Regarding the accusative case-marked DP, however, I will argue that it is base-generated and its corresponding semantic position in the embedded clause can be filled with a null pronominal (i.e. *pro*).

b. ?***Mary-ka_i** John-un [[_{CP} **t_i** ku coyangi_j-lul cwui-un] kes_j]-lul
 M-Nom J- Top that cat-Acc kill-Rel Kes-Acc

ssuleykithong-ey peri-ess-ta
 trash.box-into threw.away

(Intended) ‘Mary, she killed the cat and John threw Mary away (because of it).’

(49) HiRC

a. ?**Mary-ka_i** John-un [[_{CP} **t_i** ku coyangi-lul cwui-un] kes_j]-lul
 M-Nom J- Top the cat-Acc kill-Rel Kes-Acc

cwuci-ess-ta
 scold-Pst-Dec

‘Mary, she killed the cat and John scolded her (because of it).’

b. ?***ku coyangi-lul_i** John-un [[_{CP} Mary_j-ka **t_i** cwui -un] kes_j]-lul
 that cat-Acc J- Top M-Nom kill-Rel Kes-Acc

cwuci-ess-ta²⁸
 scold-Pst-Dec

(Intended) ‘The cat, Mary killed it and John scolded the cat (because of it).’

The unacceptable scrambling in (48)b and (49)b is due to the scrambled arguments (e.g. *Mary*, *ku koyangi* ‘cat’) is not semantically co-referential to the syntactic head of the HiRC, *kes*. In the HiRC *kes* constructions, accordingly, only internal head DPs can undergo scrambling, but not other DPs. In other words, while other elements of

²⁸ It is noticeable that the matrix verb *cwucita* ‘scold’ can take either a proposition or an argument as its complement, and thus (49) is semantically ambiguous depending on the semantics of the matrix verb. If the matrix verb selects a proposition (or the *kes* construction in (49) is interpreted as an NCC, but not an HiRC), scrambling is quite acceptable. Compare the following NCC interpretation of (49):

- (i) **ku coyangi-lul_i** John-un [_{CP} Mary-ka **t_i** cwui -un] kes-lul cwuci-ess-ta
 that cat-Acc J-Top M-Nom kill-Rel kes-Acc scold-Pst-Dec
 ‘The cat, John scolded that Mary killed it.’

an HiRC are subject to island conditions, scrambling of the internal head from an HiRC does not show any island effects (or it shows only the weakest island effect (cf. J. Jo 2004)). Thus, in terms of scrambling, an HiRC is different from an HeRC, which never allows scrambling from them, as shown in (45).

On the other hand, one of the most important properties of scrambling from an HiRC *kes* construction removes the ambiguity of the internal (or semantic) head. In other words, if there are two or more potential internal heads in an HiRC, because *kes* can be associated with any kind of argument (e.g. subject or object) in the HiRC, then scrambling of an internal head eliminates the semantic ambiguity since the scrambled element must be regarded as an internal head of the HiRC. For example, in the following scrambled sentences, each of examples (50)b, (50)c, and (50)d has its own interpretation because the scrambled element must be regarded as an internal head (scrambled elements in bold):

(50) HiRC

- a. John-un [koyangi_i-ka cwij_j-lul coch-ko iss-nun] kes_{i/j/i&j}-ul
 J-Top cat-Nom mouse-Acc chase-Comp be-Rel Kes-Acc

capassta
 caught.

- (i) ‘A/the cat was chasing a/the mouse and John caught the cat.’
 (ii) ‘A/the cat was chasing a/the mouse and John caught the mouse.’
 (iii) ‘A/the cat was chasing a/the mouse and John caught the cat and the mouse.’

- b. ?**koyangi-ka** John-un [t_i cwi-lul coch-ko iss-nun] kes_i-ul
 cat-Nom J-Top mouse-Acc chase-Comp be-Rel Kes-Acc

capassta
 caught

‘A cat, it was chasing a mouse and John caught the cat.’

- c. **cwi-lul** John-un [koyangi-ka t_i coch-ko iss-nun] kes_i-ul
 mouse-Acc J-Top cat-Nom chase-Comp be-Rel Kes-Acc

capassta
 caught

‘A mouse, a cat was chasing it and John caught the mouse.’

- d. ?**koyangi-ka cwi-lul** John-un [$t_i t_j$ coch-ko iss-nun] kes_{i/j}-ul
 cat-Nom mouse-Acc J-Top chase-Comp be-Rel Kes-Acc

capassta
 caught

‘A cat was chasing a mouse and John caught both the cat and the mouse.’

The semantic ambiguity of (50)a is due to the fact that the internal head is “indeterminate”; that is, multiple candidates are competing for the internal head in (50)a, depending on various factors such as the discourse contexts and the matrix predicate’s semantics (cf. M. Kim 2004). That is to say, *kes* in (50)a can be co-indexed with either a subject argument or an object argument of the relative clause. Moreover, *kes* can be associated with the two arguments at the same time in (50)d. Although (50)a is semantically ambiguous, the most preferable reading of it is the first interpretation, since a subject argument has priority to be selected as a semantic head of the HiRC over other elements according to the “Accessibility Hypothesis” (Keenan and Cormrie 1977), by which a subject argument is preferentially either

extracted (scrambled or relativized) or interpreted over an object argument or other adjuncts if there is no given specific discourse or pragmatic information about the clause. However, in other semantic or pragmatic contexts, (50)a can be interpreted like (50)c or (50)d, since every argument can be a potential internal head of an HiRC. Under my assumptions, each of the potential internal heads of the HiRC in (50)a can undergo scrambling as in (50)b, (50)c, and (50)d. In terms of acceptability, it seems that (50)b and (50)d are slightly marginal over (50)c. But they may not be treated as totally ungrammatical or unacceptable because they can be introduced as the discourse-driven responses to the following *wh*-scrambled questions in (51)b and (51)c, respectively:

(51) HiRC

a. John-un [**mwuess_i-i** cwi-lul coch-ko iss-nun] **kes_i-ul**
 J-Top what-Nom mouse-Acc chase-Comp be-Rel Kes-Acc

capass-ni
 caught-Q

‘What_i was chasing a mouse and John caught it_i?’

b. **mwuess_i-i** John-un [**t_i** cwi-lul coch-ko iss-nun] **kes_i-ul**
 what-Nom J-Top mouse-Acc chase-Comp be-Rel Kes-Acc

capass-ni
 caught-Q

‘What_i was chasing a mouse and John caught it_i?’

- c. **mwuess_i-i** **mwuess_i-ul** John-un [**t_i** **t_j** coch-ko iss-nun] **kes_{i/j}-ul**
 what-Nom what-Acc J-Top chase-Comp be-Rel Kes-Acc
- capass-ni
 caught-Q

‘What was chasing what and John caught both of them?’

If *wh*-scrambling in (51)b and (51)c is possible, then scrambling in (50)c and (50)d are acceptable since they are interpreted as focused in response to the *wh*-scrambled questions in (51). Thus, I assume that as long as a scrambled element is considered as an internal head of an HiRC, it can be scrambled out of the HiRC.

Let us take another example to elaborate more specifically on this property of scrambling more specifically. The following sentence is provided in M. Kim (2004:152):

(52) HiRC

John-un [[Mary-ka **khal-lo** **cokak-ul** mandul-ko iss-nun]
 J-Top M-Nom knife-with sculpture-Acc make-Prog/Pres Imf-Rel

kes]-lul ppayas-a peliessta
 Kes-Acc take.away-Comp threw.away

‘(i) Mary was making a sculpture with a knife and John took the sculpture from her and threw it away.’

‘(ii) Mary was making a sculpture with a knife and John took the knife from her and threw it away.’

Kim introduced (52) to explain the ambiguity of the internal head of HiRC. Interestingly, as many Korean linguists have observed (among them, Cha 2005; Lee 2006), the internal head of the HiRC can be either an argument or an adjunct in

(52).²⁹ That is, there are multiple candidates for the internal head of an HiRC in (52) (e.g. *khal-lo* ‘with knife’ and *cokak* ‘sculpture’). As seen in section 3.4, the internal head of an HiRC can be determined by the interaction of the morpho-syntactic, semantic, and pragmatic properties of both the matrix clause and the HiRC. According to J. Lee (2006), however, the semantic ambiguity in (52) disappears when short scrambling occurs, as illustrated in (53) and (54):

(53) HiRC

John-un [[**cokak-ul**_i Mary-ka khal-lo t_i mandul-ko iss-nun] kes]-lul
 J-Top sculpture-Acc M-Nom knife-with make-Pres Imf-Rel Kes-Acc

ppayas-a peliessta
 take.away-Comp threw.away

‘Mary was making a sculpture with a knife and John took the sculpture from her and threw it away.’

(54) HiRC

John-un [[**khal-lo**_i Mary-ka t_i cokak-ul mandul-ko iss-nun] kes]-lul
 J-Top knife-with M-Nom sculpture-Acc make-Pres Imf-Rel kes-Acc

ppayas-a peliessta
 take.away-Comp threw.away

‘Mary was making a sculpture with a knife and John took the knife from her and threw it away.’

Both (53) and (54) are *short* scrambling (or clause-internal scrambling) examples, and

²⁹ It is well known that not only arguments (e.g. subject and object) but also adjuncts (e.g. time, location, manner, etc.) can be the semantic (or internal) head of an HiRC. Many Korean linguists assume that if no semantic and pragmatic information is given, the determination of the semantic head of an HiRC is determined by the famous Accessibility Hypothesis (Keenan and Comrie 1977). Thus, the preferable reading of (52) is the first interpretation because according to the Accessibility Hypothesis, an argument is more favorably selected than an adjunct for the semantic head of an HiRC.

the potential semantic ambiguity as seen in (52) disappeared in them by scrambling. Let us compare (53) and (54) with the following *long* (distance) scrambling versions (55) and (56), respectively:

(55) HiRC

cokak-ul_i [[John-un Mary-ka khal-lo **ti** mandul-ko iss-nun] kes]-lul
 sculpture-Acc J-Top M-Nom knife-with make-Pres Imf-Rel Kes-Acc

ppayas-a peliessta
 take.away-Comp threw.away

‘A sculpture, Mary was making it with a knife and John took the sculpture from her and threw it away.’

(56) HiRC

?***khal-lo_i** John-un [[Mary-ka **ti** cokak-ul mandul-ko iss-nun] kes]-lul
 knife-with J-Top M-Nom sculpture-Acc make- Pres Imf-Rel Kes-Acc

ppayas-a peliessta
 take.away-Comp threw.away

(Intended) ‘With a knife, Mary was making a sculpture and John took the knife from her and threw it away.’

The long scrambling of an argument from an HiRC is acceptable as in (55) while the one of an adjunct from an HiRC is not acceptable as in (56). In other words, only arguments can undergo long scrambling, but not adjuncts in Korean. In fact, this asymmetry between arguments and adjuncts regarding long scrambling is not new in the literature (Saito 1989; Bošković and Takahashi 1998; Bošković 2004; etc.). This sheds light on another important property of scrambling in relation to HiRCs. Namely,

a long scrambled element from an HiRC must be an argument, but not an adjunct.³⁰

Thus, I suggest the following generalization for DP scrambling from Korean HiRC

constructions:

³⁰ The impossibility of long scrambling of adjuncts can be supported from the assumption that a floating quantifier as an adverbial cannot be scrambled out of an HiRC. This prediction is borne out as follows (floating quantifier in italics):

- (i) HiRC
- a. na-nun [Mary-ka chayk-lul *se-kwen(-ul)* sa-n] kes-lul
 I-Top M-Nom book-Acc three-NC-Acc buy-Rel Kes-Acc
- iless-ta
 read-Dec
- ‘I read the three books that Mary bought.’
- b. **[se-kwen(-lul)]_i* na-nun [Mary-ka [chayk-ul] **t_i** sa-n] kes-lul
 three-NC-Acc I-Top M-Nom book-Acc buy-Rel Kes-Acc
- ilkess-ta
 read-Dec
- c. [**chayk-ul**]_i na-nun [Mary-ka **t_i** [*se-kwen(-ul)*] sa-n] kes-lul
 book-Acc I-Top M-Nom three-NC-Acc buy-Rel Kes-Acc
- ilkess-ta
 read-Dec
- ‘As for the books, I read the three ones that Mary bought.’
- d. ?*[[chayk-ul] se-kwen(-ul)]_i* na-nun [Mary-ka **t_i** sa-n] kes-lul
 book-Acc three-NC-Acc I-Top M-Nom buy-Rel Kes-Acc
- ilkess-ta
 read-Dec
- ‘As for the three books, I read them that Mary bought.’

In (i), if the floating quantifier, *se-kwen* ‘three-Numeral Classifier (for books)’, is treated as an adverbial, it cannot be scrambled in (i)b. The examples (i)d shows that the floating quantifier can be scrambled only when it is considered as part of the object nominal phrase (cf. Sportiche 1988).

(57) Generalization on Scrambling from HiRC

- An element can be scrambled out of an HiRC iff
- A scrambled element must be an internal head and
 - A scrambled element must be an argument

Otherwise, DP scrambling from an HiRC is prohibited.

The final property of scrambling from HiRCs is related to case marking on the scrambled elements. DP scrambling does not trigger any case-marking change on the scrambled element, as follows:

- (58) a. John-un [**koyangi-ka** sayngsen-lul mek-ess-ta]-ko
 J-Top [cat-Nom fish-Acc eat-Pst-Dec-Comp

sayngkakhanta
 think

‘John thinks that a/the cat ate the fish.’

- b. **koyangi-ka_i** John-un [**t_i** sayngsen-lul mek-ess-ta]-ko
 cat-Nom_i J-Top fish-Acc eat-Pst-Dec-Comp

sayngkakhanta
 think

‘As for the cat, John thinks that it ate the fish.’

- c. ***koyangi-lul_i** John-un [**t_i** sayngsen-lul mek-ess-ta]-ko
 cat-Nom_i J-Top fish-Acc eat-Pst-Dec-Comp

sayngkakhanta
 think

In (58)c, scrambling from a complement clause does not change the nominative case marker of the scrambled DP to another case marker (e.g. accusative case marker). On

the contrary, it appears that scrambling from an HiRC can generate a different case marker while undergoing movement, as instantiated in (59)c:

(59) HiRC

- a. John-un [[**koyangi-ka** sayngsen-lul mek-nun] kes]-ul tayriessta
 J-Top cat-Nom fish-Acc eat-Rel Kes-Acc hit
 ‘The cat ate the fish and John hit it.’

- b. ?**koyangi-ka**_i John-un [[**t**_i sayngsen-lul mek]-un kes]-ul
 cat-Nom_i J-Top fish-Acc eat-Rel Kes-Acc

tayriessta
 hit

‘As for the cat, it ate the fish and John hit it.’

- c. **koyangi-lul**_i John-un [[**e**_i sayngsen-lul mek]-un kes]-ul
 cat-Acc_i J-Top fish-Acc eat-Rel Kes]-Acc

tayriessta
 hit

‘As for the cat, it ate the fish and John hit it.’

In terms of acceptability, (59)c is better than (59)b. Given the general assumption that scrambling does not change case-marking, how can we explain the apparently case-changed example (59)c? I argue that the sentence-initial DP in (59)c, *koyangi-lul* ‘cat-Acc’, is actually base-generated in the matrix clause, but not scrambled out of the HiRC. To support this analysis, examine the following examples:

(60) HiRC

- a. ***koyangi-ka** John-un [[**kukes**_i-i sayngsen-lul mek]-un kes]-ul
 cat-Nom_i J-Top it-Nom fish-Acc eat-Rel Kes]-Acc

tayriessta
 hit

- b. **koyangi-lul** John-un [[**kukes-i** sayngsen-lul mek]-un kes]-ul
 cat-Acc_i J-Top it-Nom fish-Acc eat-Rel Kes]-Acc

tayriessta
 hit

‘As for the cat, it ate the fish and John hit the cat.’

If the trace positions in (59)b and (59)c are filled by the resumptive pronoun *ku kes* ‘it’, only (59)c is grammatical, as shown in (60)b. This indicates that the sentence-initial element in (59)c is not derived from movement, but base-generated according to the general assumption that a trace left by movement cannot be filled by a resumptive pronoun. In (59)c, if the accusative-marked DP, *koyangi-lul* ‘cat-Acc’, is base-generated, then its corresponding semantic position in the embedded clause should be filled with a null pronominal (i.e. *pro*). In contrast, the sentence-initial element in (59)b must be derived by scrambling since its original position cannot be filled by a resumptive pronoun, as shown in (60)a. In addition, compared with (59)c, the marginality in (59)b proves that the sentence-initially occurred DP in (59)b is a consequence of scrambling. DP scrambling from an HiRC shows a weak island effect, and thus (59)b is slightly marginal over (59)c, in which scrambling does not happen. In this way, we can confirm the prediction that scrambling never triggers case-marking changes. This can even apply to the scrambling of the whole strings of HiRC *kes* construction, as follows:

(61) HiRC

- a. John-un [[koyangi-ka sayngsen-lul mek-nun] kes]-*ul* tayriessta
 J-Top cat-Nom fish-Acc eat-Rel Kes]-Acc hit
 ‘A/The cat ate the fish and John hit the cat.’
- b. **[[koyangi-ka sayngsen-lul mek]-un kes]-*ul*_i** John-un **t_i** tayriessta
 [[cat-Nom fish-Acc eat-Asp Kes]-Acc J-Top hit
 ‘A/The cat ate the fish and John hit the cat.’
- c. ***[[koyangi-ka sayngsen-lul mek]-un kes]-*i*_i** John-un **t_i** tayriessta
 [[cat-Nom fish-Acc eat-Asp Kes]-Nom J-Top hit
 ‘A/The cat ate the fish and John hit the cat.’

The difference between (61)b and (61)c is that only the case marker of the scrambled HiRC construction in (61)c (i.e. *-i*) is not identical with the *in-situ* case marker in (61)a (i.e. *-(l)ul*). Thus, the ungrammaticality of (61)c can be easily accounted for by the assumption that scrambling of the whole HiRC construction cannot trigger any case-marking change.

In sum, there are two grammatical conditions for DP scrambling from HiRCs: first, the scrambled element must be an internal head; second, the scrambled element must be an argument. Moreover, we have observed that scrambling does not trigger any case-marking change.

3.7 Conclusion

In this chapter, I have discussed various similarities and differences between Korean HiRC and HeRC constructions. The HiRC constructions headed by *kes* conform to the cross-linguistic definitions for HiRC in every respect (Culy 1990). I have shown that in Korean, the HiRC constructions significantly differ from the the

HeRC constructions with respect to various syntactic and semantic properties. I have also proposed the structure (3) for Korean HiRC constructions, in which *kes* in an HiRC construction is a pronominal head, which is semantically co-referential to the internal head occurring inside the HiRC. I have further argued that a gappy HiRC is significantly different from an HeRC in terms of the grammatical properties of the gap that they contain. That is, the gap in HiRCs is regarded as a base-generated null argument (i.e. *pro*) occurring in a *pro*-dropped language, while the gap in HeRCs appears to be a trace derived by movement. On the other hand, I have shown that while DP scrambling from HeRCs is impossible in Korean, DP scrambling from HiRCs is possible if and only if a scrambled element is an internal head argument of the HiRCs.

Appendix: Emphatic Repetitive Expressions

In this appendix, I discuss what I call an “emphatic repetitive expression,” which we have seen in section 3.5.1.1. This expression frequently occurs in a sentence when one put some emphasis on the preceding noun phrase, and it always is accompanied by certain prosodic features such as a focal stress and a pause. I assume here that *kes* modified by demonstratives or adjectives is not part of the HiRC construction. Rather, it is part of the emphatic repetitive expression, repeating the preceding *kes* construction. I show here that *kes* in the HiRC construction is distinct from *kes* in the emphatic repetitive expression.

Regarding emphatic repetitive expressions, first of all, it is very interesting to

note that only noun phrases can be repetitive. A complementizer construction cannot occur in this emphatic usage, as shown in (62):

- (62) a. *na-nun [John-i sakwa-lul mek-ess-ta]-ko **ku-ko**
 I-Top J-Nom apple-Acc eat-Pst-Dec-Comp Det-Comp

sayngkakhanta
 think

- b. *John-i sakwa-lul mek-e(-lul) **ku-e(-lul)** po-ass-ta³¹
 J-Nom anything come-Comp-Acc Det-Comp try-Pst-Dec

Neither the clausal complement marked by the complementizer *-ko* nor the verbal complement marked by the complementizer *-e* can be repetitive in (62)a and (62)b.³²

In addition to (30)a and (30)b introduced in section 3.5.1.1, there is empirical evidence supporting my argument that the demonstrative + *kes* string (e.g. *kukes* ‘that thing’) is not a part of the HiRC construction, but that it must be treated as an emphatic repetitive expression. For instance, an adverbial can appear just in front of the demonstrative + *kes* string, but not before the head *kes* of the HiRC construction.

³¹ In many Korean V-V constructions, the second verb may lose its lexical meaning and become a functional verb (i.e. auxiliary). In particular, in (62)b, while the first verb *mekta* ‘eat’ adheres to its lexical meaning, the second verb *pota* ‘see’ changes to the functional meaning ‘try/attempt to’ from its original lexical meaning. Typically, a verb complementizer such as *-e/a* occurs between these two verbs in Korean, depending on the morphological requirement of the second verb. Thus, the verbal complementizer *-e* is introduced by the morphological requirement of the second “functional” verb *pota* ‘try to’.

³² Ironically, given the prediction that a complementizer cannot occur in the emphatic repetitive expression, we can argue here that *kes* in the HiRC cannot be a complementizer, but a nominal or pronominal because *kes* in the HiRC can be repetitive, as follows (a focal stress in bold):

- (i) na-nun [cwi-ka pang-eyse nao-nun] kes-ul **ku kes_i-ul** capassta
 I-Top mouse-Nom room-from come.out-Rel Kes-Acc Det Kes-Acc caught
 ‘A mouse_i was coming out of the room and I caught **that mouse_i**.’

An adverbial *palo* ‘right’ can modify an emphatic expression in Korean, and it occurs just before the emphatic repetitive expression. But it cannot intervene between the HiRC and *kes*, as shown in (63):

- (63) HiRC
 a. na-nun [John-i sakwa-lul takca-ey tu-(u)n] (***palo**) kes (**palo**)
 I-Top J-Nom apple-Acc table-at put-Rel right Kes right

kukes-ul mekessta
 that-Acc ate

(lit) ‘John put the apple on the table and I ate it, the right one.’

- b. na-nun [John-i sakwa-lul takca-ey tu-(u)n] (***palo**) kes (**palo**)
 I-Top J-Nom apple-Acc table-at put-Rel right Kes right

ku ssekun kes-ul mekessta
 that rotten thing-Acc ate

(lit) ‘John put the apple on the table and I ate it, the right tasty one.’

In (63)a and (63)b, the adverb, *palo* ‘right’, cannot precede the syntactic head *kes* of the HiRC while it appears in the emphatic repetitive expression. No adverbial can occur before *kes* in the HiRC constructions. This strongly suggests that the demonstrative + *kes* string is not part of the preceding HiRC construction.

In addition, I assume that if *kes* is modified by demonstratives, then a demonstrative + *kes* string is not part of the HiRC construction. That is, no pronominal modifier (e.g. demonstrative or adjective) can intervene between *kes* and its preceding HiRC. Compare the HiRC (64)a with the HeRC (64)b:

- (64) a. HiRC
 na-nun [John-i sakwa-lul takca-ey tu-(u)n] ***(ku) ssekun**
 I-Top J-Nom apple-Acc table-at put-Rel that rotten

kes-ul mekessta
 thing-Acc ate

(lit) ‘John put the apple on the table and I ate (the) rotten one.’

- b. HeRC
 na_i-nun [*pro*_i e_j pangkum tta-n] **(ku) masissnun sakwa_j-lul**
 I-Top right.now pick-Rel that tasty apple-Acc

coahanta
 like

(lit) ‘I like the apples, the tasty ones that I picked up a moment ago.’

In the HiRC (64)a, the morphological combination of an adjective + *kes* must be followed by the demonstrative *ku* ‘that’. In contrast, in the HeRC construction of (64)b, the presence of the demonstrative *ku* ‘that’ does not seem to be a crucial factor for determining the grammaticality of the sentence. In other words, the only difference between (30)b (which we saw in section 3.5.1.1) and (64)a is the presence of the demonstrative *ku* ‘that’. With respect to the existence of demonstratives, the discrepancy between (64)a and (64)b cannot be explained by M. Kim’s (2004), Cha’s (2005) and Lee’s (2006) analysis where *kes* in the HiRC construction is a pronominal (or nominal) and thus it allows any pronominal modifiers. That is, without any stipulation, they cannot account for the reason why *kes* in (64)a cannot occur without the demonstrative, over (64)b. Instead, this problem can be resolved if we assume that *kes* in the HiRC construction does not allow any modifiers and that the demonstrative + *kes* or the demonstrative + adjective + *kes* strings are emphatic repetitive

expressions. In particular, the ungrammaticality of (64)a can be best accounted for by the fact that the emphatic repetitive expression must include demonstratives in Korean. In contrast, the grammaticality of (64)b is due to the external head of the HeRC construction, which allows prenominal modifiers. That is, since an emphatic repetitive expression always co-occurs with demonstratives, the composition of an adjective + noun in (64)b must be interpreted as an external head of the relative clause, not an emphatic repetitive expression. On the other hand, *kes* as the syntactic head of an HiRC cannot occur with any prenominal modifiers. *Kes* can co-occur with demonstratives when it is regarded as part of emphatic repetitive expression. Under my assumption that no modifier can intervene between HiRC and *kes*, an HiRC construction acts like a single unit or chunk. *Kes* in (64)a needs the demonstrative *ku* ‘that’ because the adjective + *kes* must be treated as an emphatic repetitive expression, repeating the preceding HiRC construction. Thus, *kes* in the HiRC differs from the emphatic *kes* in that only the latter can take any prenominal modifiers.

CHAPTER 4

Kes Nominal Complement Clause Constructions

4.1 Introduction

In Chapter 2, we saw that *kes* constructions must be analyzed as complex noun phrases, which contain embedded clauses in them. In Korean, according to the semantic relation between the head noun and the embedded clause, embedded clauses appearing *kes* constructions can be divided into two types: relative clause and complement clause. That is, a relative clause modifies the head noun (i.e. a head-adjunct relation), while a complement clause complements the head noun (i.e. a head-complement relation). The relative clause embedded in the *kes* construction is called a head-internal relative clause (HiRC), as seen in Chapter 3, and the complement clause embedded in the *kes* construction is called a nominal complement clause (NCC). The main purpose of this chapter is to address the grammatical nature of NCC constructions, a type of *kes* construction.³³ In analyzing Korean *kes* NCC constructions, I argue first that in terms of its grammatical status, *kes* in the NCC constructions is a D^0 . Second, there are two types of NCC constructions: propositional vs. perceptual NCCs. Third, DP scrambling from NCC constructions is distinct from that from HiRC constructions.

In Chapter 3, I have suggested that *kes* in the HiRC construction is a pronominal, which requires a relative clause as its modifier. In this chapter, I will discuss another type of *kes* construction, different from the HiRC construction:

³³ In this chapter, unless there is a special mention, an NCC refers to a *kes* NCC.

- (1) a. HiRC
 na-nun [[*koyangi*_i-ka *sayngsen*_j-ul hwumchi-nun] *kes*_{ij}]-**ul**
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc
- cap-ass-ta
 catch-Pst-Dec
- (i) ‘I caught the cat_i while it_i was stealing the fish.’
 (ii) ‘I snatched the fish_j while the cat was stealing it_j.’
 (iii) ‘I witnessed (or took a picture) that the cat was stealing the fish.’
- b. NCC³⁴
 na-nun [[*koyangi*-ka *sayngsen*-ul hwumchi-nun] *kes*]-**ul**
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc
- al-ass-ta
 know-Pst-Dec
- (i) ‘I knew that the cat stole the fish.’
 (ii)?*‘I knew the cat that was stealing the fish.’
 (iii)?*‘I knew the fish that the cat was stealing.’

The possible readings between the two types of *kes* constructions in (1) show that they are grammatically distinguished from each other. In (1)a, *kes* is anaphoric in the sense that it can be associated with the semantic (or internal) head of the preceding relative clause, which can be presented either overtly (i.e. gapless HiRC) or covertly (i.e. gappy HiRC). Also, (1)a can be interpreted without establishing any semantic association between *kes* and an argument of the preceding embedded clause. That is, the third reading in (1)a is possible if the matrix verb *capta* ‘catch’ is translated into the English verbs such as ‘take a picture’ or ‘witness’. On the other hand, (1)b does

³⁴ In this chapter, the relativizers such as *-nun*, *-(u)n* and *-(u)l* are glossed as adnominal markers (i.e. Adn) since they occur in the NCCs, not in the HiRCs. That is, depending on the *kes* construction, they are glossed differently (cf. Sohn 1999).

not allow any co-referential reading of *kes* with an argument in the preceding embedded clause. The only possible reading of (1)b happens only when *kes* is not semantically associated with an argument of the preceding clause. That is, it appears that *kes* in (1)b does not function as an anaphoric item. In addition, in this type of *kes* construction, all the arguments (or adjunct phrases) of an embedded clause preceding *kes* are fully licensed themselves in terms of grammaticality, and the entire *kes* construction also functions as an argument of the matrix predicate. Note that *kes* in (1)b can be replaced by the free noun *sasil* ‘fact’:

(2) Free Nominal NCC

- a. *na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **sasil**]-ul
 I-Top cat-Nom fish-Acc steal-Rel sasil-Acc

cap-ass-ta
 catch-Pst-Dec

- b. na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **sasil**]-ul
 I-Top cat-Nom fish-Acc steal-Adn fact-Acc

al-ass-ta
 know-Pst-Dec

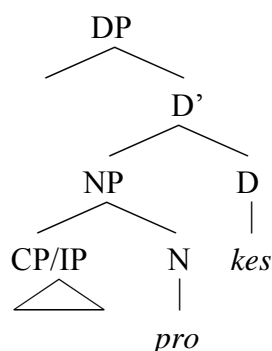
‘I knew the fact that the cat was stealing the fish.’

In (2), the free noun *sasil* ‘fact’ is semantically not relevant to any element of the preceding embedded clause. Accordingly, in (2)a, the NCC construction marked by the free noun *sasil* ‘fact’ cannot occur with the matrix verb, *capta* ‘catch’, of which selectional restriction on the complement must be an object that one can touch or grab. It is well known that Korean NCC constructions are grammatically related to the selectional restriction of a matrix predicate (Yang 1972; N. Kim 1984; Sohn 1999;

Cha 2005; and many others).

In this chapter, I propose that in the NCC construction (1)b, *kes* plays a functional role, such as a complementizer linking a matrix predicate to its nominal complement. *Kes* in the NCC construction, especially, is treated as a functional head of DP (i.e. D^0). The syntactic structure of *kes* NCC constructions is suggested as follows:

(3) Proposed Structure of *Kes* NCC Constructions³⁵



The structure in (3) displays that an NCC *kes* construction is a complex DP, in which *kes* is merged to the functional head D^0 , not in N or NP, unlike the anaphoric *kes* of the HiRC construction.³⁶ Furthermore, in (3), an embedded clause preceding *kes* is directly selected by the covert expletive (i.e. *pro*), whose position can be occupied by

³⁵ The structure (3) is very similar to the nominalized DP structure, and thus *kes* appears to be a nominalizer. However, I argue here that *kes* is different from a nominalizer.

³⁶ The head (i.e. D^0) of DP was originally designated for determiners such as English articles *a* and *the* (Abney 1987). However, in Korean which does not have such an overt article system, it has been assumed that D^0 can be occupied by a functional head such as a nominalizer or a null category as long as the functional head shows nominal properties (Yoon 1990; M. Kim 2004; J. Lee 2006; etc.). *Kes* in NCC constructions cannot be treated as a determiner like English *a*, *the*, or possessive 's; rather, it is regarded as a functional head which can occur in a D^0 . Here, I will call *kes* just a functional head. The term *functional head* simply refers to a functional category which can occur in a D^0 .

a free noun such as *sasil* ‘fact’ or *somwun* ‘rumor’ in the free nominal NCC construction. Based on the proposed structure, I argue here that *kes* serves its own syntactic and semantic functions, distinct from either nominalizers or complementizers.

DP scrambling from *kes* NCC constructions differs from that of HiRC constructions in that the former is not subject to the generalized conditions for HiRC scrambling proposed in Chapter 3. Thus, scrambling can be an important cue showing syntactic differences between *kes* NCC constructions and other constructions.

The organization of the chapter is as follows: in section 4.2, I will discuss various grammatical differences between HiRC and NCC constructions. While comparing the syntactic and semantic properties of the two types of *kes* constructions, I will argue that HiRC constructions are not grammatically equivalent to NCC constructions; that is, they must be treated separately from each other. Section 4.3 explores the morphological properties of *kes* in the NCC constructions. I show that even though it appears to play a role as a functional category, *kes* is grammatically different from the typical Korean complementizers (e.g. *-ko*) or nominalizers (e.g. *-ki* and *-(u)m*). Also, the functional role of *kes* in the NCC constructions is apparently distinct from that of *kes* in the HiRC constructions. In section 4.4, I will suggest that *kes* is a functional head (i.e. D^0), connecting a nominal complement to its head (i.e. matrix predicate). Section 4.5 presents evidence that there are two types of *kes* NCC constructions in Korean. In 4.6, I use scrambling as a tool to distinguish between *kes* NCC construction and other *kes* constructions (e.g. HiRC construction). Section 4.6 is

a summary and conclusion of the chapter.

4.2 HiRC vs. *Kes* NCC Constructions

In this section, I show that there are two types of *kes* constructions in Korean, namely, HiRC and *kes* NCC constructions, and they are grammatically different from each other. In Chapter 3, I have already discussed the grammatical properties of HiRC constructions. Now I discuss here another type of *kes* construction, which is distinct from the HiRC construction in many grammatical respects.

The two types of *kes* constructions are illustrated in the following examples in

(4):

(4) a. HiRC (Head-internal Relative Clause)

na-nun	[_{DP} [	koyangi-ka	sayngsen-ul	hwumchi-nun]	kes]-ul
I-Top		cat-Nom	fish-Acc	steal-Rel	KES-Acc

cap-ass-ta
catch-Pst-Dec

‘I caught the cat while it was stealing the fish.’

b. NCC (Nominal Complement Clause)

na-nun	[_{DP} [	koyangi-ka	sayngsen-ul	hwumchi-nun]	kes]-ul
I-Top		cat-Nom	fish-Acc	steal-Adn	KES-Acc

al-ass-ta
know-Pst-Dec

‘I knew that the cat was stealing the fish.’

c. HiRC or NCC

na-nun	[_{DP} [	koyangi-ka	sayngsen-ul	hwumchi-nun]	kes]-ul
I-Top		cat-Nom	fish-Acc	steal-Adn	KES-Acc

po-ass-ta
see-Pst-Dec

(i) ‘I saw the cat while it was stealing the fish.’ (an HiRC reading)

(ii) ‘I saw that the cat was stealing the fish.’ (an NCC reading)

I argue here that *kes* in (4)b must be analyzed as a functional head selecting for an NCC, compared with the *kes* in (4)a, which must be treated as a syntactic head modified by an HiRC. In other words, the embedded clause preceding *kes* in (4)a is an adjunct clause to the syntactic head of a noun phrase, while the embedded clause preceding *kes* in (4)b is a complement clause headed by the nominal head of a noun phrase. In this regard, I follow the traditional view that the semantic distinction between a relative clause and a complement clause is interpreted in the syntactic structure; that is, a relative clause is an adjunction to a higher projection, while a complement clause is a sisterhood to the head of a higher projection (Chomsky 1986). In Chapter 3, we have seen that the *kes* construction in (4)a must be treated as an HiRC construction. It is really hard to get an HiRC reading for the *kes* construction in (4)b (e.g. ‘I knew the cat that was stealing the fish.’). The most preferred reading of it is an NCC reading (e.g. ‘I knew that the cat was stealing the fish.’). Note that the preferred reading of (4)b is closely related to the semantics of the matrix verb, *alta* ‘know’. This type of verb is classified here as a *propositional* verb, and it rarely occurs in a sentence containing an HiRC. But the matrix verb *pota* ‘see’ in (4)c can semantically select either an HiRC or an NCC, depending on the context. This type of

verb is classified here as a *perceptual* verb, and it always results in the semantic ambiguity of a sentence. In this chapter, I call the *kes* construction in (4)b a *propositional* NCC construction and the *kes* construction in (4)c, a *perceptual* NCC construction, in accordance with the class of the matrix predicate of a complex sentence. That is, the *kes* construction in (4)b is selected by a propositional matrix verb such as *alta* ‘know’, *mithta* ‘believe’, or *hwuhoyhata* ‘regret’, etc., while the *kes* construction in (4)c co-occurs with a perceptual matrix verb such as *pota* ‘see’, *tutta* ‘hear’, or *mokkyekhata* ‘witness’, etc. Therefore, I show that the HiRC and NCC constructions are grammatically different from each other, and that the HiRC constructions can be also interpreted as perceptual NCC constructions because they always occur with perceptual verbs, not propositional verbs.

4.2.1 The Semantic Differences between HiRC *Kes* NCC Constructions

In this subsection, I discuss the semantic differences between the two *kes* constructions: HiRC and NCC. I show that whereas *kes* in the HiRC construction is an anaphoric pronominal appearing in the syntactic head of an HiRC, the *kes* in the NCC construction is a functional head (i.e. D^0), the function of which is just to link a *kes* NCC construction to the predicate of a matrix clause.

First, the grammatical status of *kes* of HiRC constructions is different from that of NCC constructions. In particular, *kes* as a head noun of an HiRC is anaphoric in the sense that it is co-referential with not only an entity in the preceding relative clause but also a null entity (i.e. *pro*), presupposed in the domain of discourse, in the

preceding relative clause. On the other hand, *kes* in the NCC construction is functional in the sense that it just plays the role of a functional category; that is, it intervenes between a matrix verb and its nominal complement. To see this difference more explicitly, compare the following examples in (5) and (6):

- (5) a. HiRC Construction
 na-nun [_{DP}[_{CP} **koyangi**_i-ka sayngsen-ul hwumchi-nun] **kes**]_i-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc

 cap-ass-ta
 catch-Pst-Dec

 ‘I caught the cat while it was stealing the fish.’
- b. HiRC Construction with a Gap
 na-nun [_{DP}[_{CP} *pro*_i sayngsen-ul hwumchi-nun] **kes**]_i-ul
 I-Top fish-Acc steal-Rel KES-Acc

 cap-ass-ta
 catch-Pst-Dec

 ‘I caught something while (it) was stealing the fish.’
- (6) a. Perceptual *Kes* NCC Construction
 na-nun [_{DP}[_{CP} koyangi-ka sayngsen-ul hwumchi-nun] **kes**]_i-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc

 po-ass-ta
 see-Pst-Dec

 (i) ‘I saw the cat while it was stealing the fish.’ (an HiRC reading)
 (ii) ‘I saw that the cat was stealing the fish.’ (an NCC reading)

b. Propositional *Kes* NCC Construction

na-nun	[_{DP} [_{CP} koyangi-ka sayngsen-ul hwumchi-nun]	kes]-ul
I-Top	cat-Nom fish-Acc steal-Adn	KES-Acc

al-ass-ta
know-Pst-Dec

‘I knew that a/the cat was stealing a/the fish.’

In Chapter 3, I have suggested that the *kes* string in (5) is an HiRC construction. In (5)a and (5)b, *kes* refers to a specific semantic entity (i.e. *koyangi* ‘the cat’ or *pro* ‘something or somebody’) in the preceding embedded clause (i.e. CP), regardless of whether or not the entity is phonetically realized in the embedded clause. However, *kes* in (6) does not have such semantic function at all; that is, it is not co-referential with any entity in the preceding embedded clause. Rather, it appears to function as a complementizer, which defines the *kes* construction as a nominal complement in relation to the matrix verb. This implies that since *kes* is not an anaphoric nominal, the embedded clause preceding *kes* in (6)b need not be interpreted as an HiRC anymore; namely, a relative clause reading (e.g. ‘I knew the cat that was stealing the fish’) is not available. Interestingly, (6)a is semantically ambiguous, depending on the status of *kes*. For example, in the NCC reading, *kes* is not co-referential with any element within the preceding clause, but it plays its role as a functional category, which signifies that the complex noun phrase containing it is the nominal complement of a matrix verb. I call *kes* in the NCC reading just a “functional head” of DP in the sense that it introduces a nominal complement to the matrix verb. On the other hand, *kes* in the HiRC reading refers to the specific entity, *koyangi* ‘cat’, in the preceding

and (7), their semantic ambiguity can disappear. This prediction is borne out, as demonstrated in (8):

- (8) a. na-nun [_{DP}[**koyangi**-ka sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc
 ttayli-ess-ta
 beat-Pst-Dec
 (i) ‘I hit the cat since it was stealing the fish.’ (an HiRC reading)
 (ii) *‘I hit that a/the cat was stealing a/the fish.’ (an NCC reading)
- b. na-nun [_{DP}[koyangi-ka sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc
 hwaksinha-n-ta
 believe-Prs-Dec
 (i)*‘I believe the cat since it is stealing the fish.’ (an HiRC reading)
 (ii) ‘I believe that a/the cat is stealing a/the fish.’ (an NCC reading)

The matrix predicates in (8), *ttaylita* ‘hit’ and *hwaksinhata* ‘believe’, are a class of verbs that cannot take an argument denoting either an entity or an event at the same time. In particular, the verb in (8)a is an entity predicate, and so it cannot take the *kes* construction denoting an event. On the contrary, the verb in (8)b as an event predicate cannot take the *kes* construction denoting a specific entity. Thus, in addition to the distinct status of *kes*, the semantic ambiguity of (6)a and (7) gets unambiguous, depending on the semantic denotations of a matrix predicate.

Finally, NCC and HiRC constructions are semantically different from each other in that only HiRC constructions can have certain “supplementary” semantic information such as *temporal*, *causative*, or *concessive* information, depending on the

context. That is, an HiRC+*kes* construction can receive more than one semantic interpretation. This is exactly why many Korean linguists treat the HiRC as a “non-restrictive” relative clause (J. Lee 2006; M. Kim 2004, among others). To demonstrate this difference, compare the following HiRC and NCC *kes* constructions:

- (9) a. HiRC
 na-nun [_{DP} [koyangi_i-ka sayngsen-ul hwumchi-nun] kes_i]-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc

 cap-ass-ta
 catch-Pst-Dec

 (i) ‘I caught the cat *while* it was stealing the fish.’ (*temporal* information)
 (ii) ‘I caught the cat *since* it was stealing the fish.’ (*causative* information)
- b. NCC
 na-nun [_{DP} [koyangi-ka sayngsen-ul hwumchi-nun] kes]-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc

 al-ass-ta
 know-Pst-Dec

 ‘I knew that the cat was stealing the fish.’

Depending on the context, the HiRC construction in (9)a shows the interpretive variability. In contrast, the NCC construction in (9)b does not have any secondary information. Thus, they are semantically different from each other.

In sum, Korean *kes* constructions can be separated into two types: NCC and HiRC, depending on their distinct semantic properties, as shown in table 4.1:

(10) Table 4.1 The Semantic Differences between HiRC and *Kes* NCC Constructions

<i>Kes</i> Construction Type	NCC	HiRC
the status of <i>kes</i>	functional head of DP (i.e. D ⁰)	anaphoric pronoun
the denotation of a matrix verb	event (or proposition)	entity
the supplementary information	No	Yes
the verbal type selecting <i>kes</i> constructions	propositional or perceptual	perceptual

4.2.2 The Morpho-syntactic Differences between HiRC and *Kes* NCC Constructions

At first glance, it appears that syntactically, the HiRC and NCC constructions are very similar in that there is no “semantic gap” in the embedded clause and they end in *kes*. However, I argue in this subsection that there are certain morpho-syntactic differences between HiRC and NCC constructions.

The first notable morpho-syntactic difference between the NCC and HiRC constructions is that the NCC+*kes* construction allows either a long or a short verbal suffixation in the preceding clause while the HiRC+*kes* construction allows only a short verbal suffixation, as follows:

- (11) a. Short Form HiRC
 na-nun [_{DP}[koyangi_i-ka sayngsen-ul hwumchi-**nun** **kes**]_i]-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc
 cap-ass-ta
 catch-Pst-Dec

‘I caught the cat while it was stealing the fish.’

b. Long Form HiRC

*na-nun [_{DP} [koyangi-ka sayngsen-ul hwumchi-**ess-ta-nun**] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Pst-Dec-Rel Kes-Acc

cap-ass-ta
 catch-Pst-Dec

In the HiRC construction, the embedded clause preceding *kes* cannot take a fully-inflected (or long) verbal form in (11)b, but a short verbal form in (11)a. However, in the NCC construction, a long verbal form can occur in the embedded clause, as illustrated in (12)b:

(12) a. Short Form NCC

na-nun [_{DP} [koyangi-ka sayngsen-ul hwumchi-**nun**] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc

al-ass-ta
 know-Pst-Dec

‘I knew that the cat was stealing the fish.’

b. Long Form NCC

na-nun [_{DP} [koyangi-ka sayngsen-ul hwumchi-**ess-ta-nun**] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Pst-Dec-Adn Kes-Acc

al-ass-ta
 know-Pst-Dec

‘I knew that the cat stole the fish.’

Unlike (11)b, *kes* in the NCC construction can occur with either a short verbal form in (12)a or a fully-inflected verbal form in (12)b. Interestingly, the suffixal restriction on the HiRC construction is also observed in the nominalizer constructions:

(13) Nominalized Clause

- a. na-nun [Mary-ka hakkyo-ey o-**ki**]-lul wuenha-n-ta
 I-Top M-Nom school-Loc come-Nml-Acc want-Prs-Dec
 ‘I want Mary’s coming to school.’
- b. *na-nun [Mary-ka hakkyo-ey o-**ass-ta-ki**]-lul wuenha-n-ta
 I-Top M-Nom school-Loc come-Pst-Dec-Nml-Acc want-Prs-Dec

In (13)b, the clause preceding the nominalizer *-ki* cannot take a long form verbal suffixation. Thus, both the HiRC+*kes* construction and the nominalizer construction are sensitive to the verbal form of the preceding clause; that is, they cannot take a long verbal suffixation. In contrast, the NCC+*kes* construction can have either a short or a long form suffixation in the embedded clause as in (11), depending on the classes of the matrix verbs.³⁷

Another syntactic difference between HiRC and NCC constructions is that *kes* in the HiRC construction cannot be substituted for by a free noun such as *sasil* ‘fact’ or *somwun* ‘rumor’, while *kes* in the NCC can. To see the difference between the HiRC and NCC constructions in this regard, compare the following examples:

(14) HiRC

- a. na-nun [DP[**koyangi**]-ka sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-Acc
- cap-ass-ta
 catch-Pst-Dec

‘I caught the cat while it was stealing the fish.’

³⁷ I do not claim here that a long form clause is available in all the NCC+*kes* constructions. In fact, there is a certain type of NCC construction that cannot take a long form. I will discuss in detail two subtypes of the NCC construction in section 4.4.3.

- b. *na-nun [_{DP} [**koyangi**-ka sayngsen-ul hwumchi-nun] **sasil/somwun**]-ul
 I-Top cat-Nom fish-Acc steal-Rel fact/rumor-Acc

cap-ass-ta
 catch-Pst-Dec

(15) NCC

- a. na-nun [_{DP} [koyangi-ka sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc

al-ass-ta
 know-Pst-Dec

‘I knew that the cat was stealing the fish.’

- b. na-nun [_{DP} [koyangi-ka sayngsen-ul hwumchi-nun] **sasil/somwun**]-ul
 I-Top cat-Nom fish-Acc steal-Adn fact/rumor-Acc

al-ass-ta
 know-Pst-Dec

‘I knew the fact/rumor that the cat was stealing the fish.’

In (14) and (15), only the *kes* in the NCC construction can be replaced by a free noun. The reason why *kes* in (14)b cannot be replaced by a free noun is that the substituted free noun cannot be semantically connected with any element (i.e. the semantic head) of the HiRC. That is to say, since *kes* in the HiRC construction must be co-referential with the internal head appearing in the relative clause, it cannot be replaced by any free noun. Thus, the syntactic difference between the HiRC (14) and the NCC (15) constructions is due to the anaphoric property of *kes*.

Third, the syntactic difference between the HiRC and NCC construction is also shown in the so-called “reported speech expression (or indirect quotative expression).” In general, it is assumed that a long verbal form in the embedded clause

results from the reported speech construction by omitting the quotation particle – *(la)ko* and the verb *hata* ‘do/say’ (Sohn 1999). That is, (16)b is derived from (16)c by the truncation of the related morphemes:

(16) a. Short Form NCC

na-nun [[koyangi-ka sayngsen-ul hwumchi-**nun**] **kes**]-ul
I-Top cat-Nom fish-Acc steal-Adn KES-Acc

al-ass-ta
know-Pst-Dec

‘I knew that the cat was stealing the fish.’

b. Long Form NCC

na-nun [[koyangi-ka sayngsen-ul hwumchi-**ess-ta-nun**] **kes**]-ul
I-Top cat-Nom fish-Acc steal-Pst-Dec-Adn KES-Acc

al-ass-ta
know-Pst-Dec

‘I knew (the fact that it is said) that the cat stole the fish.’

c. Reported Speech (or Indirect Quotative) NCC

na-nun [[koyangi-ka sayngsen-ul hwumchi-**ess-ta**]-**(la)ko** **ha-nun**
I-Top cat-Nom fish-Acc steal-Pst-Dec-Quotation say-Adn

kes]-ul al-ass-ta
KES-Acc know-Pst-Dec

‘I knew (the fact that it is said) that the cat stole the fish.’

Compared with the short verbal form (16)a, the reported speech expression in (16)c takes a long verbal form as in (16)b. But this alternation of a verbal form cannot apply to the HiRC+*kes* construction, as follows:

- (17) a. Short Form HiRC
 na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] kes]-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-Acc

 cap-ass-ta
 catch-Pst-Dec

 ‘I caught the cat while it was stealing the fish.’
- b. Reported Speech HiRC
 *na-nun [[koyangi-ka sayngsen-ul hwumchi-**ess-ta**]-**(la)ko ha-nun**
 I-Top cat-Nom fish-Acc steal-Pst-Dec-Quotation say-Adn

kes]-ul cap-ass-ta
 KES-Acc catch-Pst-Dec

Thus, the reported speech expression is available only in the NCC *kes* constructions, not in the HiRC constructions.

Finally, there is another morpho-syntactic difference between HiRC and NCC constructions with respect to the Korean focus particle *-man* ‘only’. The focus particle *-man* can freely occur immediately after the syntactic element that it modifies in (18)a and (18)b, while both the *kes* and the internal head of the HiRC cannot be focused by *-man* at the same time in (18)c:

- (18) a. na-nun [_{DP}[**koyangi**_i-ka sayngsen-ul hwumchi-nun] **kes**]-**man**-ul
 I-Top cat-Nom fish-Acc steal-Rel KES-only-Acc

 cap-ass-ta
 catch-Pst-Dec

‘I caught only the cat while it was stealing the fish.’

- b. na-nun [_{DP} [**koyangi**_i-**man**-i sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-only-Nom fish-Acc steal-Rel KES-only-Acc
- cap-ass-ta
 catch-Pst-Dec
- c. *na-nun [_{DP} [**koyangi**_i-**man**-i sayngsen-ul hwumchi-nun] **kes**]-**man**-ul
 I-Top cat-only-Nom fish-Acc steal-Rel KES-only-Acc
- cap-ass-ta
 catch-Pst-Dec

The reason why the internal head (i.e. *koyangi* ‘cat’) and *kes* cannot be attached by –*man* simultaneously is that they are syntactically coindexed with each other and refer to one semantic entity. That is, an illegitimate double focus-marking happens in (18)c. In contrast, the double focus-marking problem does not arise in the NCC *kes* construction where *kes* is not related to any element in the preceding clause, as follows:

- (19) a. na-nun [_{DP}[koyangi-ka sayngsen-ul hwumchi-nun] **kes**]-**man**-ul
 I-Top cat-Nom fish-Acc steal-Adn KES-only-Acc
- al-ass-ta
 know-Pst-Dec
- ‘I knew only that the cat was stealing the fish.’
- b. na-nun [_{DP} [**koyangi**-**man**-i sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-only-Nom fish-Acc steal-Adn KES-Acc
- al-ass-ta
 know-Pst-Dec
- ‘I knew that only the cat was stealing the fish.’

- c. na-nun [_{DP} [koyangi-**man**-i sayngsen-ul hwumchi-nun]
I-Top cat-only-Nom fish-Acc steal-Adn

kes]-**man**-ul al-ass-ta
KES-only-Acc know-Pst-Dec

‘I knew only that only the cat was stealing the fish.’

In (19)c, since the embedded subject, *koyangi* ‘cat’, is not co-referential to *kes*, they can take a focus particle separately. Thus, in terms of double focus-marking, HiRC constructions differ from NCC constructions.

In sum, we have seen various morpho-syntactic differences between the HiRC and NCC *kes* constructions in this subsection, as illustrated in table 4.2:

- (20) Table 4.2 The morpho-syntactic differences between NCC and HiRC *kes* constructions

<i>Kes</i> Construction Type	NCC	HiRC
the verbal form of the embedded clause	Short or Long	Short only
the replacement by a free noun	Yes	No
the reported speech expression is available	Yes	No
the double focus marking by <i>-man</i> ‘only’	Yes	No

The primary factor for the morpho-syntactic differences is due to the structural status of *kes*. That is, *kes* in the HiRC is a syntactic head of a relative clause coindexed with the internal head of the HiRC, whereas *kes* in the NCC functions as a D^0 .

In the following sections, I will discuss in detail the grammatical nature of *kes* NCC constructions, distinct from HiRC constructions.

4.3 The Morphological Properties of *Kes* in NCC Constructions

In this section, I examine the morphological status of *kes* in the NCC constructions. *Kes* in the NCC construction is very similar to nominalizers or complementizers in certain grammatical respects. However, I show here that *kes* in the NCC construction is morphologically different from the typical Korean nominalizers *-ki* or *-(u)m* or complementizers *-ko* or *-e/a*.

Traditionally, *kes* in the NCC constructions has been treated as either a nominalizer (Lee 1968; Cook 1968; N. Kim 1984) or a complementizer (H. Lee 1970; Yang 1972; Lee 1979) because it displays a number of similar grammatical properties with them. However, there is much evidence that *kes* in the NCC construction is neither a nominalizer nor a complementizer. First, the morphological behavior of *kes* in NCC constructions is different from the typical nominalizers such as *-ki* and *-(u)m*. The nominalizers, *-ki* or *-(u)m*, are neither attached to the adnominal verbal forms (e.g. *-nun*, *-(u)n*, *-(u)l*), nor do they occur with the fully inflected verbal forms, as follows:

(21) *Ki*-nominalized Clause

- | | | | | | |
|----|---------------------------------|----------|-----------|----------------------------------|--------------|
| a. | na-nun | [Mary-ka | sakwa-lul | mek-ess (*-nun)- ki]-lul | palay-ess-ta |
| | I-Top | M-Nom | apple-Acc | eat-Pst-Adn-Nml-Acc | hope-Pst-Dec |
| | 'I hoped Mary's eating apples.' | | | | |
| b. | na-nun | [Mary-ka | sakwa-lul | mek-ess (*-ta)- ki]-lul | palay-ess-ta |
| | I-Top | M-Nom | apple-Acc | eat-Pst-Dec-Nml-Acc | hope-Pst-Dec |
| | 'I hoped Mary's eating apples.' | | | | |

(22) *Um*-nominalized Clause

- | | | | | | |
|----|--------------------------------|----------|-----------|---------------------------------|--------------|
| a. | na-nun | [Mary-ka | sakwa-lul | mek-ess *(-nun)- um]-ul | al-ass-ta |
| | I-Top | M-Nom | apple-Acc | eat-Pst-Adn-Nml-Acc | know-Pst-Dec |
| | 'I knew Mary's eating apples.' | | | | |

- b. na-nun [Mary-ka sakwa-lul mek-ess *(-ta)-**um**]-ul al-ass-ta
 I-Top M-Nom apple-Acc eat-Pst-Dec-Nml-Acc know-Pst-Dec
 ‘I knew Mary’s eating apples.’

As in (21) and (22), the nominalizers *-ki* and *-(u)m* are usually attached to the verbal stem (and the tense marker *-ess*, optionally), but never follow the adnominal marker (e.g. *-nun*) or the sentential force markers (e.g. *-ta* and *-nya*). In contrast, *kes* must occur with the adnominal markers such as *-nun*, *-(u)n*, and *-(u)l*, which arguably express present/imperfective, past/perfective and future, respectively, and it can occur with a fully inflected verbal form though it still needs an adnominal marker, as illustrated in (23):

(23) *Kes* NCC

- a. na-nun [Mary-ka sakwa-lul mek*(-nun) **kes**]-ul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Adn KES-Acc hope-Pst-Dec
 ‘I hoped that Mary ate apples.’
- b. na-nun [Mary-ka sakwa-lul mek-ess-ta*(-nun) **kes**]-ul
 I-Top M-Nom apple-Acc eat-Pst-Dec-Adn KES-Acc
 al-ass-ta
 know-Pst-Dec
 ‘I knew that Mary ate apples.’

In (23), *kes* must occur with the adnominal markers such as *-nun*, *-(u)n*, or *-(u)l*.

The nominalized forms of *kes* also differ from those of the nominalizers. For example, the nominalizer *-(u)m* occurs in two types of nominalizations, which I call “lexical” and “phrasal” nominalization, respectively, as shown in (24):

- (24) a. Lexical Nominalization
 [cwuk-*um*-kwa sal-*m*]-*uy* chai
 die-Nom-and live-Nml-Gen difference
 ‘the difference between death and life’
- b. Phrasal Nominalization
 [John-i setwulle ttena-*ess*-*m*]-*ul* al-ci mos-hayssta
 J-Nom hurriedly leave-Pst-Nml-Acc know-Comp not-did
 ‘(I) did not know that John left hurriedly.’

(24)a and (24)b show that *-um* co-occurs with case markers. In (24), regardless of the lexical or phrasal nominalization type, the V-Nml (‘V + nominalizer’) forms can be attached by the nominal particles such as case markers *-uy* or *-ul*. In (24)b, only the phrasal nominalization can contain the past tense verbal suffix *-ess*. The lexical nominalizer *-(u)m* in (24)a does not occur with any verbal suffixes. If *kes* in the NCC is a nominalizer, it would show the two types of nominalizations. However, this is not the case; rather, *kes* only occurs with phrasal nominalizations:

- | | | |
|------------------------------------|-----|-------------------------------|
| (25) <u>lexical nominalization</u> | vs. | <u>phrasal nominalization</u> |
| a. *sa(l)- <i>kes</i> | | sa(l)-nun <i>kes</i> |
| live-Kes | | live-Adn Kes |
| | | ‘living’ |
| b. sal- <i>m</i> | | sal (-ass)- <i>um</i> |
| live-Nml | | live-Pst-Nml |
| ‘life’ | | ‘living’ |

Kes in the NCC also differs from the clausal complementizer *-ko* (or the verbal complementizer *-e*) in terms of the preceding verbal inflection. In particular, *kes* does not have any restrictions on the inflectional form of the verb as long as it follows an adnominal marker:

(26) *Kes* NCC

- a. John-un [nay-ka Mary-lul coaha-**n-ta-nun**]-kes-ul
 J-Top I-Nom M-Acc like-Pres-Dec-Adn-Kes-Acc

mol-ass-ta
 not.know-Pst-Dec

‘John did not know that I like Mary.’

- b. John-un [nay-ka Mary-lul coaha-**nun**]-kes-ul mol-ass-ta
 J-Top I-Nom M-Acc like-Adn-Kes-Acc not.know-Pst-Dec
 ‘John did not know that I like Mary.’

- c. John-un [nay-ka Mary-lul coaha-**nun/-n/-l**]-kes-ul mol-ass-ta
 J-Top I-Nom M-Acc like-Adn-Kes-Acc not.know-Pst-Dec
 ‘John did not know that I like/liked/will like Mary.’

In (26), *kes* in the NCC construction is morphologically similar to complementizers in that it can occur with a fully inflected verbal form. However, *kes* in the NCC construction is also distinct from the typical Korean complementizers such as *-ko* and *-e/a*. The clausal complementizer *-ko* always follows a fully inflected verbal form, including the tense and sentential force markers. It can occur neither with the adnominal markers, nor suffixed by case markers:

(27) Clausal Complementizer *-Ko*

- a. John-un [nay-ka Mary-lul coaha-**n-ta**]-ko malhay-ss-ta
 J-Top I-Nom M-Acc like-Pres-Dec-Comp say-Pst-Dec
 ‘John said that I like Mary.’

- b. *John-un [nay-ka Mary-lul coaha]-ko malhay-ss-ta
 J-Top I-Nom M-Acc like-Comp say-Pst-Dec

- c. *John-un [nay-ka Mary-lul coaha-**nun**]-ko malhay-ss-ta
 J-Top I-Nom M-Acc like-Adn-Comp say-Pst-Dec

- d. *John-un [nay-ka Mary-lul coaha-n-ta]-**ko-lul** malhay-ss-ta
 J-Top I-Nom M-Acc like-Pres-Dec-Comp-Acc say-Pst-Dec

In (27)a, the clausal complementizer *-ko* occurs with tense and sentential force markers, but it cannot occur with a simple verbal stem as in (27)b. Furthermore, in (27)c and (27)d, it never occurs with the adnominal suffix *-(nu)n* or the case marker *-lul*. That is, the complementizer *-ko* must be treated as a clausal complementizer in the sense that it can occur with full tensed clauses that have sentential particles on the right edge.

In sum, *kes* in the NCC construction is different from typical Korean nominalizers or complementizers even though it appears to share some morpho-syntactic properties with them. Table 4.3 clearly shows not only the similarities but also the differences between *kes* and nominalizers or complementizers in Korean. The most remarkable morphological property of *kes* is that it displays both nominal and verbal (or clausal) characteristics at the same time. This ambivalent property distinguishes *kes* from nominalizers and complementizers.

(28) Table 4.3 Morphological Properties of *Kes* (NCC), Nominalizers, and Complementizers

	Verbal Suffixes			Nominal Suffixes	
	tense (-ess)	sentential force (-ta/ -nya)	adnominal marker (-nu /-(u)n /-(u)l)*	case marker (-(l)ul)	nominal affix/particle (-tul/-to)
nominalizer <i>-ki</i>	Yes	No	No	Yes	Yes
nominalizer <i>-(u)m</i>	Yes	No	No	Yes	Yes
complementizer <i>-ko</i> (clausal)	Yes	Yes	No	No	No
complementizer <i>-e/a,-ko</i> (verbal)	No	No	No	Yes	No
-kes in NCC constructions	Yes	Yes	Yes	Yes	Yes

(*Adnominal marker: *-nun*: imperfective/present vs. *-(u)n*: perfective/past, *-(u)l*: future)

4.4 Proposal: *Kes* as a Functional Head

We have seen in the previous section that *kes* in the NCC construction is morphologically different from complementizers or nominalizers. Our next goal is to classify *kes* into an appropriate grammatical category. In this section, while concentrating on the grammatical properties of *kes* in the NCC constructions, I propose that *kes* is a D^0 , which is a functional category and plays a role introducing a nominal complement (i.e. the *kes* NCC construction) to its verbal head (i.e. the matrix predicate of a complex sentence). As a functional head of DP, *kes* holds certain common properties with C^0 's and with N^0 's.

In the proposed *kes* NCC structure in (3), I assume that *kes* is base-generated

in the head (i.e. D^0) of DP. In the functional head position, *kes* must be treated as functional, and it does not contain any specific lexical meaning ‘thing or object’ as a bound noun. As shown in the lexical/functional dichotomy of *kes* in (29), I suggest that there are two classes of *kes* in Korean:

(29) Lexical/Functional Properties of *Kes*

a. The lexical *kes* ‘thing or object’

- (i) *ku-kes* ‘that thing’, *i-kes* ‘this thing’, *ce-kes* ‘that thing over there’,
- (ii) *masil-kes* ‘something to drink/beverage’, *sal-kes* ‘something to buy’, etc.

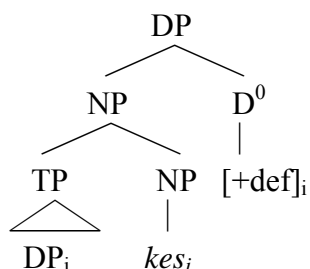
b. The functional *kes*

- (i) *kes* as an anaphoric expletive in the HiRC construction
- (ii) *kes* as a functional head of DP (i.e. D^0) in the NCC construction

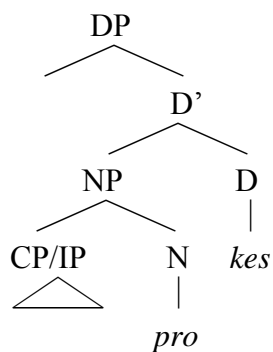
In (29)a, *kes* as a lexical bound noun has a specific lexical entity referring to ‘thing’ or ‘object’. As a lexical bound noun, it must occur with some prenominal modifiers such as demonstratives or adjectives. In (29)b, the functional *kes* has no specific lexical meaning, and it usually occurs with nominal embedded clauses such as HiRC or NCCs. It has been suggested in some research that the grammatical distinction of *kes* between (29)a and (29)b results from the “grammaticalization” of *kes* (e.g. Simpson and Wu 2001; Horie 2005). In other words, from a comparative perspective, *kes* was a lexical bound noun in ancient times, but the grammatical category of *kes* has been changed from lexical to functional in modern times through the grammaticalization process of *kes*. In Chapter 3, I have proposed that *kes* in the HiRC construction occurs in the nominal head position, N^0 /NP, which is typically reserved for the syntactic head noun of a relative clause. In the *kes* NCC structure (3), however, *kes* is merged to the functional head D^0 . To see the status of *kes* in the HiRC and NCC constructions,

compare the following two structures in (30):

(30) a. Proposed HiRC Structure (Chapter 3: (3))



b. NCC *Kes* Constructions (= (3))



Under my assumption, *kes* in (30)a occurs in the syntactic head position (N⁰/NP) of the preceding HiRC while in (30)b, *kes* occurs in a functional head, D⁰. That is, they are not structurally identical to each other. This implies that although they are functional, *kes* in the HiRC construction must be separated from the one in the NCC construction in a certain grammatical respect. In Chapter 3, I have argued that *kes* in the HiRC construction is anaphoric in the sense that it is semantically co-referential with the internal head of the relative clause. However, *kes* in the NCC construction does not show such anaphoricity. Rather, it operates as a functional category in the

sense that it plays a role introducing a nominal complement to the predicate of a sentence. Accordingly, I assume that the distinction between the HiRC *kes* and the NCC *kes* is determined by the anaphoricity as well as the functionality of a category. That is, only functional and non-anaphoric heads can be merged into the functional head, D^0 , while a functional and anaphoric head is under NP. Table 4.4 shows the grammatical distribution of *kes* as a bound noun:

(31) Table 4.4 Distribution of *Kes*

	Demonstrative/Adjective + <i>Kes</i>	<i>Kes</i> in HiRC	<i>Kes</i> in NCC
functionality	-	+	+
anaphoricity	-	+	-

In the *kes* NCC structure (3), another noticeable feature is the existence of *pro* in an N^0 , which takes a CP/IP complement. Under my assumption, *kes* in the NCC construction cannot be replaced by a free noun since they do not occur in the same structural position. There are two sets of facts which show this. First, at first glance, *kes* appears to be structurally identical with a free noun of the free nominal NCC construction:

- (32) a. *Kes* NCC
 na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn Kes-Acc

 al-ass-ta
 know-Pst-Dec

 ‘I knew that the cat was stealing the fish.’

- b. Free Nominal NCC
 na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **sasil**]-ul
 I-Top cat-Nom fish-Acc steal-Adn fact-Acc
- al-ass-ta
 know-Pst-Dec

‘I knew the fact that the cat was stealing the fish.’

M. Kim (2004) and Cha (2005) assume that *kes* in (32)a can be replaced by a free noun such as *sasil* ‘fact’ or *somwun* ‘rumor’ as in (32)b. However, the semantic properties of *kes* are not identical with the free noun, *sasil* ‘fact’. For example, the *kes* NCC constructions can occur with the perceptual matrix verbs such as *tutta* ‘hear’, *capta* ‘catch’, etc., as shown in (33)a:

- (33) a. *Kes* NCC
 na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn Kes-Acc
- tul-ess-ta
 hear-Pst-Dec

‘I heard that the cat was stealing the fish.’

- b. Free Nominal NCC
 *na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **sasil**]-ul
 I-Top cat-Nom fish-Acc steal-Adn fact-Acc
- tul-ess-ta
 hear-Pst-Dec

In (33)b, however, the NCC construction marked by the free nominal *sasil* cannot occur with the perceptual verb, *tutta* ‘hear’. This is because a free nominal construction marked by a free noun denotes only propositionality, not eventuality.

Thus, the semantics of *kes* is not identical to that of a free noun. Second, the free nominal NCC construction can take prenominal modifiers such as the adjective, *isanghan* ‘strange’, as shown in (34)b:

- (34) a. *Kes* NCC^{38, 39}
 *na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] ***isanghan kes***]-ul
 I-Top cat-Nom fish-Acc steal-Adn strange Kes-Acc

 al-ass-ta
 know-Pst-Dec

 (Intended) ‘I knew the strange thing that the cat was stealing the fish.’

³⁸ Note that regarding adjectival modifiers, the HiRC is similar to the propositional NCC in (34)a, as shown in (i):

- (i) *na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **jayppalum kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn quick Kes-Acc

 cap-ass-ta
 catch-Pst-Dec

 (Intended) ‘I caught the quick cat while it was stealing the fish.’

Thus, no modifiers can intervene between *kes* and the HiRC or propositional *kes* NCC.

³⁹ On the other hand, it is very interesting to note that if the *kes* NCC construction occurs with the perceptual verb, *pota* ‘see’, then the sentence is quite acceptable, as shown in (i):

- (i) ?na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **isanghan kes**]-ul
 I-Top cat-Nom fish-Acc steal-Adn strange Kes-Acc

 po-ass-ta
 see-Pst-Dec

 ‘I saw the strange thing that the cat was stealing the fish.’

This implies that there is some semantic asymmetry between two *kes* NCC types, and that one of the two NCC types (i.e. propositional *kes* NCC construction) is similar to the HiRC construction in this regard.

- b. Free Nominal NCC
 na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] *isanghan sasil*]-ul
 I-Top cat-Nom fish-Acc steal-Adn strange fact-Acc
- al-ass-ta
 know-Pst-Dec

‘I knew the strange fact that the cat was stealing the fish.’

In (34)a, however, no prenominal modifier can intervene between *kes* and the NCC. Thus, *kes* and the free nominal *sasil* ‘fact’ pattern differently. This suggests that *kes* in the NCC is a D^0 , and thus it cannot be substituted for by any free nominal. Rather, a free noun replaces *pro* in N^0 according to the structure in (3). In this regard, the structure (3) brings out the prediction that a free nominal and *kes* can co-occur at the same time because they occur in the different positions. In the case of English, this prediction appears to be borne out; for example, *I knew **the fact that** the cat was stealing the fish*. In the case of Korean, this is not true; rather, a free noun cannot occur with *kes* at the same time, as shown in (35):

- (35) *na-nun [[koyangi-ka sayngsen-ul hwumchi-nun] **sasil kes**]-ul
 I-Top cat-Nom fish-Acc steal-And fact Kes-Acc
- al-ass-ta
 know-Pst-Dec

(Intended) ‘I knew the fact that the cat was stealing the fish.’

To account for this discrepancy between English and Korean, I stipulate that *kes* as a functional head of DP is omitted whenever it is preceded by a free noun, an overt lexical entity. Otherwise, *kes* only selects for *pro*. That is, it seems that the

complementary distribution of the free noun and *kes* in the NCC constructions cannot be an argument against the assumption that *kes* is treated as a functional head, not a lexical head (i.e. a bound noun). Furthermore, a *pro* is different from a free noun in that the former has no specific lexical content while the latter has its own specific lexical entity. I assume that all the NCCs (e.g. *kes* NCC and free nominal NCC) basically have the same structure. The syntactic position for *pro* in the structure (3) is necessary only for this theoretical reason. Otherwise, there is no clear empirical evidence about the existence of *pro* in (3).

Another notable feature of the structure (3) is that as I have assumed earlier in the section, *kes* does not contain any specific lexical (or non-generic) entity such as ‘the rumor’ or ‘the fact’ in it, since it is morphologically regarded as functional. Furthermore, it cannot be interpreted as anaphoric, as demonstrated in (36):

- (36) a. John-un [[Mary-ka swukce-lul ppalli ha-l] **kes**]-ul
 J-Top M-Nom homework-Acc quickly do-Adn Kes-Acc

ceyanhayssta
 suggested

‘John suggested that Mary should do homework quickly.’

- b. na-nun [[John-i cip-ey ka-nun] **kes**]-ul wuenhanta
 I-Top J-Nom house-Loc go-Adn Kes-Acc want
 ‘I want John to go home.’

In (36), *kes* does not show any anaphoric interpretation over the semantics of the matrix verbs such as *ceyanhata* ‘suggest’ and *wuenhata* ‘want’. That is, *kes* cannot be co-referential with any specific element in the preceding embedded clause. Instead,

kes seems to occur just between the nominal complement clause and the matrix verb that subcategorizes for it.

In sum, here I have argued for the proposed *kes* NCC structure in (3). *Kes* in the NCC does not carry any specific lexical meaning and cannot be treated as anaphoric since it occurs in the functional head position of DP (i.e. D^0).

4.5 Two Types of *Kes* NCC Constructions

This section discusses the semantic and morpho-syntactic properties of *kes* NCC constructions. Based on the grammatical properties of *kes* NCC constructions, I argue that there are two types of the *kes* NCC constructions: “perceptual” vs. “propositional,” as demonstrated in (37):

(37) a. Perceptual NCC

John-un [totwuk-i tomangka-nun kes]-ul **po-ass-ta**
 J-Top thief-Nom run.away-Adn Kes-Acc see-Pst-Dec

- (i) ‘John saw that the thief was running away.’ (NCC reading)
 (ii) ‘John saw the thief_i while he_i was running away.’ (HiRC reading)

b. Propositional NCC

John-un [totwuk-i tomangka-nun kes]-ul **al-ass-ta**
 J-Top thief-Nom run.away- Adn Kes-Acc know-Pst-Dec

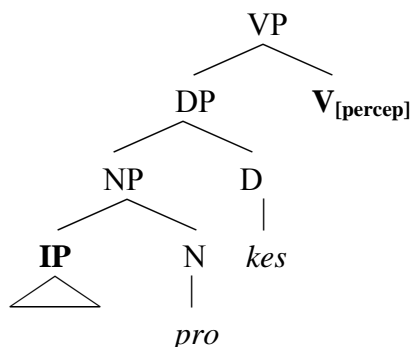
- (i) ‘John knew that the thief was running away.’ (NCC reading)
 (ii)*‘John knew the thief_i while he_i was running away.’ (HiRC reading)

In (37)a and (37)b, the matrix predicates directly impose certain semantic restrictions on the complement clauses that they subcategorize for. Traditionally, it has been assumed that there are two different types of Korean NCC constructions, depending

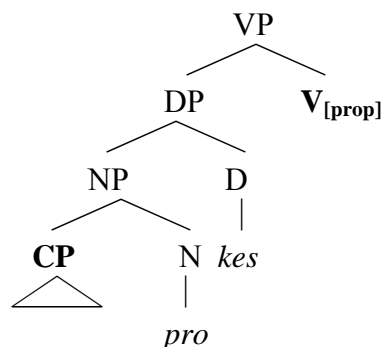
on the semantics of a matrix predicate (Cook 1968; N. Kim 1984; Sohn 1999; M. Kim 2004). These different NCC constructions have been labeled in a diverse manner depending on the researchers: “direct perceptual” vs. “propositional attitude” (M. Kim 2004), “factive” vs. “non-factive” (Cook 1968; N. Kim 1984; Sohn 1999), or “realis” vs. “irrealis” (Horie 2000). Here, following M. Kim’s (2004) terminology, I call them a perceptual NCC construction and a propositional NCC construction, respectively. From a semantic perspective, a perceptual NCC construction refers to an “eventuality” complement selected by a matrix predicate, while a propositional NCC construction refers to a “factivity” complement. I show here that not only semantically but also morpho-syntactically, they behave differently. I propose the following structures for the two types of *kes* NCC constructions:

(38) Two *Kes* NCC Constructions

a. Perceptual NCC



b. Propositional NCC



The two structures in (38) begin with two different classes of verbs, i.e. V_[percep] and V_[prop]. That is, the structural distinction in (38) is based on the semantic difference

between perceptual and propositional verbs. The perceptual verb, represented as $V_{[\text{percep}]}$ in (38)a, selects (or subcategorizes for) IP, instead of a full clausal node, CP. In contrast, the propositional verb, notated as $V_{[\text{prop}]}$ in (38)b, takes a CP as its complement. Thus, a perceptual NCC is syntactically different from a propositional NCC in (38). I show here how the distinction between perceptual and propositional *kes* NCCs is represented on the structures in (38).

4.5.1 The Semantic Properties of Two *Kes* NCC Constructions

In this section, I argue that according to the semantic relation between the *kes* NCC construction and the matrix verb, *kes* NCC constructions can be separated into two types: propositional vs. perceptual.

According to M. Kim (2004), a propositional NCC construction differs from a perceptual NCC construction in that the former semantically presupposes that its nominal complement denotes a fact; that is, a proposition which is denoted by an NCC must be taken to be true in the actual world by the speaker. For example, in (39)a, the proposition ('the thief's running away') that the *kes* NCC denotes is presupposed to be true in the actual world of the speaker:

- (39) Propositional NCC
- a. John-un [totwuk-i tomangka-nun kes]-ul **al-ass-ta**
 J-Top thief-Nom run.away- Adn Kes-Acc know-Pst-Dec
 'John knew that the thief was running away.'
- b. #kulentey, totwuk-i tomangka-ci **anh-ass-ta**
 but thief-Nom run.away-CI Neg-Pst-Dec
 'But the thief did not run away.'

When the negation (39)b occurs after (39)a, the interpretation of (39)b is not felicitous because it does not semantically match with the fact that the NCC in (39)a entails. The factivity of the propositional NCC construction results from the Korean factive verbs such as *hwuhoyhata* ‘regret’, *nukkita* ‘feel/sense’, *nwunchichayta* ‘notice’, *kkaytatta* ‘realize’, *palkyenhata* ‘discover’, *alkessta* ‘come to realize’, *alta* ‘know’, etc.⁴⁰ This indicates that when the *kes* NCC construction is selected by a propositional matrix verb, it must entail a fact. Accordingly, the presupposition that the fact entailed by an NCC must be true in the speaker’s actual world must be reserved even under negation or in a question:

(40) Propositional NCC and Negation

- a. John-un [totwuk-i tomangka-nun kes]-ul **mol-ass-ta**
 J-Top thief-Nom run.away- Adn Kes-Acc not.know-Pst-Dec
 ‘John did not know that the thief was running away.’
- b. #kulentey, totwuk-i tomangka-ci **anh-ass-ta**
 but thief-Nom run.away-CI Neg-Pst-Dec
 ‘But the thief did not run away.’

(41) Propositional NCC and Question

- a. John-un [totwuk-i tomangka-nun kes]-ul **al-ass-ni**
 J-Top thief-Nom run.away- Adn Kes-Acc know-Pst-Q
 ‘Did John know that the thief was running away?’
- b. #kulentey, totwuk-i tomangka-ci **anh-ass-ta**
 but thief-Nom run.away-CI Neg-Pst-Dec
 ‘But the thief did not run away.’

The negation and question sentences in (40)b and (41)b are not semantically felicitous

⁴⁰ However, propositional *kes* NCC constructions cannot occur with certain verbs such as *sayngkakhata* ‘think’, *kwunkwumhata* ‘wonder’, *mutta* ‘ask’, etc.

because they do not match with the fact entailed in (40)a and (41)b, respectively. That is, the proposition created in (40)a and (41)a is not preserved in the negation and question. On the other hand, perceptual NCC constructions do not appear to be subject to the factivity constraint. That is, they do not presuppose the truth of the complement clause. Rather, perceptual NCC constructions are related to the semantic relation between two sets of eventualities. At first glance, like the propositional NCC construction, the perceptual NCC construction (42)a appears to presuppose that the fact entailed by the NCC must be true in the actual world:

(42) Perceptual NCC and Negation

- a. John-un [totwuk-i tomangka-nun kes]-ul **po-ass-ta**
 J-Top thief-Nom run.away- Adn Kes-Acc see-Pst-Dec
 ‘John saw the thief running away.’
- b. #kulentey, totwuk-i tomangka-ci **anh-ass-ta**
 but thief-Nom run.away-CI Neg-Pst-Dec
 ‘But the thief did not run away.’

Example (42)b is not felicitous because the event of the thief’s running away happened in the actual world. However, perceptual NCC constructions can be selected by the “intentional” verbs such as *sangsanghata* ‘imagine’ or *kkwumkkwuta* ‘dream’. In this case, the sentence does not presuppose the truth of the complement clause:

(43) Perceptual NCC and Negation

- a. John-un [totwuk-i tomangka-nun kes]-ul **sangsangha-ess-ta**
 J-Top thief-Nom run.away- Adn Kes-Acc imagine-Pst-Dec
 ‘John imagined that the thief was running away.’

- b. kulentey, totwuk-i tomangka-ci **anh**-ass-ta
 but thief-Nom run.away-CI Neg-Pst-Dec
 ‘But the thief did not run away.’

Regardless of the factivity entailed by the *kes* NCC in (43)a, (43)b is semantically felicitous because it would be true in the imaginary world, not in the speaker’s actual world. Thus, the perceptual NCC constructions are related to the semantic relation between the eventuality denoted by the NCC complement and the eventuality of the perceptual verbs. It seems that in the perceptual NCC constructions, the eventuality denoted by an NCC is semantically absorbed as a part of the larger eventuality denoted by a perceptual matrix verb. For example, in (42)a, the event of *the thief’s running away* is a part of the larger event of *John’s seeing*. That is, the perceptual NCC construction expresses the semantic relation between the two sets of eventualities. Thus, according to the semantics of verbs, the *kes* NCC constructions can be further divided into two subtypes.

Another semantic distinction between perceptual and propositional NCC constructions is related to the two nominalizers, *-ki* and *-(u)m*. In particular, the nominalized clause introduced by the nominalizer *-(u)m* must be selected by the propositional matrix verb, not by the perceptual verb, as shown in (44):

(44) Propositional Verb

- a. na-nun [ku-ka o-nun-**kes**]-ul **anta** (NCC)
 I-Top he-Nom come-Adn-Kes-Acc know
 ‘I know that he is coming.’
- b. na-nun [ku-ka o-**m**]-ul **anta** (Nominalized)
 I-Top he-Nom come-Nml-Acc know
 ‘I know his coming.’

- c. *na-nun [ku-ka o-**ki**]-lul **anta** (Nominalized)
 I-Top he-Nom come-Nml-Acc know

In (44)b and (44)c, the propositional verb, *anta* ‘know’, can co-occur with the nominalizer *-um*, but not the nominalizer *-ki*. In contrast, the nominalized clause introduced by the nominalizer *-ki* is selected by the perceptual matrix verb, not by the propositional verb, as shown in (45)c:

- (45) Perceptual Verb
- a. na-nun [ku-ka o-nun-**kes**]-ul **palanta** (NCC)
 I-Top he-Nom come-Adn-Kes-Acc hope
 ‘I hope that he is coming.’
- b. *na-nun [ku-ka o-**m**]-ul **palanta** (Nominalized)
 I-Top he-Nom come-Nml-Acc hope
- c. na-nun [ku-ka o-**ki**]-lul **palanta** (Nominalized)
 I-Top he-Nom come-Nml-Acc hope
 ‘I hope his coming.’

In (45)b and (45)c, the perceptual verb selects with the nominalizer *-ki*, not the nominalizer *-um*. Thus, depending on the semantic class of a matrix verb, nominalizers are restricted in Korean. With respect to the factivity of the matrix predicate, the distinction between the two nominalizers or the two *kes* NCC constructions has also been observed by many researchers (Cook 1968; N. Kim 1984; Sohn 1999; and many others).

In sum, by means of the factivity entailed by *kes* NCC constructions, the classification between perceptual and propositional NCC constructions can be accomplished in Korean. That is, only propositional NCC constructions presuppose

the truth of the complement clause. But such factivity is not a necessary condition for perceptual NCC constructions, which just express the eventuality relation between the NCC and the matrix predicate.

4.5.2 The Morpho-syntactic Properties of Two *Kes* NCC Constructions

In this subsection, I discuss the morpho-syntactic distinction between two *kes* NCC constructions. I show here that perceptual and propositional NCCs differ from each other morpho-syntactically because a matrix predicate can impose various morpho-syntactic constraints on the possible kinds of NCC constructions it subcategorizes for.

The first notable morpho-syntactic distinction between the two NCC constructions is that perceptual NCC constructions allow only a short verbal form in them while propositional constructions can take either a short verbal form or a fully-inflected (or long) form. To see this difference between them, compare the examples shown in (46) and (47):

(46) a. Short Form Perceptual NCC

John-un [totwuk-i tomangka-**nun** kes]-ul **po-ass-ta**
 J-Top thief-Nom run.away-Adn Kes-Acc see-Pst-Dec
 ‘John saw that the thief was running away.’

b. Long Form Perceptual NCC

*John-un [totwuk-i tomangka-**ss-ta-nun** kes]-ul **po-ass-ta**
 J-Top thief-Nom run.away-Pst-DecAdn Kes-Acc see-Pst-Dec
 (Intended) ‘John saw that (they say) the thief was running away.’

- (47) a. Short Form Propositional NCC
 John-un [totwuk-i tomangka-**nun** kes]-ul **al-ass-ta**
 J-Top thief-Nom run.away-Adn Kes-Acc know-Pst-Dec
 ‘John knew that the thief was running away.’
- b. Long Form Propositional NCC
 John-un [totwuk-i tomangka-**ss-ta-nun** kes]-ul **al-ass-ta**
 J-Top thief-Nom run.away-Pst-DecAdn Kes-Acc know-Pst-Dec
 ‘John knew that (they say) the thief was running away.’

In (46)a and (47)a, the perceptual and propositional NCCs can take a short verbal form. However, unlike the propositional NCC in (47)b, the perceptual NCC in (46)b cannot take a long verbal form, and it takes only the short verbal form in (46)b. The HiRC constructions share the common morphological constraint by which a long form of a verbal suffixation cannot occur inside of them.⁴¹ However, the propositional NCC construction can freely take either a short or a long verbal form, as in (47). Thus, the HiRC and perceptual NCC follow the same pattern in this regard.

Another distinction between perceptual and propositional NCC

⁴¹ Regarding the restriction on the complement verbal suffixation, HiRC *kes* constructions also show similar properties:

- (i) a. na-nun [[koyangi-ka sayngsen-ul hwumchi-**nun**] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Rel Kes-Acc

 cap-ass-ta
 catch-Pst-Dec

 ‘I caught the cat when it was stealing the fish.’
- b. *na-nun [[koyangi-ka sayngsen-ul hwumchi-**ess-ta-nun**] **kes**]-ul
 I-Top cat-Nom fish-Acc steal-Pst-Dec-Rel Kes-Acc

 cap-ass-ta
 catch-Pst-Dec

Thus, just like perceptual NCCs, the HiRCs cannot take a long form complement.

constructions is related to the morphological restrictions on the adnominal markers occurring before *kes*. In Korean, there are three adnominal markers: *-nun*, *-(u)n*, and *-(u)l*. Although these adnominal markers are treated differently depending on the researcher (I. Yang 1972; N. Kim 1984; Sohn 1999; M. Kim 2004, and J. Lee 2006; etc.), they are generally assumed as in table 4.5:

(48) Table 4.5 Three Adnominal Suffixes

-nun	Imperfective/Present
-(u)n	Perfective/Past
-(u)l	Future

In (48), only the adnominal marker *-(u)l* does not have any aspect, and thus it cannot occur in the perceptual NCC construction, but can in the propositional NCC construction, as shown in (49):

(49) a. Perceptual NCC

John-un [totwuk-i tomangka-**nun/-n/*-ul** kes]-ul **po-ass-ta**
 J-Top thief-Nom run.away-Adn Kes-Acc see-Pst-Dec
 ‘John saw that the thief was running away/ran away/*will run.’

b. Propositional NCC

John-un [totwuk-i tomangka-**nun/-n/-ul** kes]-ul **al-ass-ta**
 J-Top thief-Nom run.away-Adn Kes-Acc know-Pst-Dec
 ‘John knew that the thief was running away/ran away/will run away.’

In (49)a and (49)b, *-nun* and *-(u)n* occur in both types of NCC constructions. However, *-(u)l* cannot occur with the perceptual NCC, as shown in (49)a. This strongly suggests that the perceptual NCC is syntactically dominated by an IP that lacks a tense or aspect head, not by a full CP node including tense. That is, the NCC selected by a perceptual matrix verb appears to be structurally smaller than that

selected by a propositional matrix verb. The propositional NCC in (49)b is syntactically regarded as a CP since it can take a fully-inflected verbal form. Thus, with respect to their NCC structures, perceptual and propositional NCC constructions differ from each other in that only propositional NCC constructions can contain a full CP node.

The existence of these morpho-syntactic differences between the two NCC constructions supports the analysis of the two NCC structures in (38). For example, in (38)a, the perceptual NCC construction cannot contain a fully-inflected verbal form because it takes an IP complement, not a CP complement. In (38)b, on the contrary, the propositional NCC construction can contain a fully-inflected verbal form because it can take a CP complement. Thus, the structures in (38) clearly show the reason why the perceptual NCC takes a short form complement while the propositional NCC can take either a short form or a long form complement.

In sum, based on semantic and morpho-syntactic properties, there are two types of *kes* NCC constructions: *perceptual* and *propositional*. The different characteristics between them are documented in table 4.6:

(50) Table 4.6 Two Types of *Kes* NCC Constructions

	Propositional NCC	Perceptual NCC
a class of matrix predicates	<i>alta</i> ‘to know’ <i>icta</i> ‘to forget’ <i>hwuhoyhata</i> ‘to regret’ <i>selmyenghata</i> ‘to explain’ <i>hwaksilahata</i> ‘to be certain’ <i>pwunmyenghata</i> ‘to be obvious’ <i>thamcihata</i> ‘to detect’ <i>nathanayta</i> ‘to reveal’ <i>allyecwuta</i> ‘to inform’ <i>mwushahta</i> ‘to ignore’ etc....	<i>wenhata</i> ‘to want’ <i>palata</i> ‘to wish/hope/want’ <i>myenglyenghata</i> ‘to command’ <i>ceyanhata</i> ‘to propose’ <i>elyepta</i> ‘to be difficult’ <i>yaksokhata</i> ‘to promise’ <i>pota</i> ‘to see’ <i>tutta</i> ‘to hear’ <i>kwenhata</i> ‘to urge’ <i>silhta</i> ‘to dislike’ etc....
short verbal form	Yes	Yes
long verbal form	Yes	No
free nominal substitution	Yes	No
tense restriction on	No	Yes

The semantic distinction between the two types of verbs in table 4.6 can mislead us since the perceptual verbal class includes certain non-perceptual verbs such as *wenhata* ‘want’, *palata* ‘wish’, or *elyepta* ‘be difficult’. The distinction between propositional and perceptual verbs is originally suggested as “factive” vs. “non-factive”, respectively, in Cook (1968) and N. Kim (1984). In Horie (2000), they are also referred to as “realis” and “irrealis”, respectively. However, adopting M. Kim (2004) who suggests a more detailed semantic analysis of the two types of verbs, here I will call them perceptual and propositional, respectively.

In addition, it is interesting to note that *kes* NCC constructions and nominalized constructions follow the same pattern with respect to the verbal form. In particular, the perceptual NCC construction in (49), which has certain restrictions

on the verbal suffixes in its NCC, is very similar to the typical nominalizers such as –(u)m and –ki, since they do not allow a fully-inflected verbal form. Like the perceptual *kes* NCC construction, for example, the nominalizers cannot occur with the long form of a verbal suffixation, as shown in (51)b and (52)b:

(51) Propositional Verb and Nominalizer -*Ki*

- a. na-nun [Mary-ka sakwa-lul mek-**ki**]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc hope-Pst-Dec
 ‘I hoped Mary’s eating apples.’
- b. *na-nun [Mary-ka sakwa-lul mek-**ess-ta-ki**]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Pst-Dec-Nml-Acc hope-Pst-Dec
 ‘I hoped Mary’s eating apples.’

(52) Propositional Verb and Nominalizer -*Um*

- a. na-nun [Mary-ka sakwa-lul mek-**um**]-ul al-ass-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc know-Pst-Dec
 ‘I knew Mary’s eating apples.’
- b. *na-nun [Mary-ka sakwa-lul mek-**ess-ta-um**]-ul al-ass-ta
 I-Top M-Nom apple-Acc eat-Pst-Dec-Nml-Acc know-Pst-Dec
 ‘I knew Mary’s eating apples.’

In (51)b and (52)b, the nominalized complements cannot take a long verbal form, just as we have seen in the perceptual NCC example in (46)b. Thus, neither nominalized clauses nor perceptual NCCs have a fully-inflected clausal node, CP.

4.6 Scrambling from *Kes* NCC Constructions

In this section, I look at various DP scrambling instances from *kes* NCC constructions. I show that scrambling gives us additional good morpho-syntactic evidence in support of the assumption that *kes* NCC constructions must be separately

treated from HiRC constructions. I also show here that the two *kes* NCC constructions are not distinct from each other with respect to DP scrambling.

4.6.1 Scrambling from *Kes* Propositional NCC Constructions

In this subsection, I argue that concerning scrambling, a *kes* NCC construction is somewhat distinguished from an HiRC *kes* construction. In addition, it will be verified here that DP scrambling from *kes* NCC constructions is more acceptable than that from other NCC constructions, but less acceptable than that from CP complement clauses or nominalized clauses, in which scrambling is fully acceptable.

In Korean, DP extraction from embedded clauses headed by a lexical free noun tends to be prohibited or significantly marginal, while DP extraction from embedded clauses headed by a functional morpheme such as a complementizer (e.g. *-ko*) or a nominalizer (*-ki* or *-(u)m*) is relatively acceptable. In particular, an HeRC is a type of the embedded clause headed by a lexical nominal, and thus scrambling from it is strictly banned, as shown in (53)b:

(53) HeRC

- a. John-un [[e_i ku coyangi-lul cwui-n] Mary_i]-lul
 J-Nom that cat-Acc kill-Rel M-Acc

pinanha-yss-ta
 criticize-Pst-Dec

‘John criticized Mary who killed the cat.’

- b. ***ku coyangi-lul_i** John-un [[*e_i* **t_j** cwui-n] Mary_i]-ul
 that cat-Acc J-Top kill-Rel M-Acc

pinanha-yss-ta
 criticize-Pst-Dec

(Intended) ‘The cat, John criticized Mary who killed it.’

Like the HeRC (53)b, scrambling out of a free nominal NCC construction is extremely marginal (54)b:

(54) Free Nominal NCC

- a. John-un [_{CNP} [Mary-ka ku coyangi-lul cwui-ess-ta-nun]
 J-Nom M-Nom that cat-Acc kill-Pst-Dec-Adn

somwun]-lul tul-ess-ta
 hear-Pst-Dec

‘John heard the rumor that Mary killed the cat.’

- b.?? **ku coyangi-lul_i** John-un [_{CNP} [Mary-ka **t_i** cwui-ess-ta-nun]
 that cat-Acc J-Top M-Nom kill-Pst-Dec-Adn

somwun]-lul tul-ess-ta
 hear-Pst-Dec

‘The cat, John heard the rumor that Mary killed it.’

On the contrary, DP extraction from the complement constructions headed by the complementizer *-ko* or the nominalizer *-ki* is quite acceptable. See (55) and (56):

(55) Clausal Complement Clause

- a. John-un [Mary-ka ku coyangi-lul cwui-ess-ta-**ko**] sayngkakan-ta
 J-Nom M-Nom that cat-Acc kill-Pst-Dec-Comp think

‘John thinks that Mary killed the cat.’

- b. **ku coyangi-lul_i** John-un [_{CP} Mary-ka **t_i** cwui-ess-ta-**ko**]
 that cat-Acc J-Nom M-Nom kill-Pst-Dec-Comp

sayngkakhana-ta
 think

‘The cat, John thinks that Mary killed it.’

(56) Nominalized Complement Clause

- a. na-nun [John-i cip-ey ka-**ki**(-lul)] pala-n-ta
 I-Nom J-Nom house-Loc go-Nml-Acc hope-Pres-Dec
 ‘I hope that John goes home.’

- b. ?**John-i_i** na-nun [**t_i** cip-ey ka-**ki**(-lul)] pala-n-ta
 J-Nom I-Top house-Loc go-Nml(-Acc) hope-Pres-Dec
 ‘John, I hope that he goes home.’

In (55)b and (56)b, DP scrambling from the complements headed by the functional heads such as the complementizer *-ko* and the nominalizer *-ki* is acceptable or slightly marginal. In contrast, as shown in (53)b and (54)b, DP scrambling from the complements containing the lexical head nouns such as the external lexical head (i.e. *Mary*) or the free noun (i.e. *somwun* ‘rumor’) is not acceptable. Accordingly, I assume that only DP scrambling from the complements headed by a functional category (e.g. complementizer or nominalizer) is acceptable. Under my assumption, DP scrambling from *kes* NCC constructions is acceptable if *kes* is assumed as a functional head, as in the structure (3). This prediction is borne out in (57)b:

(57) *Kes* NCC

- a. John-un [Mary-ka ku coyangi-lul cwui-n] **kes**-lul an-ta
 J-Nom M-Nom that cat-Acc kill-Rel kes-Acc know
 ‘John knows that Mary killed the cat.’

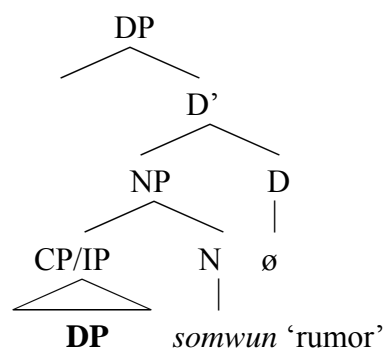
b. ?**ku coyangi-lul**_i John-un [_{CP} Mary-ka **t_i** cwui-n] **kes-lul**
 that cat-Acc J-Nom M-Nom kill-Rel kes-Acc

an-ta
 know

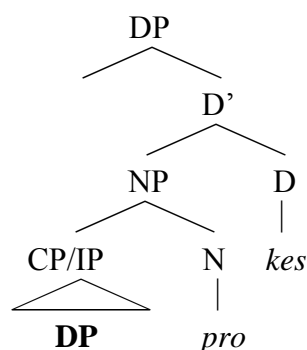
‘As for the cat, John knows that Mary killed it.’

In (57)b, scrambling of the DP, *ku coyangi* ‘the cat’, out of the NCC construction shows some weak island effect, but it is not unacceptable. Thus, with respect to scrambling, *kes* NCC constructions pattern like the complementizer or the nominalizer constructions headed by a functional head. This, in turn, supports the idea that *kes* in the NCC constructions is a functional head of DP, D^0 . If *kes* were a lexical noun, we would expect it to block scrambling.⁴² For example, the scrambling difference between the free nominal NCC (54)b and the *kes* NCC (57)b can be explained by the following two different NCC structures:

(58) a. Free Nominal NCC



b. *Kes* NCC



⁴² In my thesis, the dichotomy between functional and lexical categories is rooted in the descriptive grammatical theory that only lexical categories such as nouns, verbs, adjectives, and adverbs are contentive; that is, they have descriptive content. In contrast, functional categories such as determiners, prepositions, complementizers, and pronouns do not have such descriptive force.

In the free nominal NCC (58)a, the NCC is headed by the free noun, *somwun* ‘rumor’ while in *kes* NCC (58)b, the NCC is headed by the functional *pro*. According to the complex NP constraint (Ross 1967), DP (in bold) scrambling from both (58)a and (58)b is not completely free from island effects since it is extracted from complex noun phrases. However, shown my assumption that DP scrambling from the NCC headed by a lexical noun is much worse than that from the NCC headed by a functional head, we can account for the acceptability difference of DP scrambling between (54)b and (57)b. DP scrambling from *kes* NCC constructions is more acceptable than that from free nominal NCC constructions. Thus, the structural difference between (58)a and (58)b offers an important cue to account for the (un)acceptability of DP scrambling in (54)b and (57)b.

On the other hand, DP scrambling from *kes* NCC constructions is different from that from HiRC constructions. In Chapter 3, we saw that DP scrambling from the HiRC construction is possible if and only if the scrambled DP is the internal head of the relative clause, as illustrated in (59):

(59) DP Scrambling form HiRC

- a. John-un Mary-ka ku coyangi-lul cwui-n]_{RC} **kes-lul**
 J-Nom M-Nom that cat-Acc kill-Rel Kes-Acc
- ssuleykithong-ey peri-ess-ta
 trash.box-into threw.away

‘Mary killed the cat and John threw it away into the trash box.’

- b. ?**ku coyangi-lul**_i John-un [_{CP} Mary-ka **t_i** cwui-n] **kes_i-lul**
 that cat-Acc J-Nom M-Nom kill-Rel Kes-Acc

ssuleykihong-ey peri-ess-ta
 trash.box-into threw.away

‘The cat, Mary killed it and John threw it away into the trash box.’

- c. ***Mary-ka_j** John-un [_{CP} **t_j** ku coyangi-lul cwui-n] **kes_i-lul**
 Mary-Nom_c J-Nom that cat-Acc kill-Rel Kes-Acc

ssuleykihong-ey peri-ess-ta
 trash.box-into threw.away

(Intended) ‘Mary, she killed the cat and John threw it away into the trash box.’

In (59)b, DP scrambling from the HiRC is acceptable since the scrambled DP, *ku coyangi* ‘the cat’, is the semantic head of the relative clause. In (59)c, the scrambled DP, *Mary*, is not the semantic head, and thus scrambling of it is unacceptable. That is, DP scrambling from the HiRC construction is conditional. In contrast, DP scrambling from the *kes* NCC construction is free from such constraint:

(60) DP Scrambling from *Kes* NCC

- a. John-un [Mary-ka ku coyangi-lul cwui-n] **kes-lul** an-ta
 J-Nom M-Nom that cat-Acc kill-Rel kes-Acc know
 ‘John knows that Mary killed the cat.’

- b. **ku coyangi-lul_i** John-un [_{CP} Mary-ka **t_i** cwui-n] **kes-lul**
 that cat-Acc J-Nom M-Nom kill-Rel kes-Acc

an-ta
 know

‘As for the cat, John knows that Mary killed it.’

- c. **Mary-ka_i** John-un [_{CP} **t_i** ku coyangi-lul cwui-n] **kes-lul**
 Mary-Nomc J-Nom that cat-Acc kill-Rel Kes-Acc

an-ta
 know

‘As for Mary, John knew that she killed it.’

In (5)b and (5)c, DP scrambling from the *kes* NCC construction is acceptable since the scrambled DP need not be co-referential with *kes*. Thus, HiRC constructions differs from *Kes* NCC constructions with respect to DP scrambling.

In sum, I have argued here that in terms of acceptability, DP scrambling from *kes* NCC constructions is similar to DP scrambling from embedded clause constructions headed by the complementizer *-ko* or the nominalized *-ki*, but different from DP scrambling from free nominal NCCs or HiRC constructions. This implies that the *kes* NCC construction is headed by a functional noun, not by a lexical noun. Table 4.8 shows that the grammaticality (or acceptability) of DP scrambling varies depending on the complement type even though there are no clear boundaries among one another:

(61) Table 4.7 DP Scrambling from Korean NCC and Relative Clause Constructions

Extraction (scrambling) from ...	Acceptability/ Grammaticality	Grammatical Notation
CP complement clause (- <i>ko</i>)	good	
nominalized clause (- <i>ki</i> or - <i>um</i>)	good	
<i>kes</i> NCC construction	slightly marginal	?
HiRC construction	slightly marginal	?
free nominal NCC construction	very marginal	??
HeRC construction	ungrammatical	*

4.6.2 Scrambling from Perceptual *Kes* NCC Constructions

Regarding DP scrambling, the properties of perceptual NCC constructions do not differ from those of propositional NCC constructions in every grammatical respect. However, there appears to be a difference between the perceptual NCC and the propositional NCC in terms of case-marking. In particular, scrambling from the propositional NCC cannot change the case marker of the scrambled element, as shown in (62):

(62) Propositional NCC

- a. John-un [[Mary-**ka** sakwa-lul mek-un] kes]-ul alassta
 J-Top M-Nom apple-Acc eat-Adn kes-Acc knew
 ‘John knew that Mary ate apples.’
- b. **Mary-ka_i** John-un [[**t_i** sakwa-lul mek]-un kes]-ul alassta
 M-Nom_i J-Top apple-Acc eat-Adn kes-Acc knew
 ‘John knew that she ate apples.’
- c. ***Mary-lul_i** John-un [[**t_i** sakwa-lul mek]-un kes]-ul alassta
 M-Acc_i J-Top apple-Acc eat-Adn kes-Acc knew

The scrambled DP, *Mary*, from the propositional NCC cannot be changed in (62). The ungrammaticality of (62)c is due to the fact that the scrambled DP is not identical with its base-generated one in (62)a in terms of case-marking. However, scrambling from the perceptual NCC appears to change the case-marking of the scrambled element:

(63) Perceptual NCC

- a. John-un [[Mary-**ka** sakwa-lul mek-un] kes]-ul poassta
 J-Top M-Nom apple-Acc eat-Adn Kes-Acc saw
 ‘John saw Mary’s eating apples.’
- b. ?**Mary-ka_i** John-un [[**t_i** sakwa-lul mek]-un kes_i]-ul poassta
 M-Nom_i J-Top apple-Acc eat-Rel Kes-Acc saw
 ‘John saw Mary’s eating apples.’
- c. **Mary-lul_i** John-un [[**t_i** sakwa-lul mek]-un kes_i]-ul poassta
 M-Acc_i J-Top apple-Acc eat-Adn Kes-Acc saw
 ‘John saw Mary’s eating apples.’

In general, scrambling does not trigger any change of case-marking. But in the perceptual NCC example (63)c, scrambling appears to allow a change in the case-marking of the scrambled DP. Despite the case-marking difference between (63)b and (63)c, I assume that there is no case-changing in the perceptual NCC. The difference between the propositional and perceptual NCC constructions is due to the fact that a perceptual NCC allows the so-called “multiple case constructions (e.g. double accusative construction)” while a propositional NCC cannot, as exemplified in (64):

- (64) a. Perceptual NCC
 ?John-un [[Mary-**lul** sakwa-**lul** mek-un] kes]-ul poassta
 J-Top M-Acc apple-Acc eat-Adn Kes-Acc saw
 ‘John saw Mary’s eating apples.’
- b. Propositional NCC
 *John-un [[Mary-**lul** sakwa-**lul** mek-un] kes]-ul alassta
 J-Top M-Acc apple-Acc eat-Adn kes]-Acc knew
 ‘John knew that Mary ate apples.’

In (64)a, the double accusative construction for the perceptual NCC is available, and thus the first accusative case-marked DP is interpreted as an agent of the embedded verb, *mekta* ‘eat’. In fact, the semantic interpretation of (64)a is identical with that of (63)a. Accordingly, no case changing happens in (63)c. Rather, it must be assumed that the accusative case-marked DP in (63)c is scrambled from the double accusative construction in (64)a, not from the *kes* construction in (63)a. On the other hand, a propositional NCC does not allow the multiple case constructions. (62)c is ungrammatical since the scrambled DP must not be assigned an accusative case in its base-generated position, as shown in (64)b. Thus, the difference of grammaticality between (62)c and (63)c results from the fact that only a perceptual NCC allows the multiple case construction.

In sum, although it is different from an HiRC, a perceptual NCC is identical with a propositional NCC in terms of scrambling. In other words, as long as the two *kes* NCC constructions are assumed to contain a functional head, *kes*, there would be no difference between them in terms of acceptability or grammaticality.

4.7 Conclusion

In this chapter, we have discussed in detail *kes* NCC constructions. In the beginning of the chapter, I show that HiRC and NCC constructions differ from each other in various grammatical respects. I have assumed that the differences between the two *kes* constructions are due to the distinct semantic properties of *kes* appearing in them; that is, only the *kes* in the HiRC constructions can be interpreted as anaphoric. Compared with *kes* in the HiRC, *kes* in the NCC construction is a functional head of DP (D^0), which plays a role introducing a nominal complement (i.e. the NCC construction) to its head (i.e. a matrix verb). The functionality and anaphoricity of *kes*, in turn, accounts for the morpho-syntactic differences between *kes* NCC and HiRC constructions. In addition, in this chapter, I have shown that depending on the selectional properties of a matrix verb, there are two types of *kes* NCC constructions: *perceptual* vs. *propositional*. In the structures proposed in (38) for each of *kes* NCC construction, the propositional NCC construction can take a fully-inflected verbal form (i.e. CP), while the perceptual NCC construction takes only a short verbal form (i.e. IP). I have also argued that depending on their types, *kes* constructions show certain differences with respect to the acceptability (or grammaticality) of scrambling. For example, with respect to DP scrambling, *kes* NCC constructions are not distinct from other nominal or clausal constructions such as nominalized construction and CP complement.

CHAPTER 5

Scrambling of Embedded Clauses

5.1 Introduction

It is well known that Korean shows scrambling, a free word-order phenomenon. Further, in Korean, scrambling can be divided into two types: phrase-level scrambling and clause-level scrambling. Compared with (5)a, displaying the Korean default word-order, (5)b and (5)c represent phrase-level and clause-level scrambling, respectively:

(1) a. *In-situ Kes* NCC Construction

John-un [Mary-ka ku coyangi-lul cwui-n] kes-ul an-ta
 J-Nom M-Nom that cat-Acc kill-Adn Kes-Acc know
 ‘John knows that Mary killed the cat.’

b. DP Scrambling from *Kes* NCC Construction

ku coyangi-lul_i John-un [_{CP} Mary-ka **t_i** cwui-n] **kes-ul**
 that cat-Acc J-Nom M-Nom kill-Adn Kes-Acc

 an-ta
 know

‘As for the cat, John knows that Mary killed it.’

c. Scrambling from *Kes* NCC Construction

[[_{CP} **Mary-ka ku coyangi-lul cwui-n kes]-ul_i** John-un **t_i**
 M-Nom that cat-Acc kill-Adn Kes-Acc J-Nom

 an-ta
 know

‘That Mary killed the cat, John knew it.’

In (5)b, the embedded object DP, *ku koyangi* ‘cat’, is scrambled from the *kes*

construction to the initial position of the sentence, while in (5)c, the entire *kes* construction is scrambled to the sentence-initial position. Here, I call scrambling of a simple noun phrase from the *kes* construction “DP scrambling.” Besides DP scrambling, scrambling of the entire *kes* construction is referred to as “CP scrambling” here since the *kes* construction contains an embedded clause in it. Interestingly, in Korean, not only *kes* constructions but also certain other embedded clause constructions can undergo CP scrambling. For example, a complement clause, a relative clause, or a nominalized clause can be scrambled to the initial position of a sentence, as shown in (6), (3), and (7), respectively:

(2) a. *In-situ* Complement Clause

na-nun [John-i sakwa-lul mekess-ta-ko] mit-ess-ta
 I-Top J-Nom apple-Acc eat-Pst-Dec-Comp believe-Pst-Dec
 ‘I believed that John ate apples.’

b. Scrambling of Complement Clause

[_{CP} John-i sakwa-lul mek-ess-ta-ko]_i na-nun t_i mit-ess-ta
 J-Nom apple-Acc eat-Pst-Dec-Comp I-Top believe-Pst-Dec
 ‘That John ate apples, I believe it.’

(3) a. *In-situ* Relative Clause

John-i [Mary-ka sa-n] chayk-ul ilknunta
 J-Nom M-Nom buy-Rel book-Acc read
 ‘John is reading the book which Mary bought.’

b. Scrambling of Relative Clause

[_{DP} Mary-ka sa-n]_i chayk]-ul_i John-i t_i ilknunta
 M-Nom buy-Rel book-Acc J-Nom read
 ‘As for the book which Mary bought, John is reading it.’

(4) a. *In-situ* Nominalized Clause

John-un [Mary-ka Bill-uy cip-ey ka]-ki-lul palanta
 J-Top M-Nom B-Gen house-Loc go-Nml-Acc hope
 ‘John hopes Mary’s visiting to Bill’s house.’

b. Scrambling of Nominalized Clause

[_{DP}[Mary-ka Bill-uy cip-ey ka]-ki]-lul_i John-un t_i palanta
 M-Nom B-Gen house-Loc go-Nml-Acc J-Top hope
 ‘As for Mary’s visiting to Bill’s house, John hopes it.’

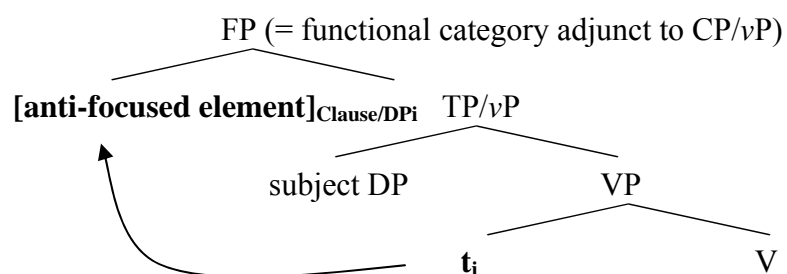
Note that as shown in (3)b and (7)b, scrambling of the relative clause and the nominalized clause must accompany with their syntactic heads (e.g. an external head noun or a nominalizer) in Korean. Also, note that even though the highest syntactic projection of the relative clause construction and the nominalized clause construction is labeled as a DP, scrambling of them is termed CP scrambling in this chapter, as opposed to DP scrambling.

The purpose of this chapter is to explore the grammatical nature of scrambling of Korean embedded clause constructions from an empirical and theoretical perspective. I argue here that scrambling of embedded clause constructions (i.e. CP scrambling) is distinct from scrambling of simple noun phrases (i.e. DP scrambling) in that the former does not show any syntactic and semantic locality effects, while the latter does. In analyzing the scrambling phenomenon in Korean, I discuss two specific subjects. First, I look into DP scrambling from *kes* constructions (especially, *propositional* NCC constructions) as a preliminary step to understanding the grammatical nature of scrambling. I demonstrate here that DP scrambling from *kes* constructions shows certain syntactic and semantic locality effects in relation to anaphor binding, WCO (weak cross over), NPI licensing, and quantifier scope.

Second, considering the results of the analysis of DP scrambling from *kes* constructions, I further examine DP and CP scrambling examples of other Korean embedded clause constructions: complement clause, relative clause, and nominalized clause constructions. I argue here that CP scrambling is distinct from DP scrambling in that only the former is not subject to any syntactic or semantic locality effects. That is, every CP scrambled construction must be reconstructed to its base-generated position for its syntactic and semantic interpretation. In accounting for the reconstruction effect of Korean CP scrambling, I introduce two well-known hypotheses in the literature: *PF-movement* and *discourse-oriented movement* (Zubizarreta 1998; Aoun & Benmamoun 1998; Sauerland & Elbourne 2002, etc. for PF-movement hypothesis, Neeleman & Reinhart 1998; Abraham & Molnarfi 2002 for discourse-oriented hypothesis). Under these hypotheses, for example, the heavy discourse-functional weight (e.g. focus) on the matrix subject DP triggers the movement of an anti-focused element out of the default “nuclear stressed” position of a sentence, as illustrated in (5).⁴³

⁴³ According to the Nuclear Stress Rule (Cinque 1993), nuclear stress falls on the most embedded element on the recursive side of the three. In Korean, a default nuclear stress falls on the preverbal elements because Korean is a head-final language and the preverbal site is the most embedded position.

(5) Discourse-oriented movement Hypothesis



In (5), the “defocalized (or *anti-focused*)” element (e.g. DP or embedded clause) moves out of its base-generated preverbal position to the left periphery in order to avoid a default nuclear stress. Adopting (5) as an analysis of Korean CP scrambling, I suggest that CP scrambling is a destressing PF-movement operation, motivated by the discourse-functional change. That is, scrambling of Korean embedded clause constructions reflects the new discourse-functional relation of a sentence at PF.

The organization of this chapter is as follows: in section 5.2, I address DP scrambling from *kes* constructions. I demonstrate here that DP scrambling shows certain locality effects in Korean. In analyzing scrambling of other Korean embedded clause constructions (e.g. complement clause, relative clause, and nominalized clause constructions), section 5.3 discusses the different properties of Korean CP scrambling compared with DP scrambling. I show here that unlike DP scrambling, CP scrambling is not subject to any locality effects. In section 5.4, I introduce two well-known hypotheses in order to present a proper analysis of CP scrambling. I assume here that Korean CP scrambling is a discourse-oriented movement operated at PF. Section 5.5 is a summary and conclusion of this chapter. In the appendix, I explore in detail the grammatical properties of the three Korean embedded clause constructions

that I analyzed in section 5.3, and I present the internal structures for each of them.

5.2 Scrambling from *Kes* Constructions

In this section, I look at various DP scrambling instances from *kes* constructions, a type of embedded clause construction. The analysis of them is helpful in understanding the grammatical nature of DP scrambling in Korean. I show here that DP scrambling from *kes* NCC constructions is subject to certain syntactic and semantic locality effects such as anaphor binding, weak crossover (WCO), NPI licensing, or quantifier scope. As a matter of fact, the three types of *kes* constructions (i.e. the HiRC and the perceptual and propositional NCCs) that I have discussed in the previous chapters are not distinct from one another with respect to the locality effects of scrambling, and therefore I discuss DP scrambling from propositional *kes* NCC constructions only.

First, scrambling from propositional NCC constructions triggers a change in the binding relation of the moved element:

(6) Anaphor Binding

- a. *John*_i-un [[*Mary*_j-ka *casin*_{i/j}-ul yokha]-nun kes]-ul alassta
 J-top M-nom self-acc curse-Adn KES-acc knew
 ‘John_i knew that Mary_j was cursing him_i/herself_j.’
- b. *casin*_{i/*j}-ul *John*_i-un [[*Mary*_j-ka *t*_k yokha]-nun kes]-ul alassta
 self_{i/*j}-acc_k J-Top M-Nom curse-Adn KES-acc knew
 ‘John_i knew that Mary_j was cursing him_i/*herself_j.’

In (6)a, the anaphor *casin* ‘self’ is ambiguous in its base-generated position in relation to its antecedents. The two potential antecedents (i.e. *John* and *Mary*) in (6)a precede

the anaphor, *casin* ‘self’. However, this ambiguity disappears when it is scrambled out of the NCC, as shown in (6)b. This is due to the fact that the scrambled anaphor *casin* ‘self’ in (6)b does not remain in the embedded clause, and thus it cannot be bound by the subject of the embedded clause (i.e. *Mary*). This indicates that scrambling of an element (e.g. DP) from an NCC can create a new binding relation, and thus it cannot be a grammatically vacuous operation.⁴⁴ Rather, scrambling has its own syntactic ground in the sense that it is necessary to remove the ambiguity of anaphors.

A second noticeable syntactic property of scrambling from a propositional NCC saves the WCO (or Weak Cross-over) violation of a sentence:

- (7) WCO
 a. ***ku_i-uy emeni-ka** [[Mary-ka **nwukwu_i-lul** yokha]-nun kes]-ul
 he-Gen mother-Nom M-nom who-acc curse-Adn Kes-Acc

 alasss-ni
 knew-Q

Intended ‘Whom_i did his_i mother know Mary was cursing?’

- b. [**nwukwu_i-lul**]_k **ku_i-uy emeni-ka** [[Mary-ka **t_k** yokha]-nun
 who_i-acc_k he-Gen mother-Nom M-Nom curse-Adn

 kes]-ul alass-ni
 Kes-Acc knew-Q

‘Whom_i did his_i mother know Mary was cursing?’

The ungrammaticality of (7)a is due to a WCO effect, because at LF, the *Wh*-phrase,

⁴⁴ Saito (1989, 1992) assumes that *long distance* scrambling like (6)b is semantically vacuous. However, his assumption has been a long-lasting controversial issue among Japanese/Korean linguists (cf. Sohn 1995, Son 2001, and Miyagawa 1997, etc.). For the recent opposite view of it, see Miyagawa (2003, 2005).

nwukwu ‘who’, crosses over its coreferential pronominal (i.e. *ku-uy* ‘his’) in the subject phrase of the matrix clause while *Wh*-movement occurs. However, scrambling of the *Wh*-phrase, as in (7)b, generates a new relation between the two coreferential elements, and thus the *Wh*-phrase is no longer lower than its coreferential pronoun. That is, the scrambled *Wh*-phrase is out of the position where WCO effects can occur. Thus, scrambling of a *Wh*-phrase from *kes* constructions changes the grammaticality of a sentence with respect to WCO.

Third, the scrambled *Wh*-phrase must be semantically interpreted as specific whereas the *in-situ Wh*-phrase can be interpreted as either specific or non-specific (cf. Son 2001):

- (8) Specificity
- a. John-i [[Mary-ka **nwukwu-lul** yokha]-nun kes]-ul alass-ni
 J-Nom M-nom who-acc curse-Adn kes]-acc know-Q
- (i) ‘Who did John know Mary was cursing?’ (nonspecific)
 (ii) ‘Who (among the persons) did John know Mary was cursing?’ (specific)
- b. **nwukwu-lul_i** John-i [[Mary-ka **t_i** yokha]-nun kes]-ul
 who-acc J-Nom M-Nom curse-Adn Kes-acc
- alass -ni
 know-Q
- (i) *‘Who did John know Mary was cursing?’ (nonspecific)
 (ii) ‘Who (among the persons) did John know Mary was cursing?’ (specific)

It has been generally assumed that as an indefinite quantificational expression, the *Wh*-phrase in (8)a can be interpreted as either specific or non-specific depending on the circumstances (Pesetsky 1987; Nishigauchi 1990; and others). Roughly, the

specific *Wh*-phrase refers to the presupposed entity already introduced in the previous contexts. Thus, the *Wh*-phrase in (8)b must be interpreted as a specific person among the set of entities already introduced in the domain of discourse.

Fourth, scrambling from an NCC is also related to the so-called NPI (negative polarity item), *amwukesto* ‘anything’. The licenser of an NPI is a negation and it must occur together with the NPI in the same clause. In (9)b, scrambling of the NPI *amwukesto* ‘anything’ from a propositional NCC is prohibited because it cannot be licensed by a head of the negation phrase, *anh* ‘not’:⁴⁵

(9) NPI Licensing

- a. *manhun salam-i* [*Mary-ka amwukesto mekci anh-nun*] *kes-ul*
 many people-Nom M-Nom anything eat.not-Adn Kes-Acc

alassta
 knew

‘Many people knew that Mary did not eat anything.’

- b. **amwukesto_i* *manhun salam-i* [*Mary-ka t_i mekci anh*] *kes-ul*
 anything many people-Nom M-Nom eat.not Kes-Acc

alassta
 knew

For licensing, the NPI *amwukesto* ‘anything’ must remain in the same clause with its licenser in (9)a. However, the NPI in (9)b cannot be licensed by a negation since they are not in the same clause domain after scrambling. Thus, scrambling of an NPI from the *kes* construction creates an illegitimate movement.

⁴⁵ Son (2001) suggests that (9)b is still marginal, thus not totally ungrammatical. I do not agree with him in this regard. It has been cross-linguistically observed that an NPI must be licensed in the same clause by its licenser, negation, I do not think that this universal condition regarding NPI licensing is an exception in Korean.

Finally, it is assumed that scope of quantifiers or quantificational expressions is usually determined in their surface positions in Korean (Beck & Kim 1997). Accordingly, the scrambled position of quantifiers is regarded as their scope position too, as demonstrated in (10):

(10) Quantifier Scope

- a. *nwukwuna*-ka [Mary-ka *nwukwunka*-lul coaha-nun] kes-ul
 everyone-Nom M-Nom someone-Acc like-Adn Kes-Acc

anta
 know

- (i) ‘Everyone knows Mary likes someone.’ ($\forall > \exists$)
 (ii) ?? ‘There is someone_i such that everyone knows Mary likes him/her_i.’ ($\exists > \forall$)

- b. *nwukwunka*-lul_i *nwukwuna*-ka [Mary-ka t_i coaha-nun] kes-ul
 someone-Acc everyone-Nom M-Nom like-Asp Kes-Acc

anta
 know

- (i) ?? ‘Everyone knows Mary likes someone.’ ($\forall > \exists$)
 (ii) ‘There is someone_i such that everyone knows Mary likes him/her_i.’ ($\exists > \forall$)

In (10)a, the first reading is preferred over the second reading; that is, the universal quantifier *nwukwuna* ‘everyone’ in the subject position of the matrix clause scopes over the existential quantifier *nwukwunka* ‘someone’. Concerning (10)b, in contrast, the most favorable interpretation is that the existential quantifier *nwukwunka* ‘someone’ scopes over the universal quantifier *nwukwuna* ‘everyone’, since it is scrambled out of the NCC clause to the position before the universal quantifier of the matrix clause. Thus, scrambling from a propositional NCC can trigger a new scope

relation of quantifier.

In sum, DP scrambling from a propositional NCC construction triggers certain syntactic/semantic effects, as noted in table 5.1:

(11) Table 5.1 DP Scrambling from *Kes* NCC Constructions

Syntactic operation	Syntactic or semantic effect
creates a new binding relation	yes
saves a WCO violation	yes
breaks an NPI licensing	yes
changes a scope relation of quantifiers	yes

DP scrambling from *kes* constructions shows certain syntactic/semantic locality effects. In the next section, I will show that this is also true in other Korean embedded clause constructions. That is, DP scrambling from an embedded clause construction shows certain locality effects. In addition, I will argue in the next section that compared with DP scrambling, CP scrambling does not show any locality effects.

5.3 Scrambling of Embedded Clause Constructions

In this section, in addition to *kes* constructions, I explore the grammatical nature of scrambling in relation to Korean embedded clause constructions. I argue here that compared with DP scrambling that can trigger grammatical change in a sentence, scrambling of embedded clause constructions (i.e. CP scrambling) is not subject to any syntactic/semantic locality effects. That is, every scrambled embedded clause construction must be reconstructed to its base-generated position for its grammatical interpretation. In order to account for the reconstruction effect of CP

scrambling, especially, I adopt here two well-known hypotheses in the literature: *PF-movement* and *discourse-oriented movement*. The PF-movement hypothesis suggests that a scrambled embedded clause construction does not show any syntactic and semantic effects because it is not done in core syntax or LF. And under the Discourse-oriented movement hypothesis, CP scrambling is not an unconditional “optional” movement operation; rather, it is motivated by the discourse-functional change of a sentence. In particular, I assume here that every unfocused embedded clause construction undergoes scrambling as a result of the focal stress shift.

5.3.1 The Structure of Korean Embedded Clause Constructions

In this section, as a preliminary step in analyzing scrambling of embedded clause constructions, I discuss the differences and similarities among the three embedded clause constructions in Korean and present the internal structures for each of them.

In grammar, a sentence can be classified as either complex or simplex, depending on whether embedded clauses appear in it. A complex sentence usually consists of a matrix clause and one or more embedded clauses. Compared with a matrix clause, an embedded clause is subjunctive (or dependent) in the sense that it cannot stand alone without being part of a matrix clause. An embedded clause construction refers to the construction that contains an embedded clause. The highest projection of an embedded clause construction can be either CP or DP, depending on the syntactic nature of a head occurring in the highest projection. In this section, in

particular, I discuss three Korean embedded clause constructions: a complement clause, a relative clause (e.g. HeRC), and a nominalized clause constructions, as shown in (6), (3), and (7). A complement clause construction headed by a clausal complementizer is treated as a CP, but a relative clause or nominalized clause construction is regarded as a DP since its syntactic head displays nominal properties. Since Korean is an SOV language, an embedded clause construction must precede a matrix predicate, which always occurs in the final position of a sentence. In addition, an embedded clause is closely related to the main predicate of a sentence, and thus it usually occurs in the syntactic or semantic domain of the predicate. In general, Korean embedded clauses end in a suffix (or a series of suffixes), which provides an inkling of subtypes of embedding. For instance, as we have already seen in section 5.1, a complement clause in (6)a ends in the declarative suffix *-ta*, followed by the typical clausal complementizer *-ko*. The relative clause in (3)b is sealed by the adnominal (or relative) marker *-(nu)n*. The nominalized clause in (7)b is easily distinguished from the other two embedded clauses in that it usually ends in the verb stem followed by the nominalizer *-ki*.

5.3.1.1 The Structure of Complement Clause Constructions

In this subsection, I explore the grammatical properties of a complement clause and present its internal structure.

In many languages, certain verbs can take clauses as arguments (e.g. objects) instead of simple noun phrases. For example, English verbs such as *see*, *hear*, *know*,

believe, like, tell, and want can take a clause for their argument. Depending on the morphological features of a complement clause, there are two types of complementation in Korean: what I call *clausal* (or *fully-inflected*) complementation and *verbal* (or *infinitival*) complementation (cf. Sohn 1999). These two complement types differ in certain grammatical properties. In particular, morphologically, a clausal complement ends in a verbal stem + verbal or sentential-level morphemes (e.g. the declarative suffix *-ta* or the interrogative suffix *-nya*) followed by a complementizer, whereas a verbal complement ends in a verbal stem immediately followed by a complementizer, as demonstrated in (12)a and (12)b:

(12) a. Clausal Complementation

na-nun	[_{CP} [	Swuni-ka	sakwa-lul	mekess-ta]- ko
I-Top		Swuni-Nom	apple-Acc	eat-Pst-Dec-Comp

mit-ess-ta
believe-Pst-Dec

‘I believed that Swuni ate the apples.’

b. Verbal Complementation

na-nun	[_{VP} [	sakwa-lul	mek]-e	po-ass-ta ⁴⁶
I-Top		apple-Acc	eat-Comp	try-Pst-Dec

‘I tried to eat the apples.’

The typical Korean clausal complementizer is *-ko*, while in Korean there are a number of verbal complementizers such as *-e/a*, *-ko*, *-keni*, *-key*, *-tolok*, *-(u)lye(ko)*, etc. In addition to the above two complement types, I have argued in Chapter 4 that

⁴⁶ As in (12)b, in the auxiliary constructions, the perceptual verb *pota* as a matrix predicate loses its lexical meaning ‘see’ and takes a new “auxiliary” meaning such as an “exploratory” function (‘attempt’ or ‘try’). Therefore, in the verbal complement construction *po-a-pota* ‘try to see’, the first verb *pota* has its lexical meaning ‘see’ and the second verb *pota* followed by the verbal complementizer *-a* functions as an auxiliary verb associated with the exploratory meaning.

there is another type of complementation in Korean, namely, the *kes* NCC construction. The NCC is typically characterized by *kes*, following a verbal stem and an adnominal suffix such as *-nun*, *-(u)n*, or *-(u)l*, as exemplified in (13):

(13) Nominal Complementation

na-nun	[_{DP} [	Swuni-ka	sakwa-lul	mek-nun]	kes]-ul
I-Top		Swuni-Nom	apple-Acc	eat-Adn	KES-Acc

al-ass-ta
know-Pst-Dec

‘I knew that Swuni was eating the apples.’

As seen in (12) and (13), it seems that there are three different types of complementations in Korean, depending on the grammatical features of complements. The main grammatical role of complementizers is to combine a matrix predicate with its complement clause as an argument. Accordingly, the syntactic categories of the complement types (e.g. CP, VP, or DP) appear to be determined by the grammatical nature of a complementizer.

On the other hand, a complement is strictly restricted by the matrix predicate of a sentence. Put differently, a matrix verb subcategorizes for both its complement type and its complementizer. For example, the complementizer *-ko* can occur with a certain class of matrix predicates such as *sayngkakhata* ‘think’, *mitnunata* ‘believe’, and *malhata* ‘tell’ that can semantically describe a proposition like a fact, an activity, or a potential state. But it never occurs with the other verbs such as *kwunkumhata* ‘wonder’ or *hwuhoehata* ‘regret’ simply because they do not select the complement type followed by the complementizer *-ko*. Likewise, a verbal complementizer or *kes*

is restricted to a limited number of matrix predicates. Thus, complements are distinguished from one another by the selectional restriction of the matrix predicate of a sentence.

Another difference between Korean complement types comes from scrambling. For instance, a verbal complement cannot undergo scrambling, as shown in (14), but both clausal and nominal complements can be freely scrambled into the initial position of a sentence, as demonstrated in (15) and (16):

(14) Scrambling of Verbal Complement

- a. na-nun sakwa-lul [_{VP} **mek**]-e po-ass-ta
 I-Top apple-Acc eat-Comp try-Pst-Dec
 ‘I tried to eat the apples.’
- b. *[[_{VP} **mek**]-e]_i na-nun sakwa-lul t_i po-ass-ta
 eat-Comp I-Top apple-Acc try-Pst-Dec

(15) Scrambling of Clausal Complement

- a. na-nun [_{CP} **Swuni-ka sakwa-lul mekess-ta**]-ko
 I-Top Swuni-Nom apple-Acc eat-Pst-Dec-Comp

 mit-ess-ta
 believe-Pst-Dec

 ‘I believed that Swuni ate the apples.’
- b. [[_{CP} **Swuni-ka sakwa-lul mekess-ta**]-ko]_i na-nun t_i
 Swuni-Nom apple-Acc eat-Pst-Dec-Comp I-Top

 mit-ess-ta
 believe-Pst-Dec

 ‘I believed that Swuni ate the apples.’

(16) Scrambling of Nominal Complement

- a. na-nun [_{DP} [Swuni-ka sakwa-lul mek-nun] kes]-ul
 I-Top Swuni-Nom apple-Acc eat-AdnKES-Acc

al-ass-ta
 know-Pst-Dec

‘I knew Swuni’s eating the apples.’

- b. [[_{DP} [Swuni-ka sakwa-lul mek-nun] kes]-ul]_i na-nun t_i
 Swuni-Nom apple-Acc eat-Adn KES-Acc I-Top

al-ass-ta
 know-Pst-Dec

‘Swuni’s eating the apples, I knew it.’

In (14), (15) and (16), a verbal complement is distinguished from a clausal or nominal complement because scrambling of it is not usually allowed in Korean. For this reason, only scrambling of a clausal complement is analyzed in section 5.3.⁴⁷

On the other hand, it has been widely assumed in the Korean literature that the internal structure of a clausal complement is very similar to the English *that* complement structure (e.g. I. Yang 1972; Sohn 1999), as follows:

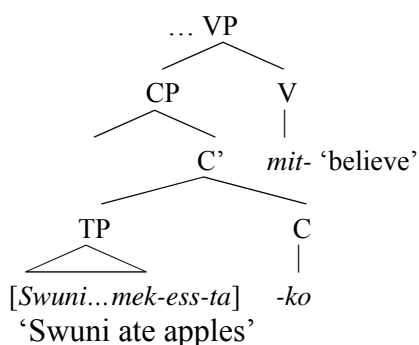
- (17) a. na-nun [_{CP} [_{TP} Swuni-ka sakwa-lul mek-ess-ta]-ko]
 I-Top Swuni-Nom apple-Acc eat-Pst-Dec-Comp

mit-ess-ta
 believe-Pst-Dec

‘I believed that Swuni ate apples.’

⁴⁷ See section 5.2 for DP scrambling from the *kes* NCC construction.

b. Structure of Clausal Complements



In the structure (17)b, like English *that*, *-ko* plays the role of a CP-complementizer, which merges an embedded clause to the matrix verb *mitta* ‘believe’. Thus, adopting the structure (17)b, I assume that when scrambling of clausal complements happen, the whole CP introduced by the complementizer *-ko* moves out of the matrix VP.

5.3.1.2 The Structure of Relative Clause Constructions

In this subsection, I address the grammatical properties of a relative clause (especially an HeRC) and present its internal structure.

A relative clause is a type of embedded clause, which modifies a nominal head. The nominal head of a relative clause is often called a semantic head of the relative clause and merged to the matrix predicate as an argument or adjunct. Compared with English relative clauses, two important differences are discovered in Korean relative clauses. First, Korean relative clauses have no relative pronouns corresponding to English *who*, *whose*, *which*, or *that*, but they are connected with the (externally-positioned) nominal head by means of the suffixes such as *-nun*, *-(u)n*, or

–(u)l (Sohn 1999).⁴⁸ The exact morphological/syntactic status of these relative clausal suffixes has been controversial among Korean linguists (Choe 1988; J. Yoon 1990; Sohn 1999; M. Jo 2002; J. Jo 2004; M. Kim 2004; J. Lee 2006; etc.). Although these suffixes are often regarded as portmanteau morphemes fused by tense and aspect (cf. Choe 1988; M. Kim 2004; Cha 2005; etc.), I refer to these suffixes as relativizers from the traditional view (Sohn 1999). They function as adjoining relative clauses to their external head nouns.

The existence of such suffixes, on the other hand, has caused another controversial issue with respect to the internal structure of Korean relative clauses among Korean linguists; namely, the CP-analysis vs. the IP-analysis. For example, Yoon (1990) and Sohn (1999) assume that the relativizer *–nun* is an overt head of CP. In Japanese, interestingly, there are no suffixes corresponding to Korean relativizers such as *–nun*, as instantiated in (18):

- (18) [DP [Mary-ga yonda-~~o~~/*no] hon] (Japanese)
 M-Nom read book
 ‘the book that Mary bought’

In the spirit of Kayne’s (1994) antisymmetry theory of syntax, Murasugi (1991, 2000) claims that Japanese relative clauses are IPs, not CPs since there is no overt C (e.g. *no*), which corresponds to English *that* or Korean *–nun*. Adopting Murasugi’s analysis, M. Jo (2002) and M. Kim (2004) argue that the suffix *–nun* appearing in Korean relative clauses is not an overt C; rather, it is treated as a part of an IP (e.g.

⁴⁸ Henthforth, unless otherwise specified, “relative clause” will be used to refer to a head-external relative clause in this chapter.

tense or modal). According to their analysis, a topic phrase cannot occur in Korean relative clauses, since it must appear above the IP-level (i.e. CP), as demonstrated in (19)b:

- (19) a. [DP [TP Mary-ga ece sa-n] chayk]
 M-Nom yesterday buy-**Rel** book
 ‘the book that Mary bought’
- b. *[DP [**Mary-nun** [TP ece sa-n]] chayk]
 M-Top yesterday buy-**Rel** book
 ‘the book that Mary bought’

Under the IP-analysis, the ungrammaticality of (19)b can be straightforwardly accounted for, since the topic phrase in bold is simply impossible.⁴⁹ However, a serious question arises with respect to the IP-adjunction analysis. For example, the suffix *-nun* can also occur in so-called “reported speech (or indirectly quotative)” expressions in Korean, as follows:

- (20) [DP [Mary-ga ece sa-ss-ta-nun] chayk]
 M-Nom yesterday buy-**Pst-Dec-Rel** book
 ‘the book that (they said) Mary bought’

In (20), the relative clause adjoining the external head *chayk* ‘book’ should be CP, not IP, because it displays a fully-inflected clausal morpheme system, including the declarative suffix *-ta*. Under the IP-analysis, the suffix *-nun* in (20) must be differently treated over the suffix *-n* in (19)a since the suffix *-nun* or *-(u)n* cannot

⁴⁹ On the other hand, under the CP-analysis, a Topic phrase cannot appear in the Spec, CP of a relative clause since a null operator moved out of an IP already occupies that position. See Yoon (1990:221) for more detailed information.

appear over an IP. Unfortunately, this is an apparent stipulation toward a unified theory of the relative clause suffixes. Therefore, instead of the IP-adjunction analysis, here I follow the CP-adjunction analysis of Korean relative clauses and treat the suffix *-nun* as an overt relativizer (or a relative clause complementizer).

On the other hand, another notable difference between English and Korean relative clauses comes from the fact that there is no article system in Korean. Accordingly, the Korean demonstrative of the following sentence (in bold), *ku*, cannot be an article which is regarded as a head of DP in the spirit of Abney (1987):

- (21) John-i [[Mary-ka e_i sa-n] **ku** twukkewun chayk_i]-ul
 J-Nom M-Nom buy-Rel that thick book-Acc
 ilk-nun-ta
 read-Pres-Dec

‘John is reading the thick book that Mary bought.’

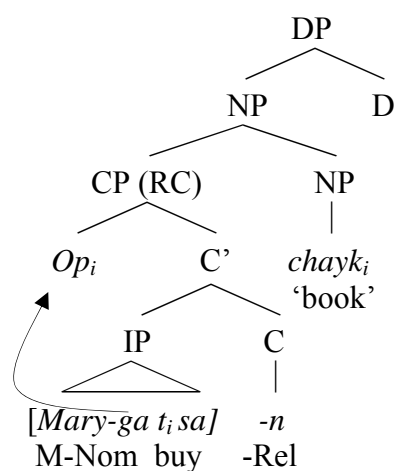
Differently put, the demonstrative *ku* in (21) cannot be treated as the same as English determiners such as *a*, *the*, and the possessive *'s*. It is well known that unlike English, Korean, Japanese, and Chinese lack an article which is regarded as a functional head of DP (Fukui 1986). Accordingly, a noun phrase can stand alone without any article in these languages. This leads to the general assumption that the Korean demonstrative *ku* does not occur in the head position of DP; rather, it is often treated as a “pre-NP” modifier of the head noun (Sohn 1999; M. Jo 2002). Therefore, I regard the determiner *ku* as an adnominal modifier.

To the internal structure of Korean relative clauses, among Korean linguists, there are two alternative approaches among Korean linguists: the NP-adjunction

analysis (Yoon 1990; Sohn 1999) vs. the antisymmetry analysis (M. Jo 2002). Based on the traditional English relative clause analysis (Chomsky 1977), the NP-adjunction analysis of Korean relative clauses assumes that relative clauses are CPs that contain a null operator, and that relative clauses are adjoined to the external head NP as an adjunct, as shown in (22)b:

- (22) a. [[*Mary-ka* e_i *sa-n*] *chayk_i*]
 M-Nom buy-Rel book-Acc
 ‘the book that Mary bought’

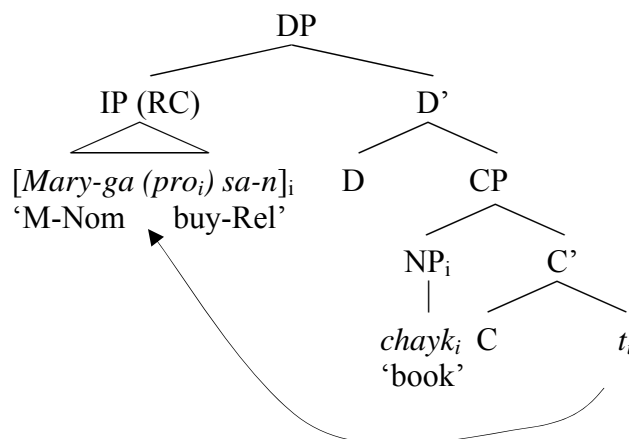
b. The NP-adjunction Analysis (Yoon 1990; Sohn 1999)



In (22)b, the null operator moves out of IP to the Spec, CP, and it is co-indexed with the external head base-generated outside the relative clause. As an alternative approach to Korean relative clauses, the antisymmetry analysis based on Kayne (1994) and Muragugi (1991; 2000) assumes that relative clauses are IPs that move to the specifier position of DP, and the external head NP of relative clauses is base-generated in the specifier of CP, as shown in (23)b:

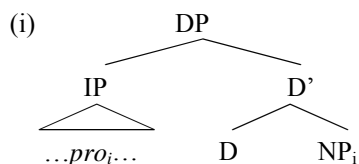
- (23) a. [[*Mary-ka* e_i *sa-n*] *chayk_i*]
 M-Nom buy-Rel book-Acc
 ‘the book that Mary bought’

b. The Antisymmetry Analysis (M. Jo 2002)



Modifying Kayne’s original analysis, Jo assumes that the external NP is base-generated in CP, but it does not move to CP. Interestingly, as Muragugi (2002) pointed out, the antisymmetry structure of relative clauses is very similar to the NP-adjunction structure in (22)b if the C projection is eliminated, since “it plays no role and is completely redundant.”⁵⁰ At any rate, as for Korean relative clause construction, it is not an important issue whether a covert operator moves to CP as in (22)b or *pro* is base-generated in DP as in (23)b. Rather, every concern seems to go to

⁵⁰ If the redundant C projection is eliminated from (23)b, we can obtain the following structure that is very similar to the NP-adjunction structure shown in (22)b, except for the IP/CP alternation (cf. Murasugi 2000:256):



the syntactic category of relative clauses preceding the external head NP; namely, IP vs. CP. As I have argued earlier in this section, I favor the CP-adunction analysis from an empirical standpoint. In addition, I will argue for the NP-adjunction analysis. For example, the great advantage of the NP-adjunct structure is that certain prenominal modifiers such as demonstratives or adjectives can occur repeatedly between a relative clause and its external head NP, as demonstrated in (24)a:

- (24) a. $[_{DP} [_{RC} \text{Mary-ka } e_i \text{ sa-nun}] \text{ ku } \text{yeppun } \text{cip}_i]$
 M-Nom live-Rel that pretty house
 ‘the pretty house that Mary is living’
- b. $[_{DP} \text{ku } [_{RC} \text{Mary-ka } e_i \text{ sa-nun}] \text{ yeppun } \text{cip}_i]$
 that M-Nom live-Rel pretty house
 ‘the pretty house that Mary is living’
- c. $?[_{DP} \text{ku } \text{yeppun } [_{RC} \text{Mary-ka } e_i \text{ sa-nun}] \text{ cip}_i]$
 that pretty M-Nom live-Rel house
 ‘the pretty house that Mary is living’

Besides, certain demonstratives or adjectives can freely precede relative clauses as in (24)b and (24)c. In the antisymmetry syntax (23)b, on the other hand, prenominal modifiers cannot precede relative clauses, since a relative clause appears in the Spec, DP. In favor of the NP-adjunction analysis, there is another general but noticeable technical aspect with respect to scrambling of Korean relative clauses. In general, a prenominal modifier such as a relative clause or an adjective cannot be syntactically separated from its modified noun in most languages. Because of that, a relative clause cannot be scrambled alone without its external head, as shown in (25)b:

- (25) a. John-i [[_{RC} Mary-ka sa-n] chayk]-ul ilknunta
 J-Nom M-Nom buy-Rel book-Acc read
 ‘John is reading the book which Mary bought.’
- b. *[[_{RC} **Mary-ka sa-n**] John-i [[t_i chayk]-ul ilknunta
 M-Nom buy-Rel J-Nom book-Acc read
 ‘John is reading the book which Mary bought.’
- c. [[_{RC} **Mary-ka sa-n**] **chayk**]-ul_i John-i t_i ilknunta
 M-Nom buy-Rel book-Acc J-Nom read
 ‘John is reading the book which Mary bought.’

As in (25)b, when a relative clause scrambles out of DP, the external head of the relative clause cannot be stranded. Differently put, technically, there is no pure scrambling of a relative clause, but scrambling of the entire relative clause (or relativized) construction where a relative clause is adjoined. Similarly, an adjective as a prenominal modifier cannot be separated from its modified noun by means of scrambling. This pied-piping property of scrambling can be better captured in the NP-adjunction analysis. In the antisymmetry syntax, however, there seems to be no structural device to block scrambling of a relative clause (i.e. IP) alone. Thus, the NP-adjunction structure along with the CP-adjunction analysis is empirically and theoretically better in accounting for Korean relative clauses.

5.3.1.3 The Structure of Nominalized Clause Constructions

In this subsection, I explore the grammatical properties of a nominalized clause construction and present its internal structure.

A nominalized clause is an embedded clause headed by nominalizer suffixes.

A nominalized clause combined with a nominalizer is often called the “nominalized

clause construction” and like a relative clause construction, it is syntactically classified as a nominal complement (Sohn 1999). However, a nominalized clause is distinguished from a relative clause in that it does not have an external nominal head and there is no syntactic gap in it. Also, it is different from a clausal complement clause headed by the complementizer *-ko* in that the latter never functions as a nominal and thus it cannot take a case marker such as nominative, accusative, or locative, etc. There are two typical nominalizers in Korean: *-ki* and *-(u)m*, and they are mostly used in different grammatical environments. According to Cook (1968) and Kim (1984), the occurrence of a nominalizer is restricted by the semantics of a matrix predicate. In particular, while the construction headed by the nominalizer *-(u)m* is semantically related to the so-called “factive” verbs, the construction headed by the nominalizer *-ki* is associated with the “non-factive” verbs, as illustrated in table 5.2:

(26) Table 5.2 Korean Nominalizer *-ki* vs. *-(u)m* (Kim 1984:38)

<i>-ki</i> (non-factive)	<i>-(u)m</i> (factive)
<i>palata</i> ‘hope’ <i>wuenhata</i> ‘want’, <i>coahata</i> ‘like’, <i>cwucanghata</i> ‘claim’ <i>swipta</i> ‘be easy’ <i>kkelita</i> ‘abhor’ <i>silhta</i> ‘dislike’ <i>memchwuta</i> ‘stop’ etc.	<i>pota</i> ‘see’, <i>alta</i> ‘know’, <i>coahata</i> ‘like’, <i>mitta</i> ‘believe’, <i>cwucanghata</i> ‘claim’ <i>malhata</i> ‘tell/said’ <i>hwuhoyhata</i> ‘regret’ <i>alumdapta</i> ‘be beautiful’ <i>sepsephata</i> ‘feel sorry’ etc.

(27) *-ki* Nominalized Clause Construction⁵¹

a. na-nun [Mary-ka sakwa-lul mek-**ki**]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc hope-Pst-Dec
 ‘I wanted Mary to eat apples.’

b. *na-nun [Mary-ka sakwa-lul mek-**um**]-ul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc hope-Pst-Dec

(28) *-(u)m* Nominalized Clause Construction

a. na-nun [Mary-ka sakwa-lul mek-**um**]-ul al-ass-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc know-Pst-Dec
 I knew Mary’s eating apples.’

b. *na-nun [Mary-ka sakwa-lul mek-**ki**]-lul al-ass-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc know-Pst-Dec

The ungrammatical sentences in (27)b and (51)b show that each of the nominalizers are semantically connected to the matrix predicate in its own way.⁵² That is, depending on the semantic class of the main predicates, the *-ki* nominalized construction is encoded as a “non-factual” event which is not realized yet, while the *-(u)m* nominalized construction a “factual” event that has already been realized. However, if a main verb is semantically “neutral” or “ambivalent” in terms of “factivity,” then either of the nominalized constructions can occur, as in (29):

(29) a. *-ki* Nominalized Clause Construction

na-nun [Mary-ka sakwa-lul mek-**ki**]-lul cwucahay-ss-ta
 I-Top M-Nom apple-Acc eat-Nml-Acc claim-Pst-Dec
 ‘I claimed (the action of) Mary’s eating apples.’

⁵¹ The gloss Nml stands for a nominalizer, distinguished from the gloss Nom (i.e. nominative case).

⁵² The semantic difference between the *-ki* verbs and *-(u)m* predicates is still a controversial topic. For example, in other studies (e.g. Horie 2000), the dichotomy between ‘factive’ and ‘non-factive’ would be substituted for by other semantic terms such as ‘*realis* vs. *irrealis*’ or ‘*event* vs. *proposition*’.

b. **-(um)** Nominalized Clause Construction

na-nun [Mary-ka sakwa-lul mek-ess-(**u**)m]-ul cwucahay-ss-ta
 I-Top M-Nom apple-Acc eat-Pst-Nml-Acc claim-Pst-Dec
 ‘I claimed (the fact of) Mary’s eating apples.’

In (29), the matrix verb *cwucanghata* ‘claim’ can be followed by either the factive or the non-factive nominalizer, depending on whether the event denoted by the preceding nominalized clause is realized or not. The realized event ends in the nominalizer *-(u)m*, as in (29)b.

On the other hand, morphologically, Korean nominalized constructions are very similar to English gerundive or *to*-infinitive constructions in the sense that a nominalizer is directly attached to a verbal stem. No adnominal (e.g. *-nun*), verbal, or sentential suffixes (e.g. *-ta*) can intervene between the verbal stem and the nominalizer, but only a tense marker such as *-ess* can optionally occur between them, as follows:

- (30) a. na-nun [Mary-ka sakwa-lul mek(**-ess**)-**ki**]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Pst-Nml-Acc hope-Pst-Dec
 ‘I wanted Mary to eat apples.’
- b. *na-nun [Mary-ka sakwa-lul mek-**nun-ki**]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Adn-Nml-Acc hope-Pst-Dec
- c. *na-nun [Mary-ka sakwa-lul mek(**-ess**)-**ta-ki**]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Pst-Dec-Nml-Acc hope-Pst-Dec

In (30)b and (30)c, neither the adnominal suffix *-nun* nor the clausal suffix *-ta* can occur with the nominalizer *-ki*. The fact that a nominalized clause cannot include a fully-inflected clausal or adnominal morpheme system strongly implies that the

presence of the internal arguments of the embedded verb (e.g. *Mary* and *sakwa* ‘apple’) strongly suggest that a VP (or TP)-like category is embedded within the nominal category, DP. That is to say, a nominalized clause construction consists of two parts: a verbal part and a nominal part. The higher nominal part headed by D is present on top of the lower verbal part, which licenses the internal arguments of a nominalized clause. In addition, departing from Alexiadou’s structure that includes NP within the nominalized DP, I suggest the *NomP* (i.e. nominalized phrase) of which head hosts the nominalizer suffix *-ki*. The syntactic role of the nominalized phrase, *NomP*, mediates between two parts of the nominalized structure in (31)b: the lower VP and the higher DP. In the previous chapter, I argued that *kes* as a nominal complementizer is a head of DP and is different from a nominalizer in various grammatical respects. Theoretically, if the nominal complementizer *kes* is distinct from a nominalizer and is placed in the functional head of DP, then a nominalizer cannot be treated as a head of DP. This is exactly why I put the *NomP* in the nominalized structure. Thus, I assume that a nominalizer is an N^0 , not a D^0 .

On the other hand, with respect to scrambling of nominalized clauses, it is noticeable that the lower verbal part of the nominalized structure cannot be separated from the higher nominal part. Therefore, when scrambling occurs in the nominalized construction, the nominalizer *-ki* cannot be stranded at all, as follows:

- (32) a. na-nun [Mary-ka sakwa-lul mek(-ess)-ki]-lul palay-ess-ta
 I-Top M-Nom apple-Acc eat-Pst-Nom-Acc hope-Pst-Dec
 ‘I wanted Mary to eat apples.’

- b. * $[_{VP}$ **Mary-ka sakwa-lul mek]_i na-nun $[_{DP}$ **t_i** -ki]-lul
 M-Nom apple-Acc eat I-Top -Nml-Acc**

palay-ss-ta
 hope-Pst-Dec

- c. $[_{DP}$ $[_{VP}$ **Mary-ka sakwa-lul mek]-ki]-lul_i na-nun **t_i**
 M-Nom apple-Acc eat-Nml-Acc I-Top**

palay-ss-ta
 hope-Pst-Dec

(lit) ‘Mary’s eating apples, I hoped.’

As in (32)c, scrambling of a nominalized clause technically refers to the movement of the entire complex DP, including nominalizers and case markers, not the movement of VP (or TP) within the nominalized construction. In spite of this fact, here I refer to scrambling of complex nominalized constructions as CP scrambling in order to distinguish them from simple DP scrambling.

5.3.2 Scrambling of Embedded Clause Constructions

In this section, I show that compared with DP scrambling, CP scrambling does not show any syntactic and semantic locality effects. That is, CP scrambling shows the “optional” nature of movement.⁵⁴ Every scrambled embedded clause is neither syntactically nor semantically different from its *in-situ* counterpart. In fact, there have been a great number of studies and suggestions with respect to scrambling of phrase-level categories (e.g. noun phrases, adverbial phrases, etc.) in either a

⁵⁴ The “optionality” of scrambling is often referred to a “reconstruction” effect in the literature, by which a moved element must be syntactically licensed or semantically interpreted in its base-generated position, not in the surface (or moved) position (cf. Saito 1989; Sauerland & Elbourne 2002; Sabel 2005).

complex or a simplex sentence (Hale 1983 for Warlpiri, Saito 1989; 1992; 2004, Miyagawa 1997; 2003; Bošković and Takahasi 1998 for Japanese, Mahajan 1990 for Hindi, Webelhuth 1989; Grewendorf and Sabel 1999 for German, Park 1994; Sohn 1995 for Korean, and many others). However, no analyses or proposals related to scrambling of clausal-level categories have been suggested in the literature, compared with DP scrambling. In this regard, my current study on Korean CP scrambling is unique. In this section, I argue for two specific facts about Korean CP scrambling. First, there are certain grammatical differences between DP and CP scrambling. Second, the most prominent property of CP scrambling is a reconstruction effect.

5.3.2.1 Case Marking and Scrambling

In general, even though they are often omitted, case markers attach to noun phrases but not clauses in Korean. That is to say, case-marking is necessary only for a nominal, not a clause. Although it is often omitted in the default word order, case-marking is obligatory whenever movement of a nominal takes place. Accordingly, case-marking must be present explicitly in both short DP scrambling in (33) and long DP scrambling in (34):

(33) Short Scrambling of DP

- a. na-nun ecey **sakwa-lul**/ \emptyset mekess-ta
 I-Top yesterday apple-Acc ate-Dec
 ‘Yesterday I ate apples.’
- b. **sakwa-lul**/ \emptyset na-nun ecey **t_i** mekess-ta
 apple-Acc I-Top yesterday ate-Dec
 ‘Apples, I ate yesterday.’

(34) Long Scrambling of DP

- a. John-un [Mary-ka **sakwa-ul/-ø** silhehanta]-ko
 J-Top M-Nom apple-Acc dislike-Comp

sayngkakhana-ta
 think-Dec

‘John thinks that Mary dislikes apples/the apples.’

- b. **sakwa-ul_i/*-ø_i** John-un [Mary-ka **t_i** silhehanta]-ko
 apple-Acc J-Top M-Nom hate-Comp

sayngkakhana-ta
 think-Dec

‘The apples, John thinks that Mary dislikes them.’

In (33)b and (34)b, the scrambled DPs must take case markers. It appears that case-marking for a nominal is optional in *in-situ* position, as in (33)a and (34)a. However, if the nominal undergoes scrambling, it must be explicitly followed by a case marker.

In the same vein, if an embedded clause is embedded within a higher nominal category such as a relative clause construction, then case-marking is necessary for scrambling of the higher DP that includes the embedded clause. In this regard, scrambling of a relative clause or nominalized clause construction must be attached to by a case marker, since the relative clause or the nominalized clause is syntactically present inside the higher nominal projection. In its *in-situ* (or default word order) position, case-marking is optional for either a relative clause construction or a nominalized clause construction, as exemplified in (35)a and (36)a:

(35) Scrambling of Relative Clause

- a. John-i [DP[**Mary-ka** **sa-n**] **chayk**]**(-ul)** ilknunta
 J-Nom M-Nom buy-Rel book-Acc read
 ‘John is reading the book which Mary bought.’
- b. [DP[**Mary-ka** **sa-n**] **chayk**]***(-ul)**_i John-i **t_i** ilknunta
 M-Nom buy-Rel book-Acc J-Nom read
- c. [DP[**Mary-ka** **sa-n**] **chayk**]**-un/man**_i John-i **t_i** ilknunta
 M-Nom buy-Rel book-Top/only J-Nom read

(36) Scrambling of Nominalized Clause

- a. John_i-un [DP **Mary_j-ka** **cip-ul** **sa-ki**]**(-lul)** palanta
 J-Top M-Nom house-Acc buy-Nom-Acc hope
 ‘John wants Mary to buy a house.’
- b. [DP **Mary_j-ka** **cip-ul** **sa-ki**]***(-lul)**_i John_i-i **t_i** pala-n-ta
 M-Nom house-Acc buy-Nom-Acc J-Nom hope
- c. [DP **Mary_j-ka** **cip-ul** **sa-ki**]**-un/man**_i John_i-i **t_i** pala-n-ta
 M-Nom house-Acc buy- Top/only J-Nom hope

In (35)b and (36)b, the scrambled relative and nominalized clause constructions are ungrammatical without any explicit case-marking, since scrambling always occurs with explicit case-marking on the nominal. Another interesting property that cannot be overlooked in the above examples is that either the topic marker *-(n)un* ‘as for’ or the (arguably) focus marker *-man* ‘only’ can be substituted for case markers, as in (35)c and (36)c.⁵⁵ In Korean, it is well known that the topic marker *-(n)un* or the focus marker *-man* can replace case markers, depending on the “information structure” of a sentence. Thus, like DP scrambling, case-marking is obligatory for the

⁵⁵ In fact, it has been suggested by some linguists that Korean case markers can be treated as focus markers (e.g. Yoon 1989). However, since a case marker can co-occur with the focus marker *-man* (e.g. *John-man-ul* ‘John-only-Acc’) this suggestion is implausible. On the other hand, the topic marker *-(n)un* cannot co-occur with a case marker. Put simply, it seems that a topic marker is competing with a case marker for the same morphological position in Korean (cf. Sell 1995).

case-marking. Unlike DP scrambling, no case-marking is necessary for a complement clause (i.e. CP) in the default word order, along the lines of Stowell's (1981:146) "Case Resistance Principle," by which a finite clause in the argument position cannot be assigned case since it bears a case-assigning feature (e.g. tense). If it cannot be assigned case in the default word order, a complement clause does not need to be assigned case in the scrambled position. Thus, scrambling of CP is possible without any overt case-marking.

5.3.2.2 Weak Cross Over and Scrambling

"Weak Cross Over (WCO)" is a syntactic phenomenon by which an object quantifier or *Wh*-phrase cannot move cross over a co-indexed element contained in a structurally higher subject DP that does not c-command its trace, as illustrated in the English example (38):

- (38) a. *Who_i did [his_i mother] love t_i?
 b. *[His_i mother] loves everyone_i.
 (cf. *everyone_i his_i mother love t_i*: Quantifier Raising at LF)

Like English, the WCO effect can be applied to account for the ungrammaticality of

(39)a:

- (39) a. **ku-uy_i* emeni-ka Mary-ka *nwukwu_i-lul* miwuehan-ta]-ko
 he-Gen mother-Nom M-Nom who-Acc hate-Dec-Comp

sayngkakha-ni
 think-Q

(Intended) ‘Who_i did his_i mother think Mary hates?’

- b. *nwukwu_i-lul_k* *ku-uy_i* emeni-ka [Mary-ka *t_k* miwuehan-ta]-ko
 who-Acc he-Gen mother-Nom M-Nom hate-Dec-Comp

sayngkakha-ni
 think-Q

‘Who_i did his_i mother think Mary hates?’

Korean is considered to be a language with covert *Wh*-movement. At LF, the *Wh*-phrase, *nwukwu* ‘who’, crosses over the matrix subject DP containing a co-indexed element *ku-uy* ‘his’, creating a WCO configuration. Thus, if there is covert *Wh*-fronting in (39)a, we can account for the ungrammaticality of the sentence. However, the WCO effect disappears in (39)b where the *Wh*-phrase undergoes scrambling. Put differently, scrambling in (39)b repairs the potential WCO violation. This strongly suggests that scrambling of *Wh*-phrases cannot be regarded as an overt instantiation of *Wh*-fronting because *Wh*-movement is subject to the WCO effect regardless of whether it is conducted either covertly (e.g. Korean) or overtly (e.g. English). Thus, scrambling of *Wh*-phrases out of an embedded clause can create a new grammatical circumstance in a sentence, saving the potential WCO violation.

Unlike DP scrambling, scrambling of embedded clauses does not change the WCO violation of *Wh*-phrases. More specifically, when *Wh*-phrases are scrambled together with the clauses that they are embedded in, the WCO effects cannot be

repaired for them, as shown in the following examples:

(40) Scrambling of Complement Clause

- a. **ku-uy_i* emeni-ka [Mary-ka *nwukwu_i-lul* miwuehan-ta]-ko
 he-Gen mother-Nom M-Nom who-Acc hate-Dec-Comp

sayngkakha-ni
 think-Q

(Intended): ‘Who_i did his_i mother think Mary hates?’

- b. ***[Mary-ka *nwukwu_i-lul* miwuehan-ta]-ko_k** *ku-uy_i* emeni-ka **t_k**
 M-Nom who-Acc hate-Dec-Comp he-Gen mother-Nom

sayngkakha-ni
 think-Q

In (40)b, scrambling of a complement clause cannot fix the WCO violation of the *Wh*-phrase embedding in the complement clause. Compared with (39)b, CP scrambling in (40)b does not trigger any new grammatical change with regard to the WCO violation. This is also true in the other CP scrambling examples such as (41)b and (42)b, where CP scrambling does not save the WCO violation of *Wh*-phrases appearing in the embedded clauses:

(41) Scrambling of Relative Clause

- a. **ku_i-uy* emeni-ka [[*nwukwu_i-ka sa-n*]_{RC} chayk]-ul ilkess-ni
 he-Gen mother-Nom who-Nom buy-Rel book-Acc read-Q
 (Intended) ‘Who_i did his_i mother read the book that (he_i) bought?’

- b. ***[[*nwukwu_i-ka sa-n*]_{RC} chayk]-ul_k** *ku_i-uy* emeni-ka **t_k**
 who-Nom buy-Rel book-Acc he-Gen mother-Nom

ilkess-ni
 read-Q

(42) Scrambling of Nominalized Clause

a. **ku_i-uy* emeni-ka [[*nwukwu_i-ka* *cip-ey* ka]-ki]-lul wuenha-ni
 he-Gen mother-Nom who-Nom house-Loc go-Nml-Acc want-Q
 (Intended) ‘Who_i does his_i mother want to go home?’

b. *[[*nwukwu_i-ka* *cip-ey* **ka]-ki]-lul_k** *ku_i-uy* emeni-ka **t_k**
 who-Nom house-Loc go-Nml-Acc he-Gen mother-Nom
 ‘Who_i does his_i mother want to go home?’

wuenha-ni
 want-Q

In (41)b and (42)b, neither the scrambled relative clause construction nor the scrambled nominalized clause construction can repair the WCO violation of the *Wh*-phrases inside them. Simply put, *Wh*-phrases cannot avoid a WCO violation if they are scrambled together with the embedded clauses where they are included. Thus, CP scrambling such as scrambling of a complement clause, a relative clause, or a nominalized clause differs from DP scrambling in that it cannot fix a WCO violation of the *Wh*-phrases within a scrambled embedded clause. In other words, CP scrambling is syntactically “undone” in terms of the WCO effects of *Wh*-phrases. Thus, a CP scrambled sentence is not syntactically different from a default word order sentence.

On the other hand, with respect to scrambling of a relative clause, there is an important property that we must not overlook. As we have seen in 4.2.2, a relative clause cannot undergo scrambling without its external head nominal. That is to say, the external head of a relative clause cannot be stranded when scrambling of the relative clause occurs. A question arises here. If an external head of a relative clause

is a *Wh*-phrase, is it sensitive to a WCO effect when it is *pied-piped* together with scrambling of the relative clause? To answer this question, compare the following (43)b with the previous (41)b:

(43) Scrambling of the External Head of Relative Clauses

a. **ku-uy_i* emeni-ka [[Mary-ka po-n]_{RC} *nwukwu_i*]-ul coaha-ni
 he-Gen mother-Nom M-Nom see-Rel who-Acc like-Q
 (Intended) ‘Who_i that Mary saw does his_i mother like?’

b. [[**Mary-ka po-n**]_{RC} ***nwukwu_i***]-ul_k *ku-uy_i* emeni-ka t_k
 M-Nom see-Rel who-Acc he-Gen mother-Nom

coaha-ni
 like-Q

‘Who_i that Mary saw does his_i mother like?’

Note that the *Wh*-phrase *nwukwu* ‘who’ in (43)b is external to the relative clause and that the scrambled *Wh*-phrase can avoid the potential WCO violation, as does DP scrambling. The externally headed *Wh* phrase in (43)b is distinct from the relative clause-embedded *Wh*-phrase in (41)b in that only the latter is sensitive to a WCO effect. In other words, only *Wh*-phrases inside a relative clause are undone with respect to the WCO effects when CP scrambling occurs. In contrast, since it appears outside the relative clause, scrambling of the external head of a relative clause must be treated as DP scrambling.

In sum, DP scrambling is different from CP scrambling in that only the former can repair the WCO violation of *Wh*-phrases. Scrambled CPs are not syntactically different from their *in-situ* CP versions.

5.3.2.3 Binding Relation and Scrambling

In Korean, DP scrambling often creates a new binding relation between an anaphor and its antecedent (cf. Park 1994), but an anaphor in a scrambled embedded clause (i.e. a complement clause) does not trigger any new binding relation, as illustrated in (44)b and (44)c, respectively:

- (44) a. *John_i-un* [*Mary_j-ka* *casin_{i/j}-ul* *miwuehanta*]-*ko* *sayngkakhanta*
 J-Top M-Nom self-Acc hate-Comp think
 ‘John_i thinks that Mary_j hates him_i/herself_j.’
- b. *casin_{i/*j}-ul_k* *John_i-un* [*Mary_j-ka* *t_k* *miwuehanta*]-*ko* *sayngkakhanta*
 self-Acc J-Top M-Nom hate-Comp think
 ‘John_i thinks that Mary_j hates him_i/*herself_j.’
- c. [*Mary_j-ka* *casin_{i/j}-ul* *miwuehanta*]-*ko_k* *John_i-un* *t_k*
 M-Nom self-Acc hate-Comp J-Top

sayngkakhanta
 think
 ‘John_i thinks that Mary_j hates him_i/herself_j.’

In (44)a, the anaphor *casin* ‘self’ in the complement clause can be bound with either the matrix subject *John* or the embedded subject *Mary*, depending on the context. In the DP scrambling example (44)b, however, the scrambled anaphor refers to the subject of the matrix clause (i.e. *John*), not the subject of the embedded clause (i.e. *Mary*). Like the non-scrambled example (44)a, the anaphor in (44)c, a CP scrambling example, is semantically ambiguous as long as it is contained in the scrambled complement clause. In terms of anaphor binding, CP scrambling is different from DP scrambling in that it cannot trigger any new binding relation of anaphors. Similarly,

while scrambling of anaphors from a relative clause can trigger a new binding relation, anaphors in the scrambled relative cannot trigger a new binding relation after scrambling is done, as illustrated in (45)b:

(45) Scrambling of Relative Clause

- a. *John*_i-i [[*casin*_i-i sa-n]_{RC} chayk]-ul ilknunta
 J-Nom self-Nom buy-Rel book-Acc read
 ‘John_i is reading the book which he_i bought.’
- b. [[*casin*_i-i sa-n]_{RC} **chayk**]-ul_k *John*_i-i **t**_k ilknunta
 self-Nom buy-Rel book-Acc J-Nom read

In (45)a and (45)b, the binding relation between the anaphor *casin* ‘self’ and its antecedent *John* is the same, regardless of CP scrambling. Interestingly, without violating the binding principle, the anaphor in the scrambled relative clause (45)b can be bound even though it appears in the surface position higher than its antecedent. That is to say, CP scrambling in (45)b is syntactically undone in terms of anaphor binding.⁵⁶ Likewise, scrambling of a nominalized clause does not trigger a new

⁵⁶ Unlike a complement clause or a nominalized clause, a relative clause is very restricted in terms of scrambling. For instance, no DP can be extracted from a head-external relative clause, as follows:

- (i) a. John-i [[Mary-ka sa-n]_{RC} chayk]-ul ilk-nun-ta
 J-Nom M-Nom buy-Rel book-Acc read-Pres-Dec
 ‘John is reading the book which Mary bought.’
- b. ***Mary-ka**_i John-i [[**t**_i sa-n] chayk]-ul ilk-nun-ta
 M-Nom J-Nom buy-Rel book-Acc read-Pres-Dec
- c. ***chayk-ul**_i John-i [[Mary-ka san] **t**_i] ilk-nun-ta
 book-Acc J-Nom M-Nom buy-Rel read-Pres-Dec
- d. ***[Mary-ka sa-n]**_i John-i [**t**_i chayk]-ul ilk-nun-ta
 M-Nom buy-Rel J-Nom book-Acc read-Pres-Dec

binding relation of anaphors. To compare CP scrambling with DP scrambling, see (46)b and (46)c:

(46) a. *John_i-un* [*Mary_j-ka cacini_j-uy cip-ul sa-ki (-lul)*] *palanta*
 J-Top M-Nom self-Gen house-Acc buy-Nom-Acc hope
 ‘John_i hopes that Mary_j buy his_i/her_j house.’

b. *casin_{i/*j}-uy* *cip-ul_k* *John_i-un* [*Mary_j-ka t_k* *sa-ki (-lul)*]
 Self-Gen house-ul J-Top M-Nom buy-Nom (-Acc)

palanta
 hope

c. [*Mary_j-ka casin_{i/j}-uy cip-ul sa-ki-lul*]_k *John_i-un t_k*
 M-Nom Self-Gen house-Acc buy-Nml-Acc M-Nom

palanta
 hope

The anaphor *casin* ‘self’ in the nominalized clause (46)a is semantically ambiguous, and hence it can be bound by either the matrix subject *John* or the embedded subject *Mary*. However, scrambling of the anaphor from the nominalized clause (46)b creates a new binding relation in that the anaphor is not ambiguous anymore but must be bound by the matrix subject antecedent, *John*. On the other hand, in the scrambled nominalized clause (46)c, the binding relation between the anaphor and its antecedent is basically identical with that of the default word order example (46)a. This strongly implies that CP scrambling is different from DP scrambling in that only the latter can change binding relations. Thus, in terms of anaphor binding, CP scrambling appears

As in the above examples, neither an element from a relative clause nor an external head of a relative clause can be scrambled at all. Furthermore, as in (i)d, a relative clause cannot be scrambled without its external head.

to be undone; namely, a scrambled embedded clause must be reconstructed to its default word order position.

5.3.2.4 Specificity and Scrambling

According to Son (2001), Korean *Wh*-phrases, a subclass of indefinite DPs, can be interpreted as either “specific” or “non-specific,” depending on the context, as in (47)a. However, a specific reading is preferred for the scrambled *Wh*-phrases, as demonstrated in (47)b:

- (47) a. John-un [Mary-ka *nwukwu*-lul miwueha-nya]-ko mwulessta
 J-Top M-Nom who-Acc hate-Q-Comp asked
 (i) ‘John asked who Mary hates.’ (non-specific ‘who’)
 (ii) ‘John asked who (among them) Mary hated.’ (specific ‘who’)
- b. *nwukwu*-lul_k John_i-un [Mary-ka t_k miwueha-nya]-ko mwulessta
 who-Acc J-Top M-Nom hate-Q-Comp asked
 (i)?? ‘John asked who Mary hates.’ (non-specific ‘who’)
 (ii) ‘John asked who (among them) Mary hated.’ (specific ‘who’)

The specific interpretation of the *Wh*-phrase, *nwukwu* ‘who’, refers to a certain set of persons, which is already established in the speaker’s mind. For example, let us imagine the situation that John is talking with Mary about their three classmates, Bill, Mark, and Luke. John knows that Mary hates one of them, but he is not sure exactly whom Mary hates among them. At some point, John says to Mary, “Whom do you hate?” In this *Wh*-question, the *Wh*-phrase, *who*, must be interpreted as “specific” in the sense that the sets of specific persons (e.g. Bill, Mark, and Luke) is already

determined between John and Mary. In replying to John's question, Mary's answer must be narrowed down to one of the three specific persons. Simply put, a specific reading of *Wh*-phrases (or indefinite DPs) presupposes that there is a certain set of entries already introduced in the speaker's mind. Son (2001) claims that as in (47)a, *Wh*-phrases in the default word order can have a specific or non-specific reading in Korean. However, as in (47)b, a specific reading of them is definitely preferred in the scrambled positions.

Now let us examine the reading of *Wh*-phrases in scrambled embedded clauses. The following examples show that *Wh*-phrases in scrambled clauses can be interpreted as specific or non-specific:

(48) a. *In-situ* Complement Clause

John-un	[	Mary-ka	<i>nwukwu-ul</i>	<i>miwueha-nya</i>]-ko	<i>mwulessta</i>
J-Top		M-Nom	who-Acc	hate-Q-Comp	asked

- (i) 'John asked who Mary hates.' (non-specific 'who')
- (ii) 'John asked who (among them) Mary hated.' (specific 'who')

b. Scrambled Complement Clause

[Mary-ka	<i>nwukwu-ul</i>	<i>miwueha-nya</i>]-ko _k	John-un	t_k	<i>mwulessta</i>
M-Nom	who-Acc	hate-Q-Comp	J-Top		asked

- (i) 'John asked who Mary hates.' (non-specific 'who')
- (ii) 'John asked who (among them) Mary hated.' (specific 'who')

The reading of *Wh*-phrases in (48)b is different from the reading in (47)b in that only the *Wh*-phrase in the scrambled complement clause is semantically ambiguous. The scrambled *Wh*-phrase in (47)b is usually interpreted as specific. In terms of specificity, there is no difference between *in-situ* and CP scrambled *Wh*-phrases. This is also

observed in the other CP scrambling examples. For example, *Wh*-phrases in a relative clause can be interpreted as either specific or non-specific regardless of scrambling, as shown in (49):

(49) a. *In-situ* Relative Clause

John-i [[*nwukwu-ka sa-n*]_{RC} chayk]-ul ilkess-ni
 J-Nom who-Nom buy-Rel book-Acc read-Q

- (i) ‘Who_i did John read the book that (he_i) bought?’ (non-specific ‘who’)
 (ii) ‘Who_i (among them) did John read the book that (he_i) bought?’
 (specific ‘who’)

b. Scrambled Relative Clause

[*nwukwu-ka sa-n*]_{RC} **chayk**]-ul_k John-i t_k ilkess-ni
 Who-Nom buy-Rel book-Acc J-Nom read-Q

- (i) ‘Who_i did John read the book that (he_i) bought?’ (non-specific ‘who’)
 (ii) ‘Who_i (among them) did John read the book that (he_i) bought?’
 (specific ‘who’)

This ambiguity is also found in the *Wh*-phrases in the scrambled nominalized clause, as shown in (50)b:

(50) a. *In-situ* Nominalized Clause

John-un [Mary-ka *nwukwu-uy* cip-ey ka-ki]-ul pala-ni
 J-Top M-Nom who-Gen house-Loc go-Nml-Acc hope-Q

- (i) ‘Whose house does John hope that Mary goes to?’ (non-specific ‘who’)
 (ii) ‘Whose house_i (among them) does John hope that Mary goes to?’
 (specific ‘who’)

b. Scrambled Nominalized Clause

[Mary-ka *nwukwu-uy* *cip-ey* **ka-ki**]-*lul*_k John-un *t*_k
 M-Nom who-Gen house-Loc go-Nml-Acc J-Top

pala-ni
 hope-Q

- (i) ‘Whose house does John hope that Mary goes to?’ (non-specific ‘who’)
 (ii) ‘Whose house_i (among them) does John hope that Mary goes to?’
 (specific ‘who’)

In (50), scrambling of the nominalized clause does not make any difference to the interpretation of the *Wh*-phrase, *nwukwu* ‘who’, in terms of specificity. In other words, the specificity of the *Wh*-phrase in the scrambled example (50)b seems to be semantically undone compared with the *in-situ* example (50)a. Thus, unless they are scrambled out of an embedded clause, *Wh*-phrases must be interpreted as either specific or non-specific, regardless of scrambling of the embedded clauses. This indicates that CP scrambling is different from DP scrambling in that only the latter can trigger a new interpretation in terms of specificity. The scrambled embedded clauses must be reconstructed to their *in-situ* positions for the interpretation of *Wh*-phrases in them.

5.3.2.5 NPI Licensing and Scrambling

Another test that we can use for the reconstruction effects of scrambled embedded clauses is NPI licensing. An NPI (or negative polarity item) refers to an expression that must co-occur with a negative expression in the same clause. In Korean, NPIs (e.g. *amwuto* ‘anyone’ or *amwukesto* ‘anything’) must have a negative

expression in the same clausal domain (Sohn 1995), as illustrated in (51)a:

- (51) a. *Mary-nun [*amwuto* John-ul miwuehan-ta]-ko sayngkakha-ci
 M-Top anybody J-Acc hate-Dec-Comp think-CI
 anhnun-ta⁵⁷
 Neg-Dec

(Intended) ‘Mary does not think that somebody hates John.’

- b. **amwuto*_i Mary-nun [*t*_i John-ul miwuehan-ta]-ko sayngkakhaci
 anybody M-Top J-Acc hate-Dec-Comp think-CI
 anhnun-ta⁵⁸
 Neg-Dec

(Intended) ‘Mary does not think that somebody hates John.’

In (51)a, the NPI *amwuto* ‘anybody’ cannot be licensed by a negation because the negation and the NPI do not appear in the same clause. Furthermore, the NPI cannot be licensed in (51)b even though it co-occurs with the negation in the same clause. This strongly suggests that an NPI must be licensed *in situ*, not in the scrambled position. In support of this suggestion, examine the following examples:

⁵⁷ In English, NPIs cannot occur in the subject position (e.g. **Anybody does not like John.*). Unlike English, as in (51)a, NPIs can appear in the subject position of a clause in Korean (Sohn 1995).

⁵⁸ Son (2001) claims that the sentence (51)b is acceptable because it can be licensed by the negation in the matrix clause, and thus scrambling can repair the NPI licensing. However, against him, I assume that (51)b is not acceptable, because the NPI must be licensed *in situ*, not in the scrambled (or surface) position. Instead, if the NPI is replaced by the free choice item (i.e. FCI) *nwukwuto* ‘whoever’, then (51)b becomes totally acceptable, as follows:

- (i) a. Mary-nun [*nwukwuto* John-ul miwuehanta]-ko sayngkakha-ci anhnun-ta
 M-Top whoever J-Acc hate-Comp think-CI Neg-Dec
 ‘Mary does not think that somebody hates John.’
 b. *nwukwuto*_i Mary-nun [*t*_i John-ul miwuehanta]-ko sayngkakha-ci anhnun-ta
 whoever M-Top J-Acc hate-not-Comp think-CI Neg-Dec
 ‘Mary does not think that somebody hates John.’

- (52) a. Mary-nun [amwuto John-ul miwueha-ci-anhnun-ta]-ko
 M-Top anybody J-Acc hate-CI-Neg-Dec-Comp

sayngkakhanta
 think

‘Mary thinks that nobody hates John.’

- b. ?*amwuto*_k Mary-nun [t_k John-ul miwueha-ci-anhnun-ta]-ko
 anybody M-Top J-Acc hate-CI-Neg-Dec-Comp

sayngkakhanta
 think

‘Mary thinks that nobody does not hate John.’ (cf. Sohn 1995:151)

Sentence (52)b is acceptable even though the scrambled NPI does not occur with the negation in the same clause. Shown the assumption that NPIs must be licensed by a negation in the same clausal domain, the scrambled NPI in (52)b must be reconstructed to its *in-situ* position in order to be licensed by the negation in the embedded clause. In other words, scrambling of NPIs cannot repair the (un)acceptability of a sentence.

Like scrambling of NPIs, scrambling of embedded clauses does not have any grammatical impact on the NPI licensing in the embedded clause because it cannot fix the NPI licensing. That is, the (un)grammaticality of a sentence is solely determined by whether or not NPIs can be licensed in the embedded clause before scrambling occurs. Note that since NPIs are licensed in the embedded clauses by a negation, the following sentences are all grammatical regardless of scrambling:

- (53) a. *In-situ* Complement Clause
 Mary-nun [*amwuto* John-ul miwueha-ci-*anhnun-ta*]-ko
 M-Top anybody J-Acc hate-CI-Neg-Dec-Comp

 sayngkakhanta
 think

 ‘Mary thinks that nobody hates John.’
- b. Scrambled Complement Clause
 [*amwuto* **John-ul** **miwueha-ci-*anhnun-ta***]-ko_i Mary-nun **t_k**
 anybody J-Acc hate-CI-Neg-Dec-Comp M-Top

 sayngkakhanta
 think

 ‘Mary thinks that nobody hates John.’

In (53), the NPI *amwuto* ‘anybody’ can be licensed by a negation as long as it remains in the complement clause, regardless of CP scrambling. This property of NPIs is also observed in the relative clause pair examples in (54):

- (54) a. *In-situ* Relative Clause
 John-i [[*amwuto* sa-ci-*anh-un*]_{RC} chayk]-ul sassta
 J-Nom anybody buy-CI-Neg-Rel book-Acc bought
 ‘John bought the book which nobody bought.’
- b. Scrambled Relative Clause
 [[*amwuto* **sa-ci-*anh-un***]_{RC} **chayk**]-ul_i John-i **t_i** sassta
 anybody buy-CI-Neg-Rel book-Acc J-Nom bought
 ‘John bought the book which nobody bought.’

In the above CP scrambling examples (e.g. (53)b and (54)b), there are no problems with licensing the NPIs because they are all licensed by a negation in the embedded clauses. In contrast, the following CP scrambling examples are all ungrammatical because the NPIs are not licensed by a negation in the same embedded clauses:

(55) a. Scrambled Relative Clause

*[[**amwuto sa-n**]_{RC} **chayk**]-ul_i John-i t_i sa-ci *anhnun-ta*
 anybody buy-Rel book-Acc J-Nom buy-CI Neg-Dec
 (Intended) ‘John does not buy the book that anybody bought.’

b. Scrambled Complement Clause

*[**amwuto John-ul miwuehan-ta**]-ko_i Mary-nun t_i sayngkakha-ci
 anybody J-Acc hate-Dec-Comp M-Top think-CI

anhnun-ta
 Neg-Dec

(Intended) ‘Mary does not think that anybody hates John.’

Since the NPIs are not licensed in the embedded clauses, the sentences in (55) are both ungrammatical regardless of CP scrambling. Thus, neither scrambling of NPIs nor scrambling of embedded clauses shows any effects on the NPI licensing. In other words, the NPI licensing is irrelevant to scrambling, but it must happen *in situ*.

On the other hand, there is a special case in which scrambling can fix the ungrammaticality of a sentence with respect to the NPI licensing. According to Beck & Kim (1997), Korean NPI licensing is restricted by an “intervention effect,” by which a quantificational expression cannot intervene between NPIs and negation in the surface word order. Note that intervention effects apply only for surface representations; that is, it is a surface word order condition. In Korean, intervention effects can be often fixed by scrambling of quantificational expressions, as illustrated in (56):

(56) a. Scrambled Complement Clause

*Mary-nun [amwuto **nwukwu-lul** miwueha-ci *anh-nya*]-ko
 M-Top anybody who-Acc hate-CI Neg-Q-Comp

mwulessta
 asked

(Intended) ‘Mary asked who nobody hates.’

b. Scrambled NPI

nwukwu-lul_i Mary-nun [amwuto **t_i** miwueha-ci *anh-nya*]-ko
 who-Acc M-Top anybody hate-CI Neg-Q-Comp

mwulessta
 asked

‘Mary asked who nobody hates.’

c. Scrambled Complement Clause

*[amwuto **nwukwu-lul** **miwueha-ci** *anhnun-nya*]-ko_i Mary-nun **t_i**
 anybodywho-Acc hate-CI Neg-Q-Comp M-Top

mwulessta
 asked

In (56)a and (56)c, the intervention effect prevents the *Wh*-phrase *nwukwu* ‘who’ from appearing between the NPI and the negation in the embedded clause. However, in (56)b, scrambling of the *Wh*-phrase can allow the NPI to avoid the intervention effect with the negation. That is, scrambling of *Wh*-phrases can repair the intervention effects. In contrast, a scrambled NPI can trigger an intervention effect if it moves cross over another quantifier expression, as demonstrated in (57)b:

(57) Scrambling of Nominalized Clause

- a. *manhun salam-i* [Mary-ka *amwuto* coaha-ci *anh-ki*]-lul
 many people-Nom M-Nom anybody like-CI Neg-Nom-Acc

palanta
 hope

‘Many people hope that Mary does not like anyone.’

- b. **amwuto*_i *manhun salam-i* [Mary-ka *t*_i coaha-ci *anh-ki(-lul)*]
 anybody many people-Nom M-Nom like-CI Neg-Nml-Acc

palanta
 hope

(Intended) ‘Many people hope that Mary does not like anyone.’

- c. [**Mary-ka** *amwuto* **coaha-ci** **anh-ki(-lul)**]_i *manhun salam-i* *t*_i
 M-Nom anybody like-CI Neg-Nom-Acc many people-Nom

palanta
 hope

‘Many people hope that Mary does not like anyone.’

In (57)b, scrambling of the NPI causes the intervention effect, since the NPI becomes separated from the negation by the matrix quantificational subject, *manhun salam* ‘many people’. That is, scrambling of NPIs causes a quantificational expression to intervene between an NPI and a negation. In (57)c, however, scrambling of the nominalized clause does not trigger any intervention effects on the NPI, because the negation is still in the same clause.

The examples in (56) and (57) shed light on the nature of DP scrambling and CP scrambling. As in (56)b and (57)b, DP (i.e. a *Wh*-phrase) scrambling is not always regarded as “vacuous” movement in that it can change the (un)grammaticality of a

sentence. Furthermore, a reading of scrambled DPs differs from that of *in situ* DPs. In this regard, the scrambled DP cannot be reconstructed to its *in situ* position. However, as in (56)c and (57)c, CP (i.e. a complement or nominalized clause) scrambling must be treated as “undone” movement since the syntactic and semantic properties of a sentence are not affected at all by scrambling. In other words, CP scrambling can neither change an interpretation nor repair (un)grammaticality of a sentence, and thus it is a purely optional movement. After all, CP scrambling always shows strong reconstruction effects. But DP scrambling often creates a new grammatical relation between a scrambled DP and an *in situ* DP, and thus it seems to resist reconstruction effects.

5.3.2.6 Quantifier Scope and Scrambling

In generative grammar, it has been generally assumed that the scope of quantifiers (or quantificational expressions) in a sentence is determined at a semantic-level representation (or LF) via movement (e.g. quantifier raising or *Wh*-movement) (Aoun & Li 1993). Also, it is well-known that in Korean and Japanese, the surface order of the non-scrambled quantifiers usually represents their scope relation; namely, a scope relation is determined by the surface c-command relation (Kuno 1973; Hoji 1985; Beck & Kim 1997). However, scrambling of a quantifier (or a quantificational expression) can create a new scope relation with other quantifiers (or *Wh*-phrases):

- (58) a. *nwukwunka-ka* *nwukwuna-lul* *coahan-ta*
 someone-Nom everyone-Acc like-Dec
 ‘Someone likes everyone.’ (some > every, *every > some)

- b. *nwukwuna-lul_i* *nwukwunka-ka* *t_i* *coahan-ta*
 everyone-Acc someone-Nom like-Dec
 ‘Someone likes everyone.’ (some > every, every > some)

In (58)a, the existential quantifier *nwukwunka* ‘someone’ c-commands the universal quantifier *nwukwuna* ‘everyone’, and hence the former scopes over the latter. But scrambling adds a new scope relation, as in (58)b. The preferred reading of (58)b is the wide scope reading of the universal quantifier.

On the other hand, unlike short scrambling, long (distance) scrambling of quantifiers does not appear to lead to new scope relations (Saito 1992). The scope relation between two quantifiers may not be changed even after scrambling happens, as exemplified in (59):

- (59) a. *nwukwunka-ka* [*John-i* *nwukwuna-lul* *miwuehanta*]-*ko*
 someone-Nom J-Nom everyone-Acc hate-Comp

sayngkakhanta
 think

 (i) ‘Someone thinks that John hates everyone.’ ($\exists > \forall$)
 (ii)*‘For everyone_i, someone thinks that John hates him_i.’ ($\forall > \exists$)
- b. *nwukwuna-lul_i* *nwukwunka-ka* [*John-i* *t_i* *miwuehanta*]-*ko*
 everyone-Acc someone-Nom J-Nom hate-Comp

sayngkakhanta
 think

 (i) ‘Someone thinks that John hates everyone.’ ($\exists > \forall$)
 (ii)*‘For everyone_i, someone thinks that John hates him_i.’ ($\forall > \exists$)

The scrambled universal quantifier in (59)b obligatorily scopes below the existential

quantifier in the matrix clause. Saito's (1989, 1992) well-known explanation for this phenomenon is that the long scrambled quantifier must be "radically" reconstructed to its *in situ* position for the interpretation of the quantifier. In his account, long scrambling of quantifiers or *Wh*-phrases is "semantically undone," and hence it is regarded as a "vacuous" movement. However, this claim seems to be too strong. For example, Miyagawa (2001, 2005) argues that long scrambling of quantifiers may or may not be reconstructed under certain conditions. Although not previously noted in the literature, the long scrambled quantifier can have a new scope relation, as shown in (60):

- (60) a. *nwukwunka-ka* [nwukwu-ka *motwun chayk-ul* ilkess-nun]-ci
 someone-Nom who-Nom every book-Acc read-Adn-CI
 alki-wenhanta
 want.to.know
 (i) 'Someone wants to know who read every book.' $(\exists > \forall)$
 (ii)*'For every book_i, someone wants to know who read it_i.' $(\forall > \exists)$
- b. *motwun chayk-ul*₁ *nwukwunka-ka*[nwukwu-ka **t_i** ilkess-nun]-ci
 every book-Acc someone-Nom who-Nom read-Adn-CI
 alki-wenhanta
 want.to.know
 (i) 'Someone wants to know who read every book.' $(\exists > \forall)$
 (ii) 'For every book_i, someone wants to know who read it_i.' $(\forall > \exists)$

Sentence (60)b is apparently a counterexample against Saito's reconstruction approach since the long scrambled quantifier expression *motwun chayk-ul* 'every book-Acc' can scope over the matrix subject existential quantifier *nwukwunka-ka*

‘someone-Nom’. The scrambled quantificational expression need not be reconstructed to its *in-situ* position in the second reading of (60)b. According to Miyagawa, scrambled quantifiers need not be reconstructed when they are scrambled out of the embedded clause that contains another quantifier (or *Wh*-phrase). As in (60)b, the scrambled quantifier can have a new scope relation with the subject (i.e. an existential quantifier) of the matrix clause only when it crosses over the *Wh*-phrase in the embedded clause. In this analysis, whether an embedded clause has multiple quantifiers or not is very important. However, this requirement appears not to be a necessary condition. That is, there is a certain case in which the scrambled quantifier can produce a new scope relation in the matrix clause even though there are no other quantifiers (or quantificational expressions) in the embedded clause. For example, let us examine the following instantiation of long scrambling:

(61) a. *manhun salam-i* [*Mary-ka* *nwukwunka-ul* *miwueha-ki*]-lul
 many people-Nom M-Nom someone hate-Nml-Acc

palanta
 hope

(i) ‘Many people hope that Mary hates someone.’ (many > \exists)

(ii)* ‘There is someone_i such that many people hope that Mary hates him_i.’
 (\exists > many)

- b. *nwukwunka-ul_i* *manhun salam-i* [*Mary-ka* **t_i** *miwueha-ki*]-lul
 someone many people-Nom M-Nom hate-Nml-Acc

*palanta*⁵⁹
 hope

- (i) ‘Many people hope that Mary hates someone.’ (many > \exists)
 (ii)? ‘There is someone_i such that many people hope that Mary hates him_i.’
 (\exists > many)

In (61)b, the scrambled existential quantifier *nwukwunka* ‘someone’ can scope over the matrix subject *manhun salam-i* ‘many people-Nom’, even if it moves out of the embedded clause which has no other quantifier or *Wh*-phrase. Perhaps this is due to the generalized assumption that an existential quantifier may have a semantic interpretation wider than actual syntactic scope, while a universal quantifier cannot (Foder & Sag 1982; Fox & Sauerland 1995; Sohn 1995; Kratzer 1997). That is to say, an existential quantifier shows a “scope illusion” by which the semantic effects of a quantifier can exceed its syntactic scope domain (e.g. clausal boundary). At any rate, long scrambling of quantifiers (*Wh*-phrases or quantificational expressions) may or may not create a new scope relation in the matrix clause, depending on the specific condition in the embedded clause or the specific properties of quantifiers.

Compared with DP scrambling, clausal scrambling can never create any new scope relation since quantifiers of an embedded clause do not get out of the clause. Accordingly, in terms of the scope relations of quantifiers, the scrambled sentences are unequivocally semantically identical to the default word-ordered sentences, as

⁵⁹ Sohn (1995:188) assumes that a sentence such as (61)b has only one reading, namely, the wide scope reading of the existential quantifier (e.g. \exists > many). However, I assume here that the other reading is possible for (61)b.

demonstrated in (62):

(62) CP scrambling

- a. [**John-i** *nwukwuna-lul* **miwuehanta**]-**ko**_i *nwukwunka-ka* **t**_i
 J-Nom everyone-Acc hate-Comp someone-Nom

sayngkakhanta
 think

- (i) ‘Someone thinks that John hates everyone.’ (∃ > ∀)
 (ii)* ‘For everyone_i, someone thinks that John hates him_i.’ (∀ > ∃)

- b. [**nwukwu-ka** *motwun chayk-ul* **ilkess-nun**]-**ci**_i *nwukwunka-ka* **t**_i
 who-Nom every book-Acc read-Adn-CI someone-Nom

alki-wenhanta
 want.to.know

- (i) ‘Someone wants to know who read every book.’ (∃ > ∀)
 (ii)* ‘For every book_i, someone wants to know who read it_i.’ (∀ > ∃)

- c. [**Mary-ka** *nwukwunka-ul* **miwueha-ki**]-**lul**_i *manhun salam-i* **t**_i
 M-Nom someone hate-Nml(-Acc) many people-Nom

palanta
 hope

- (i) ‘Many people hope that Mary hates someone.’ (many > ∃)
 (ii)* ‘There is someone_i such that many people hope that Mary hates him_i.’
 (∃ > many)

In (62), none of the quantifiers in the scrambled embedded clauses (e.g. the clausal complement (62)a, the *ci*-complementizer clause (62), and the nominalized clause in (62)c) are affected by any semantic effects of a scope. That is, the quantifiers inside the scrambled embedded clauses cannot take a wide scope over the subject quantifiers (or quantificational expressions) in the matrix clause. This is also identical to our

prediction that for interpretation, the scrambled embedded clause must be reconstructed to its *in situ*.

5.3.2.7 Summary

So far, we have discussed the general syntactic and semantic properties of DP scrambling and clausal scrambling in Korean. It has been argued that the former is distinct from the latter in various syntactic/semantic aspects. For example, DP scrambling may or may not trigger a new grammatical relation, while clausal scrambling does not, as summarized in table 5.3:

(63) Table 5.3 DP vs. CP Scrambling

syntactic/semantic effects	DP scrambling	CP scrambling
saves a WCO violation	Yes	No
creates a new binding relation	Yes	No
changes a reading of specificity	Yes	No
triggers an NPI licensing problem	Yes	No
create a new quantifier scope	Yes or No	No

As in the above table, a DP extracted from an embedded clause tends to produce a new grammatical relation in relation to other elements in a sentence. However, a scrambled embedded clause does not bring about any syntactic or semantic effects. In the sense of Saito's (1989) definition, scrambling of embedded clause is an "optional" (or semantically "undone") movement. After all, the most salient property of Korean clausal scrambling is that scrambled embedded clauses must be 'radically' reconstructed in every grammatical respect.

5.3.3 Two Hypotheses: PF-movement and Anti-focus Movement

In this section, I present two famous hypotheses (i.e. the *PF-movement* and *anti-focus* hypotheses) in the literature in analyzing CP scrambling, which is grammatically different from DP scrambling. These two hypotheses can theoretically account for the reconstruction effect of Korean CP scrambling.

In the last section, I argued that while DP scrambling often triggers various grammatical changes in a sentence, clausal scrambling never creates any new grammatical relations. Theoretically, this implies that CP scrambling is not a feature (e.g. EPP)-driven syntactic movement such as *Wh*-movement, since it does not show any syntactic/semantic effects, and thus here I will not pursue the possibility that CP scrambling is a movement operated by a feature in the core syntax.⁶⁰ Instead, in analyzing CP scrambling, here I introduce two “non-EPP-driven” alternative hypotheses: the optional PF-movement hypothesis (Saito 1989, 1992; Zubizarreta 1998; Aoun & Benmamoun 1998; Sauerland & Elbourne 2002; Sabel 2005; etc.) and the discourse-oriented movement hypothesis (Neeleman & Reinhart 1998; Abraham & Molnarfi 2002). Both of these hypotheses are based on the assumption that CP scrambling is not a syntactic operation required by a formal morphological feature, but that it is regarded as a pure PF or discourse-oriented stylistic movement. In this

⁶⁰ Unlike CP scrambling, in the literature DP scrambling is often proposed as a morphology or syntactic feature-driven movement. In particular, there are two well-known approaches to DP scrambling: a EPP-driven movement vs. a topic or focus feature-driven movement. That is to say, in the first approach, DP scrambling is treated as an EPP feature-checking movement triggered by EPP (Miyagawa 1997; 2005; Bailyn 2003; etc.), while in the second approach, it is treated as a topic or focus feature-checking movement operated in the core syntax (Rizzi 1997; Karimi 2003; É Kiss 2003, etc.). Otherwise, DP scrambling is assumed to be a “purely stylistic (optional)” PF-movement in the second approach (Saito 1989, 1992, 2005, etc.), which is not based on the feature-driven movement in the core syntax.

section, I argue that the radical reconstruction effect of CP scrambling can be best explained by the PF-movement hypothesis, which is a direct consequence of focal stress assignment influenced by the discourse conditions of a sentence.

5.3.3.1 The PF-Movement Hypothesis

In this subsection, I show how the PF-movement hypothesis can account for the optionality of CP scrambling (e.g. reconstruction effects).

In the current Minimalist Program (Chomsky 1995, 2001a, b), it is assumed that there are two interface systems in the computational system of human language: LF (or the “conceptual-intentional”) and PF (or the “articulatory-perceptual”) interfaces. If scrambling is assumed as a part of the PF interface, then it must be treated as a “semantically vacuous” movement. According to Saito (1989, 1992), long (distance) scrambling of Japanese *Wh*-phrases is a semantically “undoing” movement:

(64) a. John-ga [CP [Taroo-ga **nani-o** katta **ka**] siritagatteiru
 J-Nom T-Nom what-Acc bought Q want.to.know
 ‘John wants to know what Taroo bought.’

b. ?**nani-o_i** John-ga [CP [Taroo-ga **t_i** katta **ka**] siritagatteiru
 what-Acc J-Nom T-Nom bought Q want.to.know

Example (64)b is a declarative sentence that contains an indirect question. The scrambled *Wh*-phrase in (64)b, *nani* ‘who’, cannot be checked in the matrix clause (i.e. *Wh*-feature checking), which does not contain the Q-morpheme. To check its *Wh*-feature, it must be placed back to its default position, what Saito called “radical

reconstruction.”⁶¹ In order to account for this semantically “undone” movement, Saito claims that scrambling must be regarded as an optional movement that has no semantic consequence at LF, and that is theoretically indistinguishable from a PF-movement. According to Chomsky’s (1995) original minimalist program, any movement that has no LF force is done at PF. In the most recent version by Aoun & Benmamoun (1998) and Sauerland & Elbourne (2002), scrambling that shows radical reconstruction is regarded as a “purely phonological movement.” Unlike Saito’s (1989) original conception, they claim that semantically vacuous movement is always motivated as long as it has a phonological effect. In the same vein, based on Fox’s (2000) theory of economy, Chomsky (2001:34) proposes that optional movement can apply only if it has an effect on output. This is the so-called “Effect on Output Condition”:

(65) Effect on Output Condition

Optional α enters the numeration only if it has an effect on output.

The above output condition indicates that movement can take place only if it has an effect at the PF or LF interfaces. In other words, if scrambling is semantically vacuous at LF, then it must have some effect on the output of PF. Thus, this is the starting point for saying that scrambling showing radical reconstruction effects is PF-movement.

⁶¹ The term “radical reconstruction” is originally used by Saito (1989) to distinguish it from the standard reconstruction, which is assumed to explain the binding relation of the moved element with its antecedent. Instead of radical reconstruction, the term “total reconstruction” is used in Aoun & Benmamoun (1998) and Sauerland & Elbourne (2002). For the difference between radical reconstruction and standard (or partial) reconstruction, see Sauerland & Elbourne (2002:284).

In section 5.3.2, we saw that Korean clausal scrambling does not trigger any semantic or syntactic effects such as scope and binding relations. In order to account for this reconstruction effect of scrambling, Aoun & Benmamoun (1998) and Sauerland & Elbourne (2002) introduced the PF-movement hypothesis. A famous example of radical reconstruction is (66) (Sauerland & Elbourne 2002:284):

(66) [An Austrian]_i is likely to t_i win the gold medal.

In the standard Minimalist framework, the indefinite DP *an Austrian* in (66) is originally fronted from the internal subject of the verb *win* in (67):

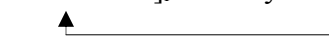
(67) [e] is likely to [an Austrian] win the gold medal.

In (66), the subject *an Austrian* has a narrow scope to the adverbial *likely*, even though it precedes (or is in a structurally higher position than) the adverbial *likely* in the surface representation. That is to say, (66) is semantically felicitous in a situation where it is not clear that an Austrian athlete will win the gold medal. Accordingly, for the correct scope relation, the fronted subject must be reconstructed to its original position at LF, as shown in (67). According to Saito (1989), this reconstruction is distinct from the so-called “standard (or partial) reconstruction” often observed with *Wh*-movement in English (e.g. [*Which pictures of him*]_k *did every student*_i *bring t_k to the class?*). He argues that radical reconstruction does not result from *Wh*-movement in Japanese, where a *Wh*-phrase carries out its [+Wh] feature checking *in situ*, not in the fronted position. Several analyses are available in the literature to account for

quantifiers. Thus, either wide or narrow scope of the universal quantifier is available. In terms of the copy theory, either the scrambled universal quantifier (i.e. the higher copy) or its trace (i.e. the lower copy) can be deleted at LF, even though only the lower copy must be deleted at PF. Thus, it seems that the LF-lowering or the copy theory of movement analysis appears to be very useful to account for the ambiguous scope relation of the scrambled quantifiers (or quantificational expressions).

On the other hand, Sauerland & Elbourne's (2002) analysis is very different from the LF-lowering or the copy theory analysis. They pay more attention to the fact that radical reconstruction is not optionally applicable to (66), and thus the semantic interpretation of the sentence is not ambiguous at all. Accordingly, the wide scope interpretation of the moved indefinite subject *an Austrian* is not allowed in (66), but only the narrow scope interpretation is available. However, (66) is distinct from (68) in that it does not allow the optimality of the reconstruction effect. This is exactly why the reconstruction effect in (66) is "radical" or "total" in the literature (Saito 1989, Sauerland & Elbourne 2002). To account for the radical reconstruction effect of (66), Sauerland & Elbourne (2002:286) provide what they call the *PF-movement* analysis, in which they posit that *an Austrian* undergoes movement from its base position, but that this is a "purely phonological movement":

(69) [An Austrian]_i is likely to *t_i* win the gold medal.



 ▲—————┘

 PF-Movement

If there is PF-movement, there will be no effect on interpretation, just as with other

phonological processes. Thus, the radical reconstruction effect as shown in (66) is created only when scrambling undergoes at PF. CP scrambling is necessary to satisfy the PF-interface condition, and thus it is not optional at PF.

In this regard, Sauerland & Elbourne's *PF-movement* hypothesis is very helpful for analyzing Korean CP scrambling. Korean CP scrambling is subject to the radical reconstruction effects and therefore it must be analyzed as (66). See the following Korean examples in (70):

- (70) a. *nwukwunka-ka* [John-i *nwukwuna-lul* miwueha-n-ta]-ko
 someone-Nom J-Nom everyone-Acc hate-Pres-DecComp
 sayngkakhanta
 think
 (i) 'Someone thinks that John hates everyone.' $(\exists > \forall)$
 (ii) *'For everyone_i, someone thinks that John hates him_i.' $(\forall > \exists)$
- b. [**John-i** *nwukwuna-lul* **miwueha-n-ta**]-ko_i *nwukwunka-ka* t_i
 J-Nom everyone-Acc hate-Pres-Dec-Comp someone-Nom
 sayngkakhanta
 think
 (i) 'Someone thinks that John hates everyone.' $(\exists > \forall)$
 (ii) *'For everyone_i, someone thinks that John hates him_i.' $(\forall > \exists)$

In (70)a and (70)b, the *in-situ* and scrambled universal quantifier, *nwukwuna* 'everyone', of the scrambled embedded clause cannot take wide scope over the existential quantifier *nwukwunka* 'someone', even though it precedes the existential quantifier in the surface representation. Only the analysis of the narrow scope interpretation of the universal quantifier is available in (70)b, just as the

corresponding default word order (70)a, and thus scrambling of the embedded clause shows the radical reconstruction effect. Such reconstruction phenomena can be best analyzed if movement is assumed to be a purely phonological operation. But neither the LF-lowering nor the copy theory can effectively capture the obligatory reconstruction effect in (70)b. Instead, if we assume that CP scrambling is derived by PF-movement, the radical reconstruction effect can be easily explained without any additional output condition because PF-movement is not expected to affect the interpretation of a sentence. Thus, the obligatory reconstruction observed in (66) and (70) can be best explained by the PF-movement analysis.

On the other hand, even though it is very simple and efficient to account for the radical reconstruction effect of Korean CP scrambling, the PF-movement hypothesis cannot be accomplished without confronting some empirical questions. Namely, what kind of phonological process triggers PF-scrambling? According to Chomsky's (1995; 2001) "Effect on Output Condition," movement takes place only when it has some effect on the output at PF or LF. This implies that PF-scrambling must have certain effects on output. Even in Sauerland & Elbourne (2002), no clue is shown to answer this question. In the next section, I will deal with this question.

5.3.3.2 The Anti-focus Movement Hypothesis

In this section, I explore the motivation of PF-movement as a PF interface output condition. I argue here that CP scrambling at PF is not optional, but it is well motivated by certain phonological process (i.e. destressing) with regard to discourse-

functional considerations.

There have been many proposals assuming that scrambling across languages is closely related to discourse-functional requirements such as Focus or Topic (É. Kiss 1995; Rizzi 1997; and others). Among them, Neeleman & Reinhart (1998) and Abraham & Molnarfi (2002) claim that scrambling can be explained by prosodic requirements in conjunction with discourse-functional considerations (e.g. destressing of non-focused elements). Adapting their analysis, I assume that PF-movement can be triggered by an “anti-focus” mechanism. In order to understand the relation between scrambling and discourse-functional properties, De Hoop (1992) argues that Dutch scrambling is sensitive to discourse conditions, often expressed as so-called “definiteness effects.” In Dutch and many other Germanic languages, the object of a sentence can be freely separated from the verb by the adverbial, as illustrated in the Dutch example (adopted from Neeleman & Reinhart 1998:310):

(71) a. Dat Jan [langzam [het boek las]]
 that John slowly the book read
 ‘John read the book slowly.’

b. Dat Jan [**het boek_i** [langzaam **t_i** las]]

De Hoop’s analysis is based on the assumption that (71)a is the default word order and (71)b is derived from (71)a by movement. She argues that scrambling of objects is derived by the syntactic considerations on the definiteness effects by which the definite object as a “strong DP” is preferred to be outside of VP, which semantically forms the domain of the existential interpretation along the lines of Diesing’s (1992)

Mapping Hypothesis.⁶² That is, scrambling of Dutch objects is a result of movement motivated by the discourse-functional properties of a sentence.

However, Neeleman & Reinhart (1998) rejects De Hoop's assumption that Dutch scrambling is related to definiteness effects. Rather, they claim that Dutch scrambling is a consequence of the stress assignment system in conjunction with discourse effects. According to them, the relation between discourse-functional properties (e.g. definiteness effects) and scrambling can be understood as a PF-interface operation. The observation that discourse conditions interact with the stress pattern of a sentence was made by Cinque (1993) and further developed by Zubizarreta (1998) and Reinhart (2006). In particular, Cinque (1993) proposes the "Clausal Null Accent Hypothesis," commonly expressed as the "nuclear stress (assignment) rule," to explain the relationship between the theory of focus and the PF-interface. According to the nuclear stress rule, identical with a sentential focus, a stress falls on the most embedded constituent of a sentence. The position of the most embedded constituent varies depending on the word order of a language. For example, while the nuclear stress of a sentence falls on the right node of the verb in English (a SVO language), it falls on the left of the verb in Dutch (SOV language), as demonstrated in (72) (nuclear stressed item in bold):

⁶² Diesing's (1992) Mapping Hypothesis:

- (i) Material from VP is mapped into the nuclear scope
- (ii) Material from IP is mapped into the restrictive clause

According to the Mapping Hypothesis, for the existential (or non-specific) interpretation, an NP must remain in VP, and thus it takes a narrow scope over other quantifiers or quantificational expressions in a sentence.

- (72) a. John read the **book**.
- b. Dat Jan [VP het **boek** las]
 that John the book read

In (72), the most embedded constituent is DP in both cases. Following Cinque's account of the nuclear stress rule and the theory of focus, Neeleman & Reinhart (1998) assume that a DP is destressed (or defocalized) if discourse information about it is changed for some reason, and that the destressed DP is placed outside of the focus domain of VP, regardless of whether the destressed DP is base-generated or PF-moved. For example, the difference between the Dutch non-scrambled and scrambled word orders is illustrated in (73) and (74) (adapted in Neeleman & Reinhart's (1998: 342-343) (79), (80), and (81)):

(73) Non-scrambled (or default) Word Order

- a. dat Jan [gisteren [het boek gelezen heft]]
 that John yesterday the book read has
- b. ...[VP AdvP [V' **DP** V]] (object stressed)

(74) Scrambled (or default) Word Order

- a. dat Jan [**het boek_i** [gisteren **t_i** gelezen heft]]
 that John the book yesterday read has
- b. ...[VP DP [VP (or V') AdvP V]] (object destressed)

The main stress, which falls on the most embedded constituent according to Cinque's nuclear stress assignment rule, is differently located in (73) and (74). While the main stress falls on the object in (73), the verb receives the main stress in (74) because it is

the most embedded constituent. According to Neeleman and Reinhart's data, the stress pattern difference between (73) and (74) entails that they have different discourse effects; namely, the object is interpreted as a focus in the non-scrambled structure (73), whereas the object cannot have the focus interpretation in the scrambled structure (74) since it is D-linked (or highly referential in the discourse) in the spirit of Pesetsky (1987).⁶³ Shown the assumption that destressing of DP and D-linking interacts in the PF-interface, Neeleman and Reinhart argue that scrambling can be understood as discourse-functionally motivated. Under their analysis, the scrambled structure is preferred whenever a DP is D-linked (i.e. anaphoric or it denotes the previously introduced entity in the context), and hence it is destressed by a phonological process.

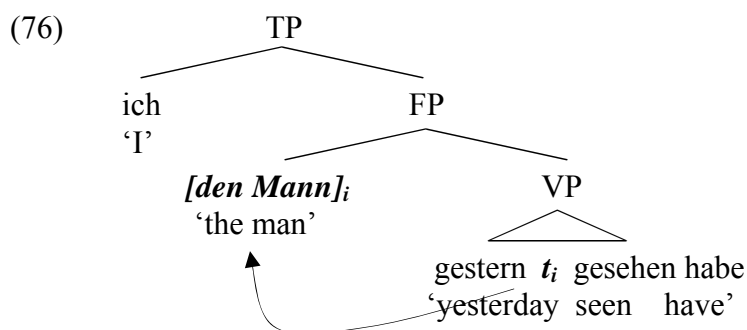
Based on Neeleman & Reinhart's (1998) analysis of Dutch scrambling, Abraham & Molnarfi (2002) argue that scrambling in German and other West Germanic languages is related to discourse-functional weight, specifically, focus vs. anti-focus. Their analysis of scrambling of "anti-focused" DPs is a consequence of reconsideration between the focus system and the default stress assignment in the sense of Cinque (1993). In other words, scrambling is a refocusing and destressing movement operation motivated by the discourse-functional properties. According to them, there is a designated position for anti-focused (i.e. thematic or anaphoric) elements (i.e. D-linked) in the left periphery of VP. The natural domain of a focused

⁶³ A "D-linked" DP refers to the anaphoric noun that has been previously introduced or presupposed in the discourse. Accordingly, Pesetsky's "D-linked DP" is almost identical with De Hoop's notion of "strong DP."

element is inside VP, and thus the scrambled sentence is regarded as a marked word order created by considerations of discourse and prosodic properties. To exemplify their analysis, consider the following scrambled sentences from German, Dutch, and Afrikaans, respectively (adapted from Abraham & Molnarfi's (2002:23) (28)) (main stressed item in bold):

- (75) a. German
 daß ich [*den Mann*_i [VP gestern *t*_i **gesehen** habe]]
 that I the man yesterday seen have
- b. Dutch
 dat ik [*de man*_i [VP gisteren *t*_i **gezien** heb]]
- c. Afrikaans
 dat ek [*die man*_i [VP gister *t*_i **gesien** het]]

In (75), the object DP, destressed and anti-focused moves out of VP, the focus domain, to the anti-focus domain for checking the [+AF] (or anti-focus) feature, more generally:



In (76), the object DP, *den Mann* 'the man', moves out of the focus domain (i.e. VP) in order to get the anti-focused interpretation in conjunction with a destressing

phonological process, and then the focal stress falls on the verb, according to the nuclear stress assignment system.⁶⁴ In (76), the category FP stands for a functional category which can appear in the anti-focus domain (outside VP). Abraham & Molnarfi assume that this movement operation is required by “anti-focusing licensing” of the object DP. To simplify, scrambling of objects shown in West Germanic languages is regarded as a refocusing and destressing mechanism in order to achieve “discourse licensing.”

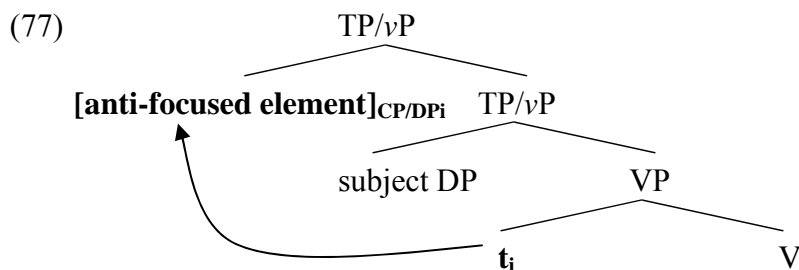
With respect to Korean CP scrambling, I adapt Abraham & Molnarfi’s (2002) insight that scrambling is a defocusing and destressing process. But I reject their assumption that scrambling is a discourse-functional feature-checking syntactic operation (e.g. [+AF] feature) and that in the scrambled structure, there is a “designated discourse-functional position” outside VP. Rather, I will adapt Neeleman and Reinhart’s (1998) PF-movement theory, which explains Korean clausal scrambling in terms of the interface economy. If we follow Abraham & Molnarfi’s assumption that scrambling is a syntactic derivation to eliminate the discourse-functional feature (e.g. anti-focus feature), we need to stipulate an additional PF-interface operation apart from the syntactic feature-checking mechanism for discourse licensing, namely, the destressing operation. That is, defocusing and destressing

⁶⁴ For the derivational issue, Abraham & Molnarfi stipulate and reformulate Cinque’s nuclear stress assignment rule, as follows (Abraham & Molnarfi 2002:26):

- (i) *Rule of default stress assignment*
The main stress of the sentence is assignable only after anaphoric destressing.

By the default stress assignment rule, the destressing operation precedes the default focalization operation.

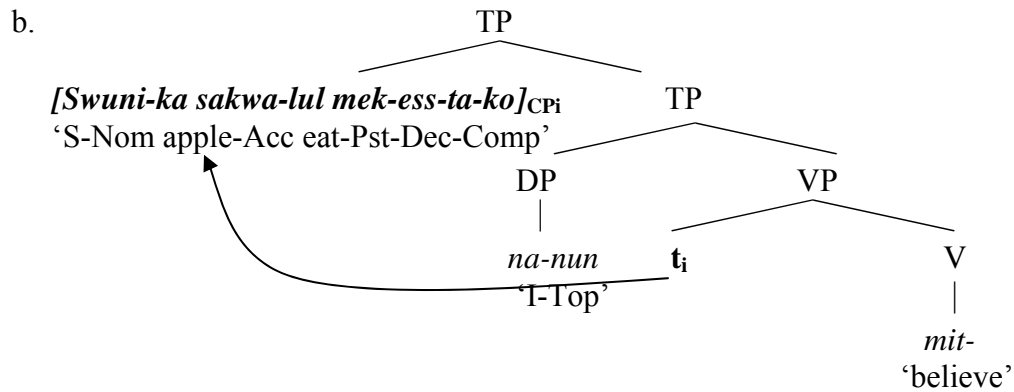
operations are each achieved by their independent components of the grammar: syntax and phonology. As Neeleman & Reinhart mention, this is clearly “uneconomical” in the sense that the two relevant operations happens separately. Accordingly, I assume that Korean clausal scrambling is a PF-interface operation in order to avoid focal stress and that it is motivated by an anti-focus requirement of an entity. A PF-movement analysis is less costly than any analysis based on complex syntactic derivations. Shown my assumption that scrambling is a PF movement accompanied by destressing and defocusing, I propose the following structure for Korean clausal scrambling, which is a modified version of Abraham & Molnarfi’s (2002) (77) (= (5)):



In (77), I suggest that Korean CP scrambling is a PF (adjunction) movement in order to avoid the nuclear stress assignment, in the spirit of Cinque (1993), with discourse effects such as defocusing. In addition, Korean CP scrambling is different from West Germanic scrambling in that it moves out of VP to the leftmost periphery of a sentence, not to the middle field between subject and VP, as illustrated in (78):

- (78) a. [Swuni-ka sakwa-lul mek-ess-ta-ko]_i na-nun t_i mit-ess-ta
 Swuni-Nom apple-Acc eat-Pst-Dec-Comp I-Top believe-Pst-Dec

‘I believed that Swuni ate apples.’



In (78), the anti-focused embedded clause (i.e. *Swuni-ka sakwa-lul mek-ess-ta-ko* ‘that Swuni ate apples’) scrambles out of VP and is adjoined to the sentence initial position, not somewhere between TP and VP. I suggest that in Korean, a focus domain is TP, not VP, since a scrambled CP moves out VP to the periphery of TP, not to the periphery of VP. If VP were a boundary between the focus and anti-focus domain, CPs would move to the left periphery of VP, not that of TP. Shown the assumption that TP is a focus domain in Korean, compare the following non-scrambled and scrambled sentence pair in Korean (focal stress in bold):

(79) Nonscrambled Structure

- a. *na-nun* [[*Swuni-ka* ***sakwa-lul*** *mek-ess-ta-ko*] *mit-ess-ta*]
 I-Top Swuni-Nom apple-Acc eat-Pst-Dec-Comp believe-Pst-Dec
 ‘I believed that Swuni ate apples.’

- b. Syntax: [TP [_{subject} DP] [VP [CP [_{subject} DP] [_{object} **DP**] V] [V]]]
 Focus set: {TP, VP, CP, DP}
 Nuclear stress: object DP of the embedded clause

(80) Scrambled Structure

- a. [_{CP} Swuni-ka sakwa-lul mek-ess-ta-ko]_i [na-nun [_{t_i}
Swuni-Nom apple-Acc eat-Pst-Dec-Comp I-Top

mit-ess-ta]]
believe-Pst-Dec

‘I believed that Swuni ate apples.’

- b. Syntax: [_{TP} [_{CP} [_{subject} DP] [_{object} DP] V1] [_{TP} [_{subject} DP] [_{VP} **V2**]]]
Focus set: {TP, VP, V2}
Nuclear stress: matrix verb

In (79) and (80), the categories in the focus set are those that can occur within the focus domain (TP). In (79), TP, VP, CP, and DP are the members of the focus domain of the sentence. Among them, the most embedded constituent, the embedded object DP (e.g. *sakwa* ‘apple’) has a nuclear stress. However, in (80), the members of the focus set have been changed after CP scrambling occurs. The scrambled embedded clause is now in the anti-focus domain over TP, and it cannot be included in the focus set. In the scrambled structure (80), a nuclear stress is reassigned to the most embedded constituent, V2 (i.e. *mita* ‘believe’). In addition, since CP scrambling is a PF operation, the scrambled CP must be radically reconstructed to its *in-situ* position in order to obtain a syntactic and semantic interpretation at LF.

In sum, in order to account for Korean clausal scrambling, I have discussed two types of movement, namely, PF-movement and Anti-focus movement. I have proposed that Korean CP scrambling is a PF-movement triggered by discourse-functional properties of embedded clauses. The proposed scrambled structure in (77),

based on Neeleman & Reinhart (1998) and Abraham & Molnarfi's (1998) theories, reflects the nature of Korean CP scrambling, which correlates with destressing and anti-focusing.

5.4 Conclusion

In this chapter, I have discussed three types of Korean embedded clauses: a complement clause, a relative clause, and a nominalized clause. Based on their grammatical properties, I suggested the internal structures for each of the three embedded clauses. In addition, I have discussed scrambling of the three embedded clauses. I have shown that while DP scrambling can create a new grammatical relation, CP scrambling does not trigger new grammatical changes. That is, every scrambled CP must be “radically” reconstructed to its base-generated position. In order to account for the radical reconstruction effect of CP scrambling, I proposed the PF-movement analysis, which also reflects on the discourse-functional flow of Korean word order variations. Since CP scrambling is a PF operation, scrambled CPs must be reconstructed to their *in-situ* positions at LF for their syntactic and semantic interpretation. Thus, in Korean, CP scrambling is distinct from DP scrambling in that only CP scrambling does not show any syntactic and semantic locality effects, and thus it is analyzed as a PF-movement operation.

CHAPTER 6

Conclusion

This dissertation concerns two specific topics in Korean syntax and semantics: *kes* constructions and scrambling of embedded clause constructions. These two topics are related to each other in that *kes* constructions are a type of embedded clause construction. The first topic is explored in Chapter 2, Chapter 3 and Chapter 4, and the second topic is mainly discussed in Chapter 5.

Korean *kes* constructions, which consist of an embedded clause and *kes*, must be treated as a type of complex noun phrase since they display various nominal properties. *Kes* appearing in *kes* constructions is distinct from *kes* modified by demonstratives or adjectives, in that the former carries no specific lexical meaning in it and thus must be interpreted functionally, while the latter must be treated as a lexical bound noun, which has a specific lexical meaning such as ‘thing’ or ‘object’. In addition, in certain grammatical respects, *kes* in the *kes* construction is regarded as part of DP, not as part of the preceding embedded clause. For example, *kes* can be affixed by the accusative case-maker *-(l)ul* or the plural marker *-tul* which is regarded as a nominal particle.

According to the grammatical relationship between *kes* and the preceding embedded clause, *kes* constructions can be separated into two types: the head-internal relative clause (HiRC) and the nominal complement clause (NCC) constructions. In

the first type of *kes* construction, *kes* is a syntactic head of the embedded clause regarded as a relative clause. That is, the embedded clause occurring in this type of *kes* construction is analyzed as an adjunct clause modifying *kes*. However, even though it appears in the syntactic head position of a relative clause, *kes* is not a true semantic head of the relative clause. Rather, the semantic head of the relative clause occurs within the clause. This type of *kes* construction is called an HiRC construction. In the HiRC construction, *kes* is analyzed as an anaphoric pronoun in the sense that it is co-referential with the semantic head of the preceding relative clause. Since Korean is a *pro*-drop language, *kes* in the HiRC construction can be semantically co-indexed with a *pro* occurring in the relative clause. This is called a gappy HiRC construction, compared with a gapless HiRC construction. In addition, DP scrambling from HiRC constructions is restricted depending on the syntactic status of the scrambled DP. In particular, a scrambled DP must be the semantic head and argument of an HiRC.

In the second type of *kes* construction, on the contrary, the embedded clause preceding *kes* is analyzed as a complement clause. That is, *kes* and its preceding embedded clause have a head-complement relationship. This type of *kes* construction is called a (*kes*) NCC construction. In the NCC construction, *kes* cannot be interpreted anaphorically since it never semantically refers to any element in the preceding complement clause. *Kes* in the NCC construction is analyzed as a functional head of DP (i.e. D^0) since it plays a functional role introducing a nominal complement (i.e. *kes* construction) into its matrix predicate of a sentence. Moreover, according to the semantic relation between the matrix verb of a sentence and its nominal complement

(e.g. *kes* constructions), *kes* NCC construction can be further divided into two subtypes: propositional and perceptual NCC constructions. That is, *kes* NCC constructions differ from each other according to the selectional restriction of a matrix predicate. Structurally, the perceptual NCC does not seem to be projected to a full CP node since it cannot take a fully inflected verbal form, but the propositional NCC does not show such syntactic restriction. Compared with HiRC constructions, DP scrambling from NCC constructions is relatively free, and thus a DP can scramble out of the NCC construction without any serious island effects. The non-restricted DP scrambling from NCC constructions supports the suggestion that *kes* in the NCC construction is a functional head.

On the other hand, compared with DP scrambling from embedded clause constructions, including *kes* constructions, Korean CP scrambling does not show any syntactic or semantic locality effects such as anaphor binding, WCO, specificity, NPI licensing, or quantifier scope. That is, every scrambled CP must be reconstructed to its base-generated position for the syntactic and semantic interpretation. The reconstruction effect of CP scrambling can be best explained by the PF-movement hypothesis. According to this hypothesis, CP scrambling is a prosodic (i.e. destressing) PF operation, motivated by the reanalysis of the discourse-functional properties of CP. In this regard, Korean CP scrambling sheds light on the flow of certain discourse-functional information (i.e. focus).

To sum up, with regard to the two topics of this dissertation, we have reached two major conclusions. First, the results of the study of Korean *kes* constructions

suggest that *kes* constructions cannot be explained in a unified way. Rather, *kes* constructions must be separated from one another (e.g. the HiRC and NCC constructions), depending on the grammatical relationship between the embedded clause and *kes* appearing in them. Moreover, a certain type of *kes* construction can be further divided into two subtypes, according to the grammatical relationship between the *kes* construction and the following matrix predicate of a sentence. Second, the results of the analysis of Korean CP scrambling suggest that CP scrambling is grammatically distinct from DP scrambling. That is, by its reconstruction effect, CP scrambling cannot be operated in core syntax or at LF, but must be analyzed as a prosodic movement at PF, motivated by the discourse-functional reconsideration of a sentence. The PF analysis is very suitable for explaining the ultimate nature of CP scrambling as not only a syntactically but also a semantically vacuous movement.

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