

The Syntax of Korean Polar Alternative Questions: A-not-A

by

Hailey Hyekyeong Ceong
B. A., University of Korea, 1989
M.A., Peking University, 2000

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of the Requirements for the Degree of

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Supervisory Committee

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Dr. Leslie Saxon
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Dr. Martha McGinnis
Departmental Member

Abstract

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This thesis explores how question FORCE (Rizzi 1997) is represented and licensed in Korean polar alternative questions (Korean PAQs). The syntactic properties of polar alternative questions have not been fully discussed in the literature; this work seeks to address that gap. The thesis has two main components. First, I provide an initial detailed investigation into the syntactic structure of Korean polar alternative questions (Korean PAQs), also called A-not-A questions, such as *ciwu-nun ca-ni an ca-ni?* ‘Is Jiwoo sleeping or not?’ I argue that Korean PAQs consist syntactically of a single clause. In this respect, Korean PAQs are distinct from both alternative questions and polar questions. The second goal of this thesis is to account for the asymmetric behaviour of complementizers in main clauses and embedded clauses. Variant complementizers occur in main clauses in Korean PAQs, while neutralized *ci* is the only complementizer which is licensed to appear in embedded clauses. Furthermore, Korean PAQs are incompatible with constituent questions in main clauses, but compatible with them in embedded clauses. This asymmetry is explained by appealing to the notion of a unique illocutionary question force in main clauses. In main clauses, the syntactic constituent ForceP cannot carry more than one kind of illocutionary question force: it bears either constituent question force or polar alternative question force, but not both. In contrast, since embedded clauses contain non-question (non-answer-requiring) complementizers,

separate question forms do not conflict with each other in this location. Based on a wide range of empirical data from Korean, this thesis proposes to distinguish Force ('question') complementizers in the main clauses from Type ('interrogative') complementizers in embedded clauses.

The novel data from Korean polar alternative questions require a major rethinking of the received view on the analysis of complementizers as expressed in Rizzi (1997). My analysis shows that the pragmatic categories of illocutionary force are highly significant for syntactic analysis in ways that have not been treated consistently in theoretical discussions of questions, in particular as regards the very distinct roles of main and embedded 'questions'.

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All faults, oversights, and errors of fact are my responsibility.

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Abbreviations

A	adjective
ACC	accusative
Agr	agree
C	complementizer (elsewhere excepting in a gloss)
CL	classifier
COMP	complementizer (in a gloss)
D	determiner
DAT	dative
DECL	declarative
ex	example
FIN	finite
FOC	focus
GEN	genitive
HON	honorific
INT	interrogative
LOC	locative
MOOD	mood marker
N	noun
NOM	nominative
P	preposition
PAI	polar alternative interrogative
PAQ	polar alternative question
PAST	past tense
PP	post-position
PRES	present tense
POS	positive
Q	question complementizer; question morpheme; question particle
T	tense
TYP	type
TOP	topic marker
V	verb

The transcription in this thesis follows the Yale Romanization (Martin 1992). When necessary, unimportant morphemes have been left unglossed for the sake of space: for example, *ka.ss-ni* (went-COMP) instead of *ka-ss-ni* (go-PAST-COMP).

The symbol * indicates that the following phrase is syntactically ill-formed; the symbol ? indicates that the well-formedness of the phrase is questionable, or that the phrase is infelicitous in its discourse context.

Chapter 1 Introduction

1.0 Goal and research questions

The purpose of this thesis is to determine how question FORCE (Rizzi 1997) is represented and licensed in Korean polar alternative questions (Korean PAQs). This work is also informed by the Minimalist Program (Chomsky 1995) which assumes that the faculty of language consists of the minimal design necessary to carry out its functions. This study will present a novel account of the syntactic structure of Korean PAQs, also termed Korean A-not-A questions because of their structural similarity to Chinese A-not-A questions.¹

The first goal of the thesis presented here is to provide an initial detailed investigation into the syntactic structure of Korean PAQs, and a unified analysis of Korean PAQs in main and embedded clauses, as exemplified in (1).

- (1) a. ciwu-nun ca-ni an ca-ni?
 Jiwoo-TOP sleep-COMP not sleep-COMP
 ‘Is Jiwoo sleeping or not?’
- b. na-nun ciwu-ka ca-nun-ci an ca-nun-ci kwungkumha-ta.
 I-TOP Jiwoo-NOM sleep-FIN-COMP not sleep-FIN-COMP wonder-DECL
 ‘I am wondering whether or not Jiwoo is sleeping’.

The second goal of this thesis is to account for the fact that Korean PAQs are incompatible with constituent questions in main clauses, but compatible with them in

¹ This study does not directly compare the structure of Korean and Chinese PAQs. However, I will argue that even though the constituents in Korean are different from the constituents in Chinese, the strategy employed by both languages to form polar alternate questions is similar.

embedded clauses. The data below show the asymmetric compatibility of Korean PAQs with constituent questions in main versus embedded clauses. In fact, the same asymmetry is observed in the English translation of these sentences: the examples in (2) are ungrammatical, while the examples in (3) are grammatical.

(2) a. *nwu-ka hakkyo-ey ka-ss-e mos ka-ss-e?
who-NOM school-LOC go-PAST-COMP cannot go-PAST-COMP
 *‘Who could or couldn’t go to school?’

b. *na-nun mwes-ul sal-l-kka mal-kka?
I-TOP what-ACC buy-MOOD-COMP not.MOOD-COMP
 *‘What should or shouldn’t I buy?’

(3) a. nwu-ka hakkyo-ey ka-ss-nun-ci mos ka-ss-nun-ci
who-NOM school-LOC go-PAST-FIN-COMP cannot go-PAST-FIN-COMP

kwungkumha-ta/ alko-sip-ta/ molun-ta.
wonder/ want to know/ don’t know-DECL

‘(I) wonder/want to know/ don’t know who could or couldn’t go to school.’

b. na-nun mwes-ul sa-l-ci mal-ci ppali kyelcenghay-ss-ta.
I-TOP what-ACC buy-FIN-COMP not.MOOD-COMP quickly decide-PAST-COMP
 ‘I quickly decided what I should or shouldn’t buy.’

To understand the syntactic structure of Korean PAQs, this thesis will seek answers for the following questions:

- What is the constituency of the construction?
- How is the structure of Korean polar alternative questions derived?
- What kind of features are involved in polar alternative questions?
- What is the structure of PAQ when it co-occurs with a *wh*-phrase in a clause?

Data has been collected from native speaker' intuition, and the theoretical work of this thesis is conducted in the framework of the Minimalist Program. The Minimalist Program is considered to be the most current syntactic approach within the generative paradigm, and it is worthwhile to see how this specific construction can be explained within this framework.

1.1 Literature review

The syntactic properties of polar alternative questions in main clauses, such as *Are you ready or not ?*, have not been fully discussed in the literature; often, these constructions are considered to result from deletion of elements from a bi-clausal sentence containing two full clauses with a disjunctive coordinator (Quirk et al. 1985; Huddleston and Pullum 2002).² Huddleston and Pullum (henceforth H&P) distinguish polar questions (PQ) and polar-alternative questions (PAQ) in English as in (4): the examples in (i) are considered to be PAQs, whereas (ii) is a PQ.³

- (4)
- i. a. Are you ready or are you not ready?
 - b. Are you ready or aren't you ready?
 - c. Are you ready or aren't you?
 - d. Are you ready or not?
 - e. Are you, or are you not, ready?
 - ii. Are you ready?

(Huddleston & Pullum 2002, p. 870)

² For discussion of the structure of English polar alternative questions in main clauses see Han Romero (2004a).

³ This paper prefers to use 'polar question' instead of 'yes/no question' because some languages do not explicitly use *yes* or *no* as the answer to polar questions.

According to H&P, the PAQ presents alternatives consisting of a positive and its negative counterpart and the second coordinate can be reduced by the omission of repeated constituents. H&P conclude that PAQs are logically equivalent to their corresponding PQs, and PAQs comprise a subclass of alternative questions. However, although they are logically equivalent, H&P observe that there are considerable pragmatic differences between PQs and PAQs: PAQs emphasize choice and the exhaustiveness of the two alternatives. Quirk et al. (1985) claim that the fronted form **Are you or not coming?* (*Are you coming or not?*) is ungrammatical because fronting would violate the requirement of structural equivalence of the two conjuncts in the equivalent grammatical structure *Are you or aren't you coming?*

Syntactic approaches to PAQs have not been fully pursued cross-linguistically. Researchers seem to take mainly the following view of PAQs, as exemplified by the stance taken in König and Siemund (2007): “alternative questions have a lot in common with polar questions”; the authors therefore exclude discussing cross-linguistic variations because alternative questions “do not seem to show any striking typological variation” (p. 292). Even PAQs in English have never been a central issue in syntax.

König and Siemund consider Chinese A-not-A questions as one of a set of polar interrogative formations available cross-linguistically. The six polar-question-forming strategies identified by them are: intonational marking, interrogative particles, interrogative tags, disjunctive-negative structures (the Chinese A-not-A construction), change in the order of constituents, and verbal inflection.⁴ This thesis, however, will cast doubt on whether disjunctive-negative structures are truly a variety of polar questions. If

⁴ There is little consensus in the literature with respect to the state of Chinese A-not-A questions: Huang et al. (2009) treat true A-not-A questions as a sort of *wh*-question and other types of A-not-A as particle questions; Hagstrom (2006) considers them to have “a function similar to that of a yes/no questions.”

we want to propose that the Chinese A-not-A construction, and likewise the Korean A-not-A construction, is in fact a type of polar question, we first need to identify the characteristics that determine question type: that is, how can a polar alternative question be distinguished from a polar question? The answer to this question lies in the type of response which is appropriate for each sort of question (see Huddleston 1994); the answer to a PQ in English (5) can be just *yes* or *no*, but the PAQ in (6) requires a more substantial response.

- (5) Q: Are you ready?
A: Yes/No.
- (6) Q: Are you ready or not?
A: *Yes./*No.
A: I am ready./ I'm not ready.

This fact holds true for the Korean PAQs in (7) as well.

- (7) Q: ciwu-nun ca-ni an ca-ni?
Jiwoo-TOP sleep-COMP not sleep-COMP
'Is Jiwoo sleeping or not?'
- A: ca-yo/an ca-yo/ *ney./ *anyo.
sleep-HON/not sleep-HON/yes/no
(She) is sleeping/ (She) isn't sleeping/*yes/*no

Only a polar question can be answered with *ney* 'yes' or *anyo* 'no' in (8).⁵

- (8) Q: ciwu-nun ca-ni? (affirmative polar)
Jiwoo-TOP sleep-COMP
'Is Jiwoo sleeping? '
- A: anyo.
no

⁵ The answer to the negative polar question *ney* 'yes' in Korean means 'no' in English.

occupying [Spec, CP]. The syntactic structure of both PAQs in (9) and alternative questions in (10) involves disjunction of clauses with deletion in the second clause, and movement of null Q to the matrix [Spec, CP].

(9) Did Jane drink milk or not?

(10) Did Jane drink milk or soy milk?

Han and Romero claim that the syntax of alternative questions (10) and polar questions with overt *or not* (9) is parallel; both question types involve ellipsis and focus, and the different interpretation of the two sentences results from the different elements in the disjuncts. Hence, Han and Romero argue that (9) and (10) occur as the result of introducing *wh*-movement into the structure of *either VP or VP/either IP or IP* declaratives. Then, the second disjunct is partially elided as shown in (11).

(11) Q_i Did t_i [Jane drink milk or ~~Jane drink~~ soy milk]?

For the analysis of disjunctive phrases with *whether or not* in embedded clauses, the authors suggest two possible alternative accounts. One possible analysis involves ellipsis in conjunction with Right-Node Raising, as shown in (13). According to Han and Romero, (13) shows that the clause *John finished the paper* right-node raises out of both disjuncts. Alternatively, the second disjunct *or not* may move and adjoin to *whether* after ellipsis, as in (14).

(12) I don't know **whether or not** John finished the paper.

- (13) a. ...whether [_{IP} John finished the paper] or [_{IP} John did not finished the paper]
 b. whether [_{IP} POS [John finished the paper]] or [_{IP} not [John finished the paper]]
 c. whether [POS e_i] or [not e_i] [John finished the paper]_{*i*}

- (14) a. ...whether [_{IP} John finished the paper] or [_{IP} ~~John not finished the paper~~]
 b. ...whether [or [_{IP} ~~John not finished the paper~~]_{*i*} [_{IP} John finished the paper] t_i

(H&R 2004a, ex 95, 96, 97)

Schwarz (1999) and Han and Romero (2004a) assume that alternative questions involve ellipsis, while Larson (1985) does not consider disjunction to be the result of ellipsis. In Han and Romero (2004a), the account of the asymmetry between main and embedded alternative questions — i.e., the fact that *whether* is null in main clauses, but is pronounced in embedded clauses — is achieved by adopting null *Q* as an allomorph of *whether*. However, the fact that *whether* appears in embedded clauses and null *Q* appears in main clauses, as well as the fact that *whether* doesn't trigger inversion but null *Q* does, is left unexplained.

In sum, the syntactic structure of PAQs in matrix and embedded clauses has not been fully or sufficiently studied in the literature.⁶ In terms of form, PAQs consist of a positive predicate followed by a negation of that predicate; the obligatory presence of both positive and negative predicates is an idiosyncrasy of this special type of question. The second salient characteristic of this question type is that the two predicates can be

⁶ To the best of my knowledge, no research has yet discussed Korean PAQs.

joined with a coordinator (if we follow the assumption that identical elements are deleted in English PAQs) or without a coordinator (in Korean and Mandarin Chinese) in a sentence; a root verb may be repeated in the sentence (in some kinds of Korean PAQs and Mandarin A-not-A) or multiple complementizers may occur (Korean).⁷ In addition to these constraints on the form of the question, the possible answers to the questions are also limited; possible answers consist only of the positive or negative form of the predicate; the answer cannot be completed with only *yes* or *no*. Polar questions, by contrast, can be answered with *yes* or *no* only, and the repeated predicate part in the answer can be omitted.

Although this thesis hypothesizes that Korean PAQs, English polar alternative questions, and Chinese A-not-A questions are all variants of a single polar alternative structure, the work concentrates on an investigation of Korean PAQs because of limited space. In the next section, the organization of the thesis is presented.

1.2 Organization

The organization of this thesis is as follows. Chapter 2 attempts to provide exhaustive descriptive data on Korean PAQs in order to inform the analysis in later chapters. It is particularly important to provide this detailed descriptive information because Korean PAQs have not received previous examination in the literature. The chapter presents the properties and behaviour of Korean PAQs in main clauses. The three salient

⁷ The expression ‘A-not-A questions’ has previously been used to describe Chinese polar questions in linguistics (Huang, J., Li, A., & Li, Y. 2009, Hagstrom 2006, Hsieh 2001, Zhang 2001, Ernst 1994, Huang 1991). Korean polar alternative questions are similar to Chinese A-not-A questions in that they require the presence of polarities within a clause.

morphological varieties of Korean PAQs are presented as in (15). These variants involve: pre-predicate negation (15a), inherently-negative predicates (15b), and a negative modal auxiliary (15c).

- (15) a. *ciwu-nun ca-ni an ca-ni?*
Jiwoo-TOP sleep-COMP not sleep-COMP
 ‘Is Jiwoo sleeping or not?’
- b. *ciwu-nun cip-e iss-ni eps-ni?*
Jiwoo-TOP home-LOC be-COMP not.be-COMP
 ‘Is Jiwoo at home or not?’
- c. *wuli-nun ca-l-kka mal-kka ?*
we-TOP sleep-MOOD-COMP not.MOOD-COMP
 ‘Should or shouldn’t we go to bed?’

In chapter 3, I present background information on Korean complementizers within the framework of Rizzi (1997) and investigate force and finite complementizers in Korean PAQs. I propose that Korean sentence markers are best understood as complementizers within an extended CP system like the one proposed in Rizzi (1997), but I make the observation that there is no direct correspondence between the various morphologically - realized Korean complementizers and force or clause type. Since the complementizers that occur in Korean PAQs occur with other force types also, I argue that Korean complementizers in main clauses are used to express mood, finiteness, and force. I suggest some possible features that may account for the variant lexical items that occur with different types of question force. Furthermore, I propose that there is a ϕ -feature agreement relationship between complementizers and subjects in main clauses in Korean.

In the second part of chapter 3, I argue that *ci* is indeed an interrogative complementizer belonging to Interrogative P (IntP) (Rizzi 2001), whereas the so-called adnominal morpheme *nun*, which appears in embedded Korean PAQs as in (16), is a finite complementizer that indicates that the clause is embedded. The properties of finiteness are discussed in the context of this proposal.

- (16) *ciwu-ka ca-nun-ci an ca-nun-ci kwungkumha-ta.*
Jiwoo-NOM sleep-FIN-COMP not sleep-FIN-COMP wonder-DECL
 ‘(I) am wondering whether or not Jiwoo is sleeping’.

Chapter 4 addresses the research questions posed at the beginning of this thesis. In section 4.1, I claim that Korean PAQs are single-clause constructions. Even though there are two predicates and two complementizers in this type of utterance, no lexical coordinator appears in Korean PAQs. I argue that the single-clause proposal receives empirical support from four facts: fixed constituent order of predicates in Korean PAQs, mandatory identity between the phonological forms of the two complementizers, inability of the negative auxiliary *mal* to act as a stand-alone predicate, and the prohibition against lexical disjunction in certain Korean PAQs.

Next, I propose different sets of features for the complementizers that occur in main clauses and embedded clauses within the framework of the Minimalist program (Chomsky 2008; Adger and Svenonius 2011): I claim that main-clause PAQ complementizers contain polar alternative question force [C, FORCE, QUESTION, POLARITY ALTERNATIVE, FINITE, ϕ -feature_[PERSON], TOPIC], whereas embedded-clause PAQ complementizers do not contain polar alternative question Force — rather, they contain only [C, TYP, INT(ERROGATIVE), POLARITY ALTERNATIVE, FINITE].

The second part of chapter 4 focuses on the structure of Korean PAQs when they co-occur with a *wh*-phrase. Recall that Korean PAQs are incompatible with constituent questions in main clauses, but compatible with them in embedded clauses. I claim that the asymmetric behaviour of Korean PAQs in main and embedded clauses is due to the presence of illocutionary force (Austin 1975; Degand 2006; Allan 2006) in main clauses and the corresponding lack of it in embedded clauses. On the assumption that illocutionary question force can select only one sub-category of question per sentence, the ungrammaticality of example (2), repeated as (17), is argued to be due to the failure of the features in that lexical items to agree with the features of either the constituent question complementizer or the polar alternative question complementizer.

- (17) a. * *nwu-ka hakkyo-ey ka-ss-e mos ka-ss-e ?*
 who-NOM school-LOC go-PAST-COMP cannot go-PAST-COMP
 * ‘Who could go to school or not?’
- b. * *na-nun mwes-ul sal-l-kka mal-kka?*
 I-TOP what-ACC buy-should-COMP not.MOOD-COMP
 * ‘What should I buy or not?’

I claim that these expressions, which are ungrammatical in main clauses, are permissible in embedded clauses because the head of an embedded clause lacks illocutionary force. Therefore, throughout this thesis, main-clause PAQs are considered to be true ‘questions’, whereas embedded-PAIs (polar alternative interrogatives) are termed ‘interrogatives’.

Moreover, I claim that semantically speaking, *or* in main clauses (as in the translation of (17)) encodes exclusive disjunction, whereas *or* in embedded clauses (as in the translation of (18)) encodes inclusive disjunction.

- (18) na-nun mwes-ul sa-l-ci mal-ci ppali kyelcenghay-ss-ta.
I-TOP what-ACC buy-FIN-COMP not.MOOD-COMP quickly decided-DECL
'I quickly decided what I should or shouldn't buy.'

Chapter 5 presents the conclusion of this thesis. I summarize the findings of this study and remark on issues that require further investigation.

Chapter 2 Two types of Korean polar alternative questions

2.0 Introduction

The main purpose of this chapter is to make a detailed and exhaustive descriptive presentation of Korean PAQs in order to inform the analysis in chapter four on the basis of which the main proposal of this thesis will be made. For that reason, the data presented here are not necessarily correlated to syntactic properties.

In order to understand the formation of Korean PAQs, the general structure of Korean polar questions and the properties of Korean complementizers need to be introduced. As in other agglutinative languages, one of the strategies for forming polar questions in Korean is to include clause markers on inflected predicates.

The clause marker *ni* appears in the right periphery of the clause in both polar questions and constituent questions as shown (1) and (2).

- (1) a. ne-nun nayil ka-**ni**?
 you-TOP *tomorrow* *go-COMP*
 Are you going tomorrow?
- b. ciwu-nun ecey ka-ss-**ni**?
 Jiwoo-TOP *yesterday* *go-PAST-COMP*
 ‘Did Jiwoo go yesterday?’
- (2) ciwu-nun **encey** ka-**ni**?
 Jiwoo-TOP *when* *go-COMP*
 ‘When is Jiwoo going?’

In this thesis, I use the term ‘complementizer’ instead of *clause marker* or *sentence ender* because I maintain that the right periphery in Korean is parallel to “the left periphery” in Rizzi (1997), as I will discuss in chapter 3. At a very descriptive level, it seems that as a

head-final language, the specification of Force in Korean sentences is expressed in the right periphery by lexical items on the head of the highest projection. As is true of most languages, Korean has non-polar questions in addition to polar questions. Constituent questions are formed with question words such as *nwuka/nwukwu* ‘who’, *encey* ‘when’, *etise* ‘where’, *mwues* ‘what’, *oay* ‘why,’ and *ettehkey* ‘how’. Clause-level alternative questions are formed with the disjunctive coordinator *animyen* ‘if not’. The example in (3) shows that clause-level alternative questions are formed with disjunctive coordinators. Example (4) shows the argument alternative question type, which Han and Romero (2004a) claim to be a polar question.

- (3) Chelswu-ka kohphi-lul animyen cha-lul masi-ess-ni?
Chelswu-NOM coffee-ACC if-not tea-ACC drink-PAST-INT
 ‘Which of these two things did Chelswu drink: coffee or tea?’ (alternative question)

(Han & Romero 2004a, p.543)

- (4) Chelswu-ka khophi-na cha-lul masi-ess-ni?
Chelswu-NOM coffee-or tea-ACC drink-PAST-INT
 ‘Is it the case that Chelswu drank coffee or tea?’ (polar question)

(Han & Romero 2004a, p. 543)

Korean polar questions, constituent questions, and alternative questions have been discussed under various topics in the literature (Beck & Kim 1997, 2006; Choi 2002; Han & Romero 2004b; Hwang 2010; Ko 2005; Shin 2005), whereas Korean PAQs have not been discussed in the literature. The descriptive syntactic structure of Korean PAQs will be presented in detail in this chapter.

The major part of this chapter consists of several subsections: section 2.1 illustrates the first type of Korean PAQ, which is formed with two predicates and two

complementizers in one sentence. In section 2.1.2, the different possible loci of negation in the sentence, and the restrictions on the location of negation in Korean PAQs is illustrated. In section 2.2, I will demonstrate the second type of Korean PAQ, which is formed with one positive predicate accompanied by the negative auxiliary *mal*; the lexical properties of *mal* are discussed in terms of its capacity to select an affirmative predicate. *Mal* is not compatible with predicative adjectives, although such adjectives can occur with type-A PAQs. *Mal* is only selected by a certain subset of complementizers. Only the complementizers *lay* and *kka* select *mal* in questions; it cannot be selected by the complementizer *ni*, since *ni* requires that its complement proposition be a fact or otherwise real. Consequently, in the B-type PAQs, use of a past tense form of the predicate, which must be semantically interpreted as fact/realis, is not allowed. A summary of the descriptive data of Korean PAQs will be presented in section 2.3.

2.1 Type-A: Full predicates construction

2.1.1 Two predicates and two complementizers in a sentence

Just as polar questions are formed by using overt complementizers, Korean PAQs are also formed with complementizers.⁸ Significantly, complementizers appear with each of the positive and negative predicate forms by which a Korean PAQ is identified. One type of Korean PAQ is formed from an affirmative predicate with a complementizer, followed

⁸ Sentences in Korean take either a polite or a non-polite form. In polite questions the complementizer *-kka* or *-yo* is attached to an honorific verbal form; in non-polite questions, the complementizer *-ni* is attached to a plain verbal form. This thesis uses examples of non-polite Korean questions since the intent is to focus narrowly on the structure of the questions rather than on the structure of honorifics. Non-polite Korean questions exhibit morphologically variant forms of finiteness.

by a negation *an* ‘not’, followed by a copy of the predicate and the complementizer of the first predicate. The predicate can be a verb (5) or a predicative adjective (6).

(5) *pro* *ku* *chayk-ul* *sa-ss-ni* *an* *sa-ss-ni?*
the book-ACC buy-PAST-COMP not buy-PAST-COMP
 ‘Did (you) buy the book or not?’

(6) *na* *yeypp-e* *an* *yeypp-e ?*
I cute -COMP not cute-COMP
 ‘Am I cute or not?’

A similar construction applies to the formation of PAQs with the light verb *ha* ‘do’, as in

(7).⁹

(7) a. *ne-nun* *ecey* *wuntong-ul* *ha-yss-ni* *an* *ha-yss-ni?*
you-TOP yesterday exercise-ACC do-PAST-COMP not do-PAST-COMP
 ‘Yesterday, did you exercise or not?’

b. *ne-nun* *ecey* *wuntong-ha-yss-ni* *an* *ha-yss-ni?*
you-TOP yesterday do.exercise-PAST-COMP not do-PAST-COMP
 ‘Yesterday, did you exercise or not?’

Besides the negation particle *an* ‘not’, the modal negation *mos* ‘cannot ; unable’ can occur in pre-predicate position, as shown in (8). The contrast in the interpretations of (5) and (8) shows that *mos* has scope over the whole sentence at LF.

(8) *ku* *chayk-ul* *sa-ss-ni* *mos* *sa-ss-ni?*
the book-ACC buy-PAST-COMP cannot buy-PAST-COMP
 ‘Were you able to buy the book or not?’

⁹ The response to (7) would be *hay-ss-e* ‘(I) did’ or *an hay-ss-e* ‘(I) didn’t’. When Sino-Korean verbs that consist of a Chinese root and *ha*-‘do’ appear in Korean PAQs, only the light verb *ha*-‘do’ is copied. I assume that the reason for this behaviour is that the Chinese root *wuntong* ‘exercise’ (noun) in *wuntongha*-‘exercise’ (verb) is a complement of the verb *ha*-‘do’ in Korean.

The data above shows that there is no overt coordinator even though there are two predicates and two complementizers in Korean PAQs: the clause-level disjunctive coordinator *animyen* ‘if.not’ does not occur in these questions. Whether Korean PAQs consist of two clauses with a null disjunctive coordinator or a single clause with no disjunction will be investigated in chapter 4.

2.1.2 Pre-predicate negation in Korean PAQs

Korean negation can be expressed by pre-predicate negation (an element which is considered to be an adverbial or particle in the literature) or post-predicate negation¹⁰. In Korean PAQs, the linear order, and particularly the order of negation within a negative predicate, is more restricted than in other clause types; only pre-predicate negation is allowed in PAQs, and the affirmative predicate must always precede the negative predicate in a sentence.

The structure and properties of these distinct positions for Korean negation have been investigated in the literature (Park 1998; Kim, J. 2000; Kim, A. 2002). The negation *an* ‘not’ and *mos* ‘not possibly, cannot, unable’ can both precede the predicate in (9); *an*, which is the short form of the negative copula *ani-*, expresses simple negation, while *mos* expresses inability or impossibility. In (10), which shows post-predicate negation, the negative auxiliaries *anh* ‘not’ or *mos* ‘cannot’ follow a verb with the complementizer – *ci*.¹¹

¹⁰ The post-predicate negations tend to be used in formal and written language more than pre-verbal negation. The pre-predicate and post-predicate negations are called ‘short-form negation’ and ‘long-form negation’ in the literature, respectively.

¹¹ *ci* is discussed extensively in chapter 4. This is an illustration of another context for *ci* in Korean. In addition to acting as an indirect interrogative complementizer and tag question complementizer, *ci* also

- (9) minswu-nun hakkyo-ey an/mos ka-ss-ta.
Minsoo-TOP school-LOC not/cannot go-PAST-COMP
 ‘Minsoo didn’t/couldn’t go to school.’
- (10) minswu-nun hakkyo-ey ka-ci anh-ass-ta / mos-hayss-ta.
Minsoo-TOP school-LOC go-COMP not-PAST-DECL/cannot-do.PAST-COMP
 ‘Minsoo didn’t/couldn’t go to school.’

Kim, J. (2000) remarks that the two types of negation in (9) and (10) show identical behaviour regarding scope, negative polarity item licensing, and aspect selection. In contrast, Kim, A. (2002) proposes that pre-predicate negation is constituent negation and post-predicate negation is sentential negation. At least, the two types of negation behave differently in Korean PAQs. Post-predicate negation (11) is allowed in ordinary polar questions, although pre-predicate negation (12) is more frequently used.

- (11) minswu-nun hakkyo-ey ka-ci anh-ass-**ni**/mos-hayss-**ni**?
Minsoo-TOP school-LOC go-COMP not-PAST-COMP/cannot-do.PAST-COMP
 ‘Didn’t/Couldn’t Minsoo go to school?’
- (12) minswu-nun hakkyo-ey an/mos ka-ss-**ni**?
Minsoo-TOP school-LOC not/cannot go-PAST-COMP
 ‘Didn’t/Couldn’t Minsoo go to school?’

Although it is permitted in polar questions, post-predicate negation cannot occur in PAQs, as illustrated in (13).

- (13) a. minswu-nun hakkyo-ey ka-ss-**ni** mos ka-ss-**ni**?
Minsoo-TOP school-LOC go-PAST-COMP cannot go-PAST-COMP
 ‘Could Minsoo go to school or not?’

serves as a complement of NegP. The whole status of the complementizer *ci* needs to be investigated in depth. Ceong (2011) attempts to capture the properties of *ci* in Korean.

b. ? minswu-nun hakkyo-ey ka-ss-ni kaci mos hay-ss-ni?
Minsoo-TOP school-LOC go-PAST-COMP go-COMP cannot go-PAST-COMP
 ‘Did Minsoo go to school or not?’

The grammatical judgment in sentence (13b) is not certain, but Korean speakers would not prefer to utter such a sentence.¹²

In this section, I have shown that there is a restriction in favour of pre-predicate negation within the phonological expression of Korean PAQs.

2.1.3 Negative predicates

Korean has negative predicates such as *molu-* ‘don’t know’ (14) and *eps-* ‘do not have; do not exist’ (15), as well as a negative copular *ani-* ‘is not’ (16), which is considered to be a derived form from the sequence of *an* ‘not’ and the copular *i* ‘be’. The data are presented below.

(14) a. na-nun ku salam-ul molu-n-ta.
I-TOP the person-ACC not.know-PRES-COMP
 ‘I do not know the person.’

b. na-nun ku salam-ul a(l)-n-ta.
I-TOP the person-ACC know-PRES-COMP
 ‘I know the person.’

(15) a. ku cip-un ton-i eps-ta.
the house-TOP money-NOM not.have-COMP
 ‘The family is poor.’ (The house does not have money.)

b. ku cip-un ton-i iss-ta.
the house-TOP money-NOM have-COMP
 ‘The family is not poor.’ (The house have money.)

¹² Corpus studies are required to support this intuition.

- (16) a. *ikes-un nay chayk-i ani-ta.*
this-TOP my book-NOM not.be-COMP
 ‘This is not my book.’
- b. *ikes-un nay chayk i-ta.*
this-TOP my book be-COMP
 ‘This is my book.’

Two distinct properties of negative predicates are: a) *an-* and *mos-* cannot precede these predicates; b) negation can follow these predicates, in which case the sentence expresses double negation, and is translated semantically as an affirmative.

The existence of negative predicates in Korean yields a unique series of PAQs which have no overt pre-predicate negations in syntactic structure: this distinct type of Korean PAQs has the frozen order (i) affirmative polar question followed by (ii) negative predicate, as shown below in (17) ~ (19). The answer can be chosen between the affirmative verb and its negative counterpart.

- (17) *ike ne chayk-i-ni ani-ni?*
this you book- be-COMP not.be-COMP
 ‘Is this your book or not?’
- (18) *ne sikan iss-e eps-e?*
you time have-COMP not.have-COMP
 ‘Do you have time or not?’
- (19) *ne-nun ce haksayng-ul a-ni molu-ni ?*
you-TOP that student-ACC know-COMP not.know-COMP
 ‘Do you know that student or not?’

This thesis holds the view that the Korean negative-lexical-predicate PAQ is simply a morphological variant of the regular type-A PAQ discussed in 2.1.1.

2.2 Type-B: Negative auxiliary *-mal* in Korean PAQs

2.2.1 One verb and two complementizers in a sentence

In addition to the first type of Korean PAQs described above, there is a second type in which the negative modal auxiliary *mal* ‘desist from’ follows an affirmative polar question as in (20a).¹³ There is only one full verb in this type of sentence; *mal* occurs instead of the second full-verb-plus-post-predicate negation complex in the construction.¹⁴ The sentence in (20b) is not ungrammatical, but it is not acceptable or desirable to native speakers.

- (20) a. ne-nun kye honha-l-lay mal-lay?
 you-TOP marriage.do-MOOD-COMP not.MOOD-COMP
 ‘Are you going to marry me or not?’
- b. ? ne-nun kye honha-l-lay haci anh-ul-lay?
 you-TOP marriage.do-MOOD-COMP do-COMP not-MOOD-COMP
 ‘Are you going to marry me or not?’

Examples of the negative auxiliary *mal* in Korean PAQs, shown in (21) ~ (22), show up with great frequency in speech.

- (21) nayil wuli-cip-ey o-l-lay mal-lay?
 tomorrow our-house-LOC come-MOOD-COMP not.MOOD-COMP
 ‘Tomorrow, would (you) like to come to our house or not?’

¹³ Sohn (1999: 389) considers *mal* to be a negative verb and Lee & Ramsey (2000: 215) consider it to be a negative auxiliary verb. The grammatical meaning of *mal* is discussed in Jang (2003) and a synchronic approach to the morpho-phonology of *mal* is presented in Yoo (2004).

¹⁴ *mal* can be produced in the post-predicate form in (i), which is similar to so-called long negation in the literature. *ssulkka malkka* (ii) appears much more frequently than (i) in actual utterances.

- (i) pyenci-lul ssu-l-kka ssu-ci mal-kka?
 letter-ACC write-MOOD-COMP write-COMP not.MOOD-COMP
 ‘Should (I) write a letter or not?’
- (ii) pyenci-lul ssu-l-kka mal-kka?
 letter-ACC write-MOOD-COMP not.MOOD-COMP
 ‘Should (I) write a letter or not?’

- (22) pyenci-lul ssu-l-kka mal-kka?
 letter-ACC write-MOOD-COMP not.MOOD-COMP
 ‘Should (I) write a letter or not?’

There are some restrictions on the formation of Korean PAQs with the negative modal auxiliary verb *mal*. *mal* is not nearly as productive as the pre-predicate negation *an*. It does not co-occur with predicative adjectives, nor with the factual complementizer *ni*. Since *mal* is a bound form, it cannot stand alone as a negative answer. The positive answer to the question in (23) is the same as for the other types, but the negative answer cannot be *mal-lay* ‘would not’ as in (24a). The negative auxiliary verb *mal* is realized as a full negative verb in answers, so the negative answer of (23) always takes *an*-negation, as in (24b).

- (23) Q: ne-nun khonsethu-ey ka-l-lay mal-lay?
 you-TOP concert-LOC go-MOOD-COMP not.MOOD-COMP
 ‘Are (you) going to the concert or not?’

- (24) A: a. * mal-lay.
 not.MOOD-COMP
- b. an ka-l-lay.
 not go-MOOD-COMP
 ‘(I) am not going.’

2.2.2 The properties of *mal*

The negative auxiliary *mal* is considered by Han and Lee (2008) to be a lexicalized item derived from the sequence of the long negation *ani*- ‘not’ and the light verb *ha* ‘do’ in the context of deontic modality; according to Han and Lee, the example in (25a) shows

the use of *an* plus *ha* in the long negation, while (25b) shows the use of these elements in the context of deontic modality.¹⁵

- (25) a. na-nun ku chayk-ul sa-ci ani ha-yess-ta
I-TOP the book-ACC buy-COMP not do-PAST-COMP
 ‘I didn’t buy the book.’
- b. na-nun ku chayk-ul sa-ci mal-aya ha-n-ta
I-TOP the book-ACC buy-COMP not-should do-PRES-COMP
 ‘I should not buy the book.’

This thesis observes that the modality of *mal* is interpreted as *should* (first-person subject) and *would* (second-person subject) in questions, as shown in (26).

- (26) a. pyenci-lul ssu-l-kka mal-kka?
letter-ACC write-MOOD-COMP not.MOOD-COMP
 ‘Should (I) write a letter or not?’
- b. pyenci-lul ssu-l-lay mal-lay?
letter-ACC write-MOOD-COMP not.MOOD-COMP
 ‘Would (you) like to write a letter or not?’

Mal is compatible only with predicates that show the mood marker *l*, which expresses the subject’s vagueness, uncertainty, indecision, or doubt. Therefore, *mal* is not compatible with the complementizer *ni*, which necessarily expresses fact or realis mood. Due to its mandatory encoding of modal uncertainty, *mal* cannot occur in PAQs which refer to realis past events, as in (27a).

- (27) a. * ecey hakkyo-ey ka-ss-ni mal-ass-ni ?
yesterday school-LOC go-PAST-COMP not.MOOD-PAST-COMP
 ‘Did you go to school or not?’

¹⁵ Dr. McGinnis points out that if *mal* is derived from the sequence of the long negation *ani-* ‘not’ and the light verb *ha* ‘do’, it shouldn’t combine with *ha* ‘do’, as it does in (25b).

- b. ecey hakkyo-ey ka-ss-ni an ka-ss-ni ?
yesterday *school-LOC* *go-PAST-COMP* *not* *go-PAST-COMP*
 ‘Did you go to school or not ?’

The above discussion shows that Korean PAQs with *mal* are more restricted in their formation than Korean PAQs with the full-predicates construction. *Mal* is correlated with the mood and modality of verbs.

2.3 Summary

In this chapter, I have presented a descriptive sketch of the properties of Korean PAQs in terms of different morphological items which are present both in their question forms and in the possible answer forms to the questions. From an inventory of polar alternative question formation, Korean PAQs produce two different patterns of predicative structures. The salient characteristics of Korean PAQs discussed are: 1) they consist of a sentence with two predicates and two complementizers without a coordinator; 2) both polarities of the predicate must be presented in the sentence; 3) the order of polarity is fixed (an affirmative predicate precedes a negative predicate); and 4) the two complementizers must be phonologically identical. Despite their superficially bi-clausal appearance, I will argue in chapter 4 that Korean PAQs consist of a single clause. Before entering into the main body of my argument, in the next chapter I will present some theoretical assumptions that will be adopted in this thesis and also examine Korean complementizers and finiteness within the framework of Rizzi (1997; 2001).

Chapter 3 Properties of complementizers: Theoretical assumptions

3.0 Introduction

I begin my analysis of Korean PAQs by discussing the C system employed in Korean PAQs. Previous research into complementizers has led to discussion about Clausal Type (Cheng 1997; Chomsky 1995), also known as Force Projection (Rizzi 1997; 2001). The complementizer domain, which is sometimes referred to as the “left periphery” (Rizzi 1997), is traditionally viewed as consisting of clause-introducing elements in head-initial languages. Works on Korean questions have not touched much on the role of complementizers, and researchers have employed many different terms for “right-periphery” elements in Korean: for instance, these elements have been referred to as both mood markers (Cho 1996), and sentence enders (Sohn 1996; Lee and Ramsey 2000). *Ci* has been analyzed as both a *yes-no* question and a *wh*-question particle (Cheng 1997), and *ni* has been argued to be either the realization of an interrogative operator (Beck and Kim 1997), or a question marker or an interrogative sentence-type suffix (Sohn 1999; Ko 2005; Kwon & Zribi-Hertz 2008). In this thesis, I suggest that all of these items should be treated as phonological realizations of the abstract complementizer in the head of ForceP, Force⁰. I propose that these items belong syntactically and functionally within the framework of a Rizzi-style C system. The role of complementizers extends to other sentence types such as exclamative, declarative, and jussive, and to both subordinate and main clauses in Korean. This thesis is written within the framework of Rizzi (1997;

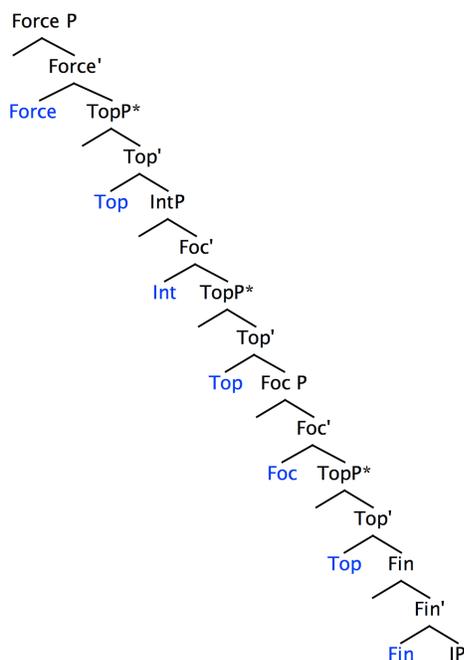
2001), who proposes multiple CP layers: ForceP, TopicP, InterrogativeP (IntP), FocusP (FocP), and FiniteP (FinP). This thesis does not adopt Kayne's (1994) proposal that all languages have a universal SVO order.

The organization of this chapter is as follows. Section 3.1 briefly discusses the literature on the relationship between clause types and complementizers. In section 3.2, the focus of discussion is narrowed down to complementizers in the domain of questions. In 3.2.1, the subcategories of question, such as polar, polar alternative, alternative, constituent, tag, and echo questions, are discussed in terms of the role of complementizers in Korean. Feature agreement between force complementizers and subject is illustrated in 3.2.2. In section 3.3, I discuss the literature on finiteness and the properties of Korean finite complementizers in embedded clauses. Section 3.4 is the summary of the chapter.

3.1 Clause types and complementizers

This thesis adopts Rizzi's (1997) influential analysis of the complementizer system, which claims that four kinds of elements exist in the left periphery: Force, Topic, Focus and Finiteness. Under Rizzi's assumptions, complementizers express not only the Clausal Type (Cheng 1997) of a sentence as interrogative, declarative, or exclamative, but also serve as overt markers of the Topic-Focus system. Topical and focal elements are located in the C system between force and finiteness. Rizzi (2001) also proposes an additional projection, Int(errogative)P, by drawing on data from the Italian complementizer *se* 'if', which introduces embedded polar questions.

(1) Force (Topic*) INT (Topic*) FOC (Topic*) FIN IP



The study shows that *se* ‘if’ and *che* ‘that’ are compatible with a following focused phrase; *se* can be preceded or followed by a topic, while *che* can only be followed by a topic. Rizzi concludes that *se* occupies a position lower than *che* (a Force head) and higher than Focus. Specifically, *se* occupies the position of Interrogative (INT) in (1). Rizzi rejects the possibility of identifying Force as declarative force, or INT as interrogative force.¹⁶ Rizzi’s proposal (ForceP is distinct from IntP; ForceP » IntP) is supported by evidence from the related language Spanish, which allows the fixed sequence *que si* ‘that if’ in a sentence.

The study also suggests that relative pronouns such as *which* are located in the Spec of Force, whereas interrogative pronouns in main-clause questions compete with

¹⁶ Rizzi (1997; 2001) does not discuss the character of either Force and INT in depth. This thesis interprets Rizzi’s proposal as claiming that main-clause interrogative complementizers occur in Force and embedded interrogative complementizers occur in INT.

focused phrases for the Spec of Focus (Rizzi 1997: 325). Therefore, ordinary *wh* elements, i.e. those other than *why* and *how come*, are incompatible with a focused element in main-clause, but not embedded, questions. The special adverbial *wh* operator *perché* ‘why’ in Italian, however, is consistent with a focused element in both main-clause and embedded questions, a behaviour which Rizzi claims can be explained by the fact that *perché* is base generated in the specifier of INT in Italian. Rizzi concludes (1) that the position of *se* ‘if’ is higher than the position of embedded *wh* elements and (2) *wh* elements in embedded questions do not move to the Spec of Focus. Therefore, the position of *wh* elements is lower than the position of embedded Focus. The ordering of C-phrases in embedded clauses is:

(2) ...Force... INT... FOC... Wh...

Another important concept in Rizzi’s C system is that the features of complementizers are different from those previously assumed. This system is particularly relevant in C systems with an activated Topic-Focus field, as Force and Finite are then necessarily separated.¹⁷

(3) The features of embedded finite declaratives

That=+DECL, +FIN

0 = +DECL,+FIN, (+Agr)

(4) C system with the Topic-Focus field

That=+DECL, (+FIN)

0 = (+DECL),+FIN, (+Agr)

(Rizzi 1997, p. 312)

¹⁷ The addition of parentheses indicates that it is optional.

According to Rizzi, Force and Finiteness must split in complex clause type cases where the topic-focus system is activated, whereas Force-Finiteness are functionally equivalent and alternate in simple cases, where the force-finiteness system can be expressed on a single head. In other words, *that* expresses declarative force and may optionally express finiteness, while *θ* expresses finiteness, and may optionally express declarative force as well as agreement. Under Rizzi's analysis, the non-alternation of *that* and *θ* in (5) is explained.

- (5) a. I think [that [next year Top⁰ [0 John will win the prize]]
 b. I think *(that) next year, (*that) John will win the prize.

(Rizzi 1997, p. 313)

Rizzi's analysis implies the possibility of five types of complementizers in embedded clauses, each of which has a different combination of features in natural language: COMP₁ {Force, Finite}, COMP₂ {Force}, COMP₃ {Finite}, COMP₄ {Force, Finite, Agree}, and COMP₅ {Finite, Agree}. English *that* in embedded clauses can be either COMP₁ or COMP₂; the complementizer *θ*, on the other hand, cannot be COMP₂.

The Korean C system has not been fully discussed in the literature. Researchers have observed that overt lexical complementizers on the head of CP in main clauses express Mood or Force, and are related to domain of discourse. Cho (1996) proposes two separate functional categories: MP (Mood Phrase) and CP (Complementizer Phrase). In Cho (1996), the head of CP is specified with nominal and modal features [+/-N, +/-M] and illocutionary force. Cho distinguishes mood markers, which appear in the right

periphery of main clauses, *-ta* (assertion), *-nya/-ni* (question), *-la* (imperative), and *-ca* (exhortative, which he calls propositive) from complementizers in embedded clauses such as *-ko* (quotation), *-ya* (obligation), *to* (permission), *-ka* (question), and *-ci* (suspicion). Lee and Lee (1999) survey about 1,700 final endings in embedded and matrix clauses in Korean. Yoon (1999) and Hahn (2003; 2006) provide a comprehensive and systematic overview of the descriptive distributional properties of diverse Korean complementizers, including an account of the behaviour of interrogative enders in different speech levels such as plain, neutral, polite, etc. They examine the morpho-syntactic properties of enders in different sentence types (declarative, interrogative, and imperative) at a descriptive level. This study has been a very useful reference for confirming my native Korean intuition. The investigation of Korean complementizers undertaken by Hahn (2003) shows that each complementizer has a wider distribution than is indicated by the facts discussed in this thesis. For reasons of length, this thesis is not able to account for the entire range of behaviour of each complementizer in all different contexts. Pak (2006) examines Korean complementizers which mark a clause as imperative, exhortative or promissive: *la*, *ca* and *ma*, respectively. The author proposes that these sentence markers are not force markers but markers of a single clause type, jussive. According to this study, a difference in the person of the subject--second person, first person, and first person inclusive of the addressee--results in an imperative, promissive, or exhortative reading, respectively. This study supports my analysis that a subject enters into an agreement relationship with Force (see 3.2.2) Other scholars have also discussed Korean complementizers: Madigan (2008) discusses “the exhortative marker” *ca* as part of an analysis of obligatory split control in Korean; Kim (2011)

analyzes *ko* ‘that’ as a subordinating complementizer and doubts that *ko* cannot be embedded quotation marker; following Cha (1999) and Pak (2004), Kim (2011) considers the other complementizers *ta*, *nya*, *la*, and *ca* (declarative, interrogative, imperative, and exhortative respectively) to be mood markers; Han and Lee (2008) propose two separate projections to account for negative imperatives in Korean: the modality projection (ModP) and the imperative illocutionary force projection (CP).

In this section, I have proposed that lexical items that appear in the right periphery in Korean are indeed complementizers, the realization of Force. Following Rizzi’s CP analysis, this thesis considers that Force and Finiteness can be expressed on a single complementizer (lexical item) in main clauses. In the next section, I will demonstrate subcategories of questions and illustrate the relationship between question types and complementizers in Korean.

3.2 Question force and complementizers

Interrogatives can be divided into subcategories of questions: polar (yes-no), constituent (wh), alternative, polar alternative, echo, and confirmative (tag) questions. This section illustrates the fact that complementizers of all these different question types are licensed in the same Force Projection in Korean.

The literature postulates that [+Q] on C^0 or the presence of a [+WH] operator yields the syntactic structure of interrogatives. Like the null question complementizer in main clauses in English, the Korean lexical items *ni* and *ci* are glossed as [+Q] in the literature (Cheng 1997; Beck & Kim 1997, 2006; Han & Romero 2004a; Ko 2005; Kwon

& Zribi-Hertz 2008; Ginsburg 2009; Hwang 2010). However, the lexical items *ni* and *ci* are not the only complementizers that appear in the head of ForceP in questions. I show below that Korean lexical items that occur in the right periphery not only express sentence types such as declarative, interrogative, imperative and exhortative, but also may express a specific subcategory of questions, such as echo or tag questions. I argue that adopting the features [+Q], [-Q] or [+WH] is insufficient to account for all the different kinds of complementizers appearing in Force⁰ in Korean questions.

3.2.1 Korean question force complementizers and their features

In the Minimalist Program, identification of the features of lexical items is a necessary part of the computational system. The aim of this section is to illustrate the properties of Korean complementizers and propose a featural analysis of the complementizers. In Table 1 (cf. Yoon 1999), I sort out the grammatically-possible correspondences between clause types and complementizers in main clauses.¹⁸ Each clause type actually has more variants than the ones that appear in this table; use of these variants depending on speech levels such as plain, neutral, polite, etc. This thesis focuses on intimate speech level (non-polite).¹⁹

¹⁸ I organized the table according to my native speaker's intuition with reference to Yoon (1999).

¹⁹ Intimate speech level is one of six addressee honorific levels represented by "sentence enders" in Korean (see Sohn 1999). The right edge of the sentence is not always occupied by force complementizers, but can be occupied by the polite marker *yo* as shown (1). *Yo* is the most common "addressee honorific" complementizer (Sohn 1999). The sentences retain their subcategories of question force. This thesis puts aside analyzing the honorific marker within the C system for the sake of limited space.

- (i) a. ciwu-nun nayil hakkyo-ey ka-na-yo?
Jiwoo -TOP tomorrow school-LOC go-COMP-POLITE
 'Is Jiwoo going to school tomorrow?'
 b. ciwu-nun nayil hakkyo-ey ka-ci-yo?
Jiwoo-TOP tomorrow school-LOC go-COMP-POLITE
 'Jiwoo is going to school tomorrow, isn't she?'

Some complementizers show one-to-one correspondence to a clause type (*ko*, *la*, *ca*, and *ta*) while some complementizers show multiple correspondence to clause types (*e*, *lay*, *ni*, *tay*, *ci*, and *kka*). Some complementizers can appear both in assertion and questions (*e*, *lay*, *tay*). These complementizers are not in free variation because they interact with subjects or with the addressee honorific marker *yo* differently.

Complementizers \ Clause Types	e	lay	ni	kka	tay	ci	ko	la	ca	ta
constituent questions	√	√	√	√	√	√				
polar questions	√	√	√	√	√					
alternative questions	√	√	√	√	√					
polar alternative questions	√	√	√	√	√					
confirmative (tag)					√	√				
echo questions							√			
exclamative			√	√						
imperative	√	√						√		
exhortative						√			√	
declarative	√	√			√					√

Table 1 Korean clause types and possible correspondences with main-clause complementizers

Representative complementizers that appear in intimate speech are *ni*, *ci* and *ko*. In the example in (6), the clause with *ni* in the syntactic environment (a) expresses a polar question. The features of *ni* are possibly [FORCE], and the feature [REALIS], because *ni* inquires simply about the truth of the proposition.²⁰ *ci* marks the utterance as a confirmative question (6b), and *ko* marks it as an echo question (6c).²¹

²⁰ The force of *ni* is not interpreted as a question force in exclamative clauses. Consider, for instance, the exclamations *elmana wun-i cohu-ni!* ‘How lucky you are!’ or *elmana yeypu-ni!* ‘How pretty you are!’ The Force of *ni* is not *question* in the context.

²¹ The complementizers *ci* and *ko* have different interpretation depending on whether they appear in main-clauses or embedded clauses; *ko* marks clauses as echo questions in main clauses, but it can serve as a direct quotative marker in embedded clauses. Moreover, constituent questions with the complementizer *ci* are not interpreted as confirmative questions. A hearer/addressee is less engaged in constituent questions with *ci* in contrast to constituent questions with *ni*. (cf. Ceong 2011).

Yukse 2008; Adger & Svenonius 2011). The properties of features of question complementizers have been investigated in constituent questions in an effort to account for *wh*-phrase movement. Chomsky (2000, p. 128) suggests that, as a probe, C carries an uninterpretable Q-feature, and that a *wh*-phrase contains both an uninterpretable [WH] feature and an interpretable operator feature [Q]; uninterpretable features must be eliminated through agreement. Elements that contain an EPP feature trigger movement of a *wh*-phrase. Watanabe (2006) argues that the Q-feature of C is interpretable. Hornstein et al. (2005) illustrate that there is a strong *wh*-feature in an interrogative complementizer, Q. It is not clear whether these authors consider Q to be an abstract complementizer or a feature of a complementizer. They account for *wh*-movement in English by proposing that the interrogative complementizer Q is selected and merged in computation and that a *wh*-phrase is moved to [Spec, CP] to check a strong *wh*-feature on Q. In the same study, they propose two null matrix interrogatives C^0 , one with a strong *wh*-feature and the other with a weak *wh*-feature. This analysis is employed to account for optional *wh*-movement in Brazilian Portuguese. McCloskey (2002) proposes an *op*-feature to account for interactions between movement and resumption in Irish. The *op*-feature in this approach identifies operators — scope-taking elements which must command their scope; *wh*-operators and null pronominal operators carry an *op*-feature and it matches *Op* on C in Irish.

A question that arises here is what kind of features can be carried by the head of ForceP in Korean PAQs. So far, both interpretable and uninterpretable [Q] features are possible candidates. Scope-taking *op*-features are possible because there is evidence that complementizers scope over the interpretation of IP. In addition to those features, the

fact that Korean complementizers are sensitive to a ϕ -feature (PERSON) on the subject suggests that there may be an uninterpretable ϕ -feature (PERSON) on Force complementizers.

3.2.2 Agreement between Force and Subject

This section considers the fact that some complementizers appear in both questions and declarative sentences. This thesis claims that *e*, *lay* and *tay* have an underspecified [FORCE] feature instead of a feature [QUESTION]. The derivation converges at PF and LF when the ϕ -feature (PERSON) of the force operator matches the ϕ -feature (PERSON) of a local subject. *ni* in the polar question (8) is complementary with *lay* in the context of reflecting the subject's point of view (cf. Speas 2003). In the question in (7), the speaker (not the subject of the root verb *ka* 'go') wants to know the truth of the event, but in (8) the speaker asks the plan or opinion of the subject (addressee) about the event.²²

- (7) ne-nun nayil ka-**ni**?
you-TOP tomorrow go-COMP
 Do you go/leave tomorrow?
- (8) ne-nun nayil ka-l-**lay**?
you-TOP tomorrow go-MOOD-COMP
 Would you like to go/leave tomorrow?

Unlike the clause with *lay* in (8), which is interpreted as a question, the sentence in (9) is interpreted as a declarative when the subject is in the first person. It is not the case that

²² According to Hahn (1991), the morpheme *l* is an allomorph of *keyss* or *li*, which expresses an unconfirmed event. Hahn considers *l-lay* to be a complex sentence ender. According to my intuition, *ni* is used when a speaker asks about the truth value of a proposition, whereas *l-lay* is used when a speaker asks about the address's plan or opinion. The Standard Korean Language Dictionary (NIKL) defines *l-lay* as an ender, which is a suffix attached to a verb stem, which is used to express the speaker's willingness, or to ask for the addressee's opinion.

rising or falling intonation changes the force of the sentence. The complementizer *lay* occurs with subject and Force agreement for <1st, DECL>, <2nd, QUES>, and *<3rd, DECL/QUES>.

- (9) na-nun nayil ka-l-lay.
I-TOP tomorrow go-MOOD-COMP
 I would like to go tomorrow.

If a first-person-subject occurs in the context of the question in (8), *kka* is the appropriate complementizer, as shown in (10).

- (10) na-nun nayil ka-l-kka?
I-TOP tomorrow go-MOOD-COMP
 Should I go (leave) tomorrow?

According to Hahn (1991), *l-kka* is a casual question complementizer which expresses the speaker's intention in future tense or expresses an assumption of the speaker in non-future tense. *kka* is incompatible with a second-person subject, as shown in (11).

- (11) * ne-nun nayil ka-l-kka?
you-TOP tomorrow go-MOOD-COMP
 'Should you leave tomorrow?'

If a third-person-subject occurred in this construction, the complementizer is interpreted as the speaker's wondering about the event, as shown in (12a). In contrast to (12b), (12a) does not demand a direct answer. To sum up, the complementizer *kka* occurs with subject and Force agreement for <1st, QUES>, *<1st, DECL>, *<2nd, DECL/QUES>, <3rd, QUES>, and *<3rd, DECL>.

- (12) a. *ciwu-nun* *nayil* *o-l-kka?*
Jiwoo-TOP *tomorrow* *go-MOOD-COMP*
 ‘(I am wondering) if Jiwoo is coming tomorrow.
- b. *ciwu-nun* *nayil* *o-ni?*
Jiwoo-TOP *tomorrow* *go-COMP*
 ‘Is Jiwoo coming tomorrow?’

The empirical data illustrated above suggest that the clauses (7) ~ (12) with different complementizers are interpreted as polar questions that have different “points of views” of subject/speaker and Mood in the sense of Cinque (1999); *l-lay* inquires about the volition of a subject in addition to indicating question force, while *ni* inquires about the truth of a proposition only. However, *l-lay* cannot express the volition of the subject in the third person; *tay* expresses the volition of a third person or asks about the knowledge of the addressee concerning the event, as shown in (13).²³

- (13) a. **ciwu-nun* *nayil* *ka-l-lay?*
Jiwoo(3rd)-TOP *tomorrow* *go-MOOD-COMP*
 *‘Would Jiwoo like to leave tomorrow?’
- b. *ciwu-nun* *nayil* *ka-l-lay?*
Jiwoo(2nd)-TOP *tomorrow* *go-MOOD-COMP*
 ‘Would you like to leave tomorrow?’
- c. *ciwu-nun* *nayil* *ka-n-tay?*
Jiwoo(3rd)-TOP *tomorrow* *go-MOOD-COMP*
 ‘Is Jiwoo going to leave tomorrow?’

As Korean allows *pro* subjects, sentence (14) is grammatical and the subject is interpreted as a contest-free third person both in the question (14a) with rising intonation and in the declarative (14b) with falling intonation.

²³ Proper nouns can be used to refer to the addressee or a third-person. (13a) is grammatical if and only if the proper noun refers to the addressee. If a proper noun is not the addressee, the sentence in (13a) is ungrammatical.

- (14) a. *pro* *nayil* *ka-n-tay?*
 he/she/they *tomorrow* *go-MOOD-COMP*
 ‘Is (she/he) going to leave tomorrow?’
- b. *pro* *nayil* *ka-n-tay.*
 he/she/they *tomorrow* *go-MOOD-COMP*
 ‘(She/He) is going to leave tomorrow.’

The data above imply that complementizers in main clauses converge at PF and LF through agreement between ϕ -feature (PERSON) of a subject and Force.²⁴

I have shown that, because it is a head-final language, the specification of Force in Korean sentence is expressed in the right periphery by complementizers in the head of Force. However, the fact is that the interpretation of Force on a clauses is interpreted differently depends on the subject; the fact that a certain subject is not compatible with a certain complementizer (e.g., the fact that *tay* only select a third-person subject) implies that complementizers not only contain the feature [FORCE] but also uninterpretable ϕ -feature (PERSON).

The discussion of features in the next section focuses on the polar alternative question force complementizer.

3.2.3 Polar Alternative Question Force Complementizers

Several of the complementizers that we discussed in the previous section, including *e*, *ni*, *lay*, *tay* and *kka*, can also occur in polar alternative questions (PAQs). However, the declarative interpretation of these complementizers (*e*, *lay*, and *tay*) is not available in the

²⁴ The agreement between PERSON of a subject and Force differs from morphological agreement in many languages, as Dr. McGinnis points out. This thesis assumes that semantic/syntactic agreement between PERSON and Force in Korean complementizers is manifested in syntax as well.

PAQ clause format, where both affirmative and negative forms of the predicate are present, each accompanied by identical complementizers.

On the other hand, the complementizers that appear in echo questions and confirmative questions cannot occur in PAQs. The examples in (15) show the complementizers that can appear in PAQs, and (16) shows the complementizers that are not available in this environment. The distribution of the two complementizers *ni* and *e* in (15a) are slightly different. The complementizer *ni* cannot appear in assertions, whereas the complementizer *e* can; when *e* appears it shows up a single complementizer associated with falling intonation. In this case, the subject of the clause cannot be second-person .

- (15) a. *pro* *ku* *chayk-ul* *sa-ss-e/ni* *an* *sa-ss-e/ni?*
the book-ACC buy-PAST-COMP not buy-PAST-COMP
 ‘Did (you) buy the book or not?’
- b. *pro* *ku* *chayk-ul* *sa-ss-tay* *an* *sa-ss-tay?*
the book-ACC buy-PAST-COMP not buy-PAST-COMP
 ‘Did (he/she) buy the book or not?’
- c. *pro* *ku* *chayk-ul* *sa-l-lay* *mal-lay?*
the book-ACC buy-MOOD-COMP not.MOOD-COMP
 ‘Would (you) like to buy the book or not?’
- d. *pro* *ku* *chayk-ul* *sa-l-kka* *mal-kka?*
the book-ACC buy-MOOD-COMP not.MOOD-COMP
 ‘Should (I) buy the book or not?’
- (16) a. * *ku* *chayk-ul* *sa-ss-ci* *an* *sa-ss-ci?* (Tag)
the book-ACC buy-PAST-COMP not buy-PAST-COMP
 *‘You bought the book or not, didn’t you?’
- b. * *ku* *chayk-ul* *sa-ss-ta.ko* *an* *sa-ss-ta.ko?* (Echo)
the book-ACC buy-PAST-COMP not buy-PAST-COMP
 *‘You bought the book or not?’

- c. * ku chayk-ul sa-**la** an sa-**la**? (Imperative)
the book-ACC buy-COMP not buy-COMP
 *‘Buy the book or not?’
- d. * ku chayk-ul sa-**ca** an sa-**ca**? (Exhortative)
the book-ACC buy-COMP not buy-COMP
 *‘Let’s buy the book or not?’
- e. * ku chayk-ul sa-ss-**ta** an sa-ss-**ta**? (declarative)
the book-ACC buy-PAST-COMP not buy-PAST-COMP
 *‘(You) bought the book or not?’

Not only can the complementizers of echo questions and tag questions not co-occur with PAQs but constituent question elements are also incompatible with PAQs, as illustrated in chapter 1. The examples are repeated here in (17).

- (17) a. * nwu-ka hakkyo-ey ka-ss-**e** mos ka-ss-**e**?
who-NOM school-LOC go-PAST-COMP cannot go-PAST-COMP
 *‘Who could go to school or not?’
- b. *na-nun mwes-ul sal-l-**kka** mal-**kka**?
I-TOP what-ACC buy-MOOD-COMP not.MOOD-COMP
 *‘What should I buy or not?’

In consideration of the fact that *wh*-phrases, echo, and tag complementizers cannot occur in PAQs, this thesis proposes that PAQ complementizers contain the feature [POLARITY ALTERNATIVE], which is not shared by the other question complementizers. The answer for why *wh*-phrases and *ci* and *ko* cannot occur in PAQs will be examined in chapter 4. The main point of this section is that we need the distinctive feature [POLARITY ALTERNATIVE] for polar alternative question complementizers in order to distinguish them from complementizers in constituent, polar, tag and echo questions. The structure and features of PAQ complementizers will be further discussed in chapter 4, but

before that, I turn to a investigation of finite complementizers in Korean in the following section.

3.3 Finite complementizers in Korean

3.3.1 What is a finite complementizer?

Under the assumption that the lexical items in the right periphery in Korean are complementizers, the question arises whether or not Korean complementizers distinguish finiteness from non-finiteness of clauses. FinP express a specification of finiteness, whether or not the head manifests mood distinctions or tense and subject (person) agreement (Rizzi 1997). By mood distinctions, I refer here to indicative, subjunctive, conditional and/or other distinctions of realis versus irrealis. Rizzi (1997) and Cristofaro (2003) observe that the morphological realization of finiteness distinctions varies cross linguistically. Contrasts in finiteness, discussed in the literature mostly on the basis of Indo-European languages, are considered to encompass: 1) verb forms that can occur in main clauses (finite) versus verb forms that occur only in embedded clauses (non-finite); 2) main clauses that permit formal contrasts in tense and mood versus embedded clauses that lack tense and mood contrasts (Crystal 1997). On the basis of these definitions, we can conclude that finiteness is a syntactic mechanism signalling whether or not a clause is embedded or whether or not the head manifests mood or tense distinctions. It is plausible that finiteness in Indo-European languages is associated with categories such as verb, auxiliary or complementizer, whereas Korean finiteness is principally encoded in lexical

complementizers; this assumption is in line with the fact that most heads of functional categories are overtly expressed as lexical items in Korean.

3.3.2 Korean finite complementizers: *nun* and *l*

To the best of my knowledge, there are no Korean verb forms that are restricted to either dependent clauses or independent clauses. However, the elements *nun/un/n* and *l/ul* can only occur in embedded clauses. *nun/un/n* and *l/ul* are in complementary distribution in terms of mood.²⁵ The contrasts in (18) and (19) show that *nun* (*un/n* are allomorphs) only occurs in embedded clauses marked by the interrogative complementizer *ci* or the declarative complementizer *kes*.

(18) a. *pro ciwu-ka ca-nun-ci kwungkumha-ta.*
Jiwoo-NOM sleep-FIN-COMP wonder-COMP-DECL
 ‘(I) am wondering if Jiwoo is sleeping’.

b. **pro ciwu-ka ca-ci kwungkumha-ta.*
Jiwoo-NOM sleep-COMP wonder-COMP-DECL
 ‘(I) am wondering if Jiwoo is sleeping.’

c. *ciwu-nun ca-ni?*
Jiwoo-TOP sleep-COMP
 ‘Is Jiwoo sleeping?’

d. **ciwu-nun ca-nun-ni?*
Jiwoo-TOP sleep-FIN-COMP
 ‘Is Jiwoo sleeping?’

(19) a. *ciwu-ka chay-ul ilk-ko.iss-nun-kes-ul po-ass-ta.*
Jiwoo-NOM book-ACC read-PROG-FIN-COMP-ACC see-PAST-COMP
 ‘I saw that Jiwoo was reading a book.’

²⁵ Some researchers treat *nun-ci* as a question morpheme or particle [+Q] (Ko 2005; Hwang 2010). In relative clauses, *nun* is considered to be a relativizer or adnominalizer (Kim 2009).

- b. *ciwu-ka chay-ul ilk-ko.iss-kes-ul po-ass-ta.
Jiwoo-NOM book-ACC read-PROG-COMP-ACC see-PAST-COMP
 ‘I saw that Jiwoo was reading a book.’
- c. ciwu-ka chay-ul ilk-ko.iss-ta.
Jiwoo-NOM book-ACC read-PROG-COMP
 ‘Jiwoo is reading a book.’
- d. *ciwu-ka chay-ul ilk-ko.iss-**nun**-ta.
Jiwoo-NOM book-ACC read-PROG-FIN-COMP
 ‘Jiwoo is reading a book.’

(18a) and (19a) show that the occurrence of *nun* in embedded clauses is grammatical, whereas (18b) and (19b) show that the same sentences lacking *nun* are ungrammatical. (18d) and (19d) show that the occurrence of *nun* in main clauses yields ungrammatical sentences.

The same contrast occurs in (20) and (21). The examples show that the finite complementizer *l* (*ul* is an allomorph) only occurs in embedded clauses marked by *ci* or *kes*.

- (20) a. ciwu-ka chay-ul ilk-**ul**-ci molu-kess-ta.
Jiwoo-NOM book-ACC read-FIN-COMP not.know-MOOD-DECL
 ‘(I) am not sure if Jiwoo will read the book.’
- b. *ciwu-ka chay-ul ilk-ci molu-kess-ta.
Jiwoo-NOM book-ACC read-COMP not.know-MOOD-COMP
 ‘(I) am not sure if Jiwoo will read the book.’
- c. ciwu-nun chay-ul ilk-ni ?
Jiwoo-top book-ACC read-COMP
 ‘Does Jiwoo read books?’
- d. *ciwu-nun chay-ul ilk-**ul**-ni ?
Jiwoo-TOP book-ACC read-FIN-COMP
 ‘Does Jiwoo read books?’
- (21) a. *pro pro* chay-ul mayil ilk-**ul**-kes-ul kangcohay-ss-ta.
book-ACC everyday read-FIN-COMP-ACC emphasize-PAST-COMP
 ‘(*pro*) emphasized (*pro*) to read a book everyday.’

- b. * *pro pro* chay-ul mayil ilk-kes-ul kangcohay-ss-ta.
book-ACC everyday read-COMP-ACC emphasize-PAST-COMP
 ‘(pro) emphasized (pro) to read a book everyday.
- c. ciwu-nun chay-ul mayil ilk-nun-ta.
Jiwoo-TOP book-ACC everyday read-PRES-COMP
 ‘Jiwoo reads a book everyday.
- d. *ciwu-nun chay-ul mayil ilk-nun-**ul**-ta.
Jiwoo-TOP book-ACC everyday read-PRES-FIN-COMP
 ‘Jiwoo reads a book everyday.
- e. ciwu-nun chay-ul mayil ilk-**ul**-kes-i-ta.
Jiwoo-TOP book-ACC everyday read-FIN-COMP-be-DECL
 ‘Jiwoo will read a book everyday.

(20b) and (21b) show that lack of *l* in embedded clauses is ungrammatical, whereas (20d) and (21d) show that the occurrence of *l* in main clauses is prohibited.

The lexical-functional item *nun* is categorized as an *adnominal* morpheme or *relativizer* in the literature (Lee & Ramsey 2000; Han and Kim 2004; Ha 2007; Kim 2009), since the item along with its allomorphs also occur in relative clauses, as in (22)²⁶.

- (22) a. chay-ul ilk-**ul** salam
book-ACC read-COMP person
 the/a person who will read the book
- b. chay-ul ilk-**nun** salam
book-ACC read-COMP person
 the person who reads the book

However, the restricted distribution of *nun* and *l* recalls theoretical discussion of finiteness. As we have seen, both *nun* and *l* appear in many types of subordinating clauses, including both relative and embedded clauses.

²⁶ Literature on relative clauses seems not to discuss the status of the lexical item *l*.

The lexical item *kes* is variously treated as a defective noun (Sohn 1999), a pronominal (Chung & Kim 2003; Kim 2004; Lee 2006 cited in Kim 2009), or a complementizer (Jhang 1994 cited in Kim 2009) in the literature. This thesis considers that *nun* and *l* are heads of FinP, and that *ci* [+INT] and *kes* [-INT] are heads of IntP (cf. Rizzi 2001). In the context of embedded declaratives, the head of IntP is *kes*, whereas in the context of embedded interrogatives the head of IntP is *ci*, as in (23).

- (23) a. *ciwu-ka onta-nun-kes-ul an-ta.*
Jiwoo-NOM come-FIN-INT-ACC know-DECL
 ‘(I) know that Jiwoo comes.’
- b. *ciwu-ka o-nun-ci al-ko.sip-ta.*
Jiwoo-NOM come-FIN-INT know-MOOD-DECL
 ‘(I) would like to know if Jiwoo will come.’

Following Rizzi (1997, p. 312), I assume that finiteness and force are separated in the context of embedded clauses. The lexical item *kes* never occurs in the head of ForceP in main clauses, but *ci* does.²⁷ *kes* may occur as the head of a nominalized clause in Korean, as in (24). The nominalized clause is a complement of the verb *i* ‘be’.

- (24) *na-nun tola.o-nun kil-ey uyu-lul sa.o-l-kes-i-ta.*
I-TOP come.back-FIN road-PP milk-ACC buy.come-FIN-INT-be-FORCE
 I will buy milk on my way coming back (home).

In this section, I have claimed that the lexical items that occur between the head of TP and IntP in embedded clauses are finite complementizers, which show an asymmetry

²⁷ However, *ci* in the highest projection of ForceP in main clauses is interpreted as having confirmative (tag) question force, exhortative, or self question force in different environments as discussed in Ceong (2011).

between main and embedded clauses. In embedded clauses, non-finiteness — expressing syntactic dependency — is realized separately from the Force complementizers.

3.3.3 Korean Finite projection

In section 3.3.1, I reviewed how the properties of finiteness are defined in the literature. On the basis of the properties of finiteness, I claim that *nun* and *l* which occur in embedded clauses in Korean, are finite complementizers that function to indicate the dependency of the clause.

Based on the properties of the head of FinP as presented by (Crystal 1997; Rizzi 1997; Cristofaro 2003), in principle four separate finiteness heads can potentially be distinguished, as shown in (25).

- (25) i. Fin₁: manifesting mood
 ii. Fin₂: manifesting tense
 iii. Fin₃: manifesting independence of clause
 iv. Fin₄: manifesting agreement

ForceP is considered to manifest force, as in (26).

- (26) Force₁: manifesting force of clauses

In English, there is a functional category that is associated with mood and tense, which is the auxiliary, and there is a functional category that is associated with force and finiteness, which is the complementizer. I claim that the five functions (FIN₁, FIN₂, FIN₃,

FIN₄, and Force₁) discussed above might split into different functional categories in Korean. In section 3.1, I suggested that Rizzi's analysis of English provides for the possible existence of five different complementizers (COMPs) in embedded clauses in natural languages, each of which can be null or morphologically encoded: COMP₁ {INT, FIN}, COMP₂ {INT}, COMP₃ {FIN}, COMP₄ {INT, FIN, Agr}, and COMP₅ {FIN, Agr}. If we match the property of Korean lexical complementizers to COMPs, it seems reasonable to postulate *ci* and *kes* are equivalent to COMP₁ {INT, FIN}, and *nun* and *l* have the property of COMP₃ {FIN}, which only appears in embedded clauses. The main-clause complementizers *ni*, *tay*, *kka*, *lay*, and *e* are possibly equivalent to COMP₄ {Force (INT), FIN, Agr}.

I have illustrated the properties of force and finite complementizers in Korean. The discussion has necessarily been brief and the analysis is not in depth because the main goal of this thesis is to investigate the structure of Korean PAQs. To the best of my knowledge, the properties of force and finite complementizers presented here have not been fully discussed in the literature because most studies focus on other aspects of Korean syntax. With this background, we can go forward to examine the complementizers in Korean PAQs.

3.4 Summary

Reviewing the split CP hypothesis (Rizzi 1997), I discussed the C system in Korean.²⁸ Basis on empirical data, I proposed that the right periphery in Korean PAQs is occupied by complementizers that realize illocutionary question force in the highest projection in

²⁸ I have not examined what the C system would look like when Topic or Focus layers are activated in Korean.

the C system. These complementizers (*e*, *lay*, *tay*, *kka*, *ni*) share some properties [FORCE] but do not inherently contain the [QUESTION] feature; some of them (*e*, *lay*, *tay*) can occur in both declarative and interrogative clauses. I observed that the complementizers (*e*, *lay*) with subject agree ϕ -feature (PERSON) yield both declarative and interrogative clauses. I argued that the feature [Q] is not sufficient for interpreting all lexical complementizers in Korean.

This thesis proposes that complementizers in main clauses encode both force and finiteness. Korean finiteness, which serves to overtly manifest the dependency of the clause is represented separately in embedded clauses. In the next chapter, I will investigate the structure of Korean PAQs in main and embedded clauses on the basis of the theoretical assumptions made in this chapter. I will demonstrate how the Korean polar alternative questions presented in chapter 2 are derived within the Minimalist Program.

Chapter 4 Structure of Korean polar alternative questions

4.0 Introduction

In this chapter, I will address the following research questions: what is the constituency of Korean polar alternative questions? What kind of features are involved in Korean PAQs? How does the structure of Korean PAQs differ in main and embedded clauses? What is the structure of Korean PAQs when they co-occur with a constituent question in a clause?

The organization of this chapter is as follows. In section 4.1, I argue that Korean PAQs do not involve coordination structures.²⁹ This means that I do not follow the possible hypothesis that the formation of Korean PAQs involves the deletion of a coordinator or the presence of a null coordinator. In section 4.2, which reviews two previous views on polar alternative questions, I begin my analysis by examining the features of Korean PAQ complementizers. With this background, I illustrate how the structure of Korean PAQs differs in main clauses and embedded clauses. Section 4.3 shows the asymmetric compatibility of Korean PAQs with constituent questions in matrix and embedded clauses: Korean PAQs are incompatible with constituent questions in main clauses, but compatible with them in embedded clauses. I account for the distinct behaviour of the Korean PAQ in these two types of clauses by appealing to the notion of illocutionary force in speech act theory. Section 4.4 is a summary of the chapter.

²⁹ The structure of Korean PAQs has not been examined in the literature, but English PAQs are considered to be coordination clauses (discussed in chapter 2 of this thesis). Chinese PAQs are analysed with two types of structures in the literature: a coordination structure, which is formed with the coordinator *haishi* ‘or’ and a non-coordination structure, which is used for A-not-A questions.

4.1 Constituency in Korean PAQs

I begin by discussing the constituency of Korean PAQs. In this section, I argue that a Korean PAQ is a single clause. Even though there are two predicates and two complementizers in this type of utterance, there are no overt coordinators or subordinators in Korean PAQs. The single-clause proposal receives empirical support from four facts: fixed constituent order of predicates in Korean PAQs, mandatory identity between the phonological form of the two complementizers, the negative auxiliary *mal*'s inability to stand-alone, and the prohibition against lexical disjunctive coordinators in certain embedded Korean PAQs.

4.1.1 The fixed polarity order

The polarity order in Korean PAQs is fixed as in (1); the affirmative predicate precedes the negative predicate. The reverse order, demonstrated in (2), is not allowed in Korean PAQs.³⁰ If there were an underlying coordinator in Korean PAQs, we would expect polarity order variation to be permissible.³¹

- (1) ne-nun ku chayk-ul sa-ss-ni an sa-ss-ni ?
you-TOP the book-ACC buy-PAST-COMP not buy-PAST-COMP
 'Did you buy the book or not?'

³⁰ If there is a pause between *an sa-ss-ni* 'not bought' and *sa-ss-ni* 'bought', the sentence can be interpreted as consisting of two clauses, one negative and one affirmative. The clauses with *animyen* 'if.not' are grammatical if the negative clause precedes the affirmative clause.

³¹ Some chronological coordinates in English show restricted, fixed word order, so fixed order may be a weak argument. However, other languages like Japanese and Chinese don't use a coordinator for chronological coordination.

(2) a. *ne-nun ku chayk-ul an sa-ss-ni sa-ss-ni ?

Reversibility is usually considered to be a basic property of coordination; the existence of a fixed order in Korean PAQS therefore argues against approaches which postulate deletion of a coordinator or the existence of a null coordinator in this construction. This thesis postulates that the pattern requiring fixed polarity order forms a conceptual unit.

4.1.2 Phonologically identical complementizers

Does the presence of two complementizers in a sentence indicate that there are two clauses? I propose that these two complementizers stand in a Copy or Agree relationship with each other. In polar questions with a second person subject *ne* ‘you’, the complementizer *e* is interpreted as interrogative, as in (3).

(3) a. ne-nun ku chayk-ul an sa-ss-**e**?
you-TOP the book-ACC not buy-PAST-COMP
 ‘Didn’t you buy the book?’

However, *sa-ss-e* ‘did (you) buy’ cannot be substituted for the negative portion of the PAQ in example (4).

(4) *ne-nun ku chayk-ul sa-ss-ni an sa-ss-**e**?
you-TOP the book-ACC buy-PAST-COMP not buy-PAST-COMP
 ‘Did you buy the book or not?’

Korean PAQs require that their two complementizers be identical, as in (5).

(5) a. ne-nun ku chayk-ul sa-ss-**ni** an sa-ss-**ni**?
you-TOP the book-ACC buy-PAST-COMP not buy-PAST-COMP
 ‘Did you buy the book or not?’

- b. ne-nun ku chayk-ul sa-ss-e an sa-ss-e?
you-TOP the book-ACC buy-PAST-COMP not buy-PAST-COMP
 ‘Did you buy the book or not?’

If Korean PAQs consisted of two separate clauses, there should be no such limitation on the choice of possible complementizers, as is the case in the uncontroversially bi-clausal example in (6).

- (6) ne-nun ku chayk-ul sa-ss-**ni** animyen an sa-ss-e?
you-TOP the book-ACC buy-PAST-COMP if.not not buy-PAST-COMP
 ‘Did you buy the book, or not?’

Mandatory identity between the phonological forms of the two complementizers supports the idea that one complementizer is a copy of the other complementizer and Korean PAQs are a single clause.³²

4.1.3 The negative auxiliary *mal*

The Korean negative auxiliary *mal* ‘don’t’ is considered by some scholars (Han & Lee 2008) to be a “lexicalized item”. This analysis is based on the behaviour of the long negation *ani-* ‘not’ and the light verb *ha* ‘do’ in the context of deontic modality: (7a) shows the use of *an* plus *ha* in the long negation, while (7b) shows the corresponding form in the context of negative deontic modality and (7c) shows affirmative modality.³³

³² The other case where complementizers usually match is in alternative questions, as in (i).

- (i) ne-nun onul ka-l-lay nayil ka-l-lay?
you-TOP today go-MOOD-COMP tomorrow go-MOOD-COMP
 Would you leave today or tomorrow?

³³ The short form *anh-ass-ta* is used more frequently than the long form *ani ha-yess-ta* (7a) in modern Korean, but I use the long form to show the contrast to (7b).

- (7) a. na-nun ku chayk-ul sa-ci ani hay-ss-ta.
I-TOP the book-ACC buy-COMP not do-PAST-COMP
 ‘I didn’t buy the book.’
- b. na-nun ku chayk-ul sa-ci mal-aya hay-ss-ta.
I-TOP the book-ACC buy-COMP not-should do-PAST-COMP
 ‘I shouldn’t buy the book.’
- c. na-nun ku chayk-ul sa-ss-eya hay-ss-ta.
I-TOP the book-ACC buy-PAST-should do-PAST-COMP
 ‘I should have bought the book.’

The negative auxiliary *mal* can occur in Korean PAQs, as shown in (8).

- (8) na-nun ku chayk-ul sa-l-kka mal-kka?
I-TOP the book-ACC buy-MOOD-COMP MOOD.not-COMP
 ‘Should I buy the book or not?’

mal-kka cannot exist as a stand-alone predicate, as shown in (9), regardless of the preceding discourse context. It needs to occur with a full verb, as in (10).

- (9) *na-nun ku chayk-ul mal-kka?
I-TOP the book-ACC MOOD.not-COMP
 *‘Shouldn’t I (buy) the book?’
- (10) na-nun ku chayk-ul sa-ci mal-kka?
I-TOP the book-ACC buy-COMP MOOD.not-COMP
 ‘Shouldn’t I buy the book?’

The fact that occurrence of a full verb is obligatory implies that *salkka malkka* in (8) is a constituent, and supports the one-clause analysis of Korean PAQs. Since *mal-kka* cannot regularly act as a stand-alone predicate, there is no reason to expect that it should be able to support its own clause in a polar alternative construction. The grammaticality of example (8) above therefore supports the idea that Korean PAQs consist of a single

clause. It is interesting that the main verb *sa* ‘buy’ shows up with the complementizer *ci* in (10).

4.1.4 Non-involvement of lexicalized disjunction

An additional piece of evidence in favour of the single-clause approach is the asymmetry between sentences that contain the predicative adjective *caymi.iss* ‘interesting’ (literally ‘there are interests’) with the lexically-overt disjunction *animyen* ‘if.not’, and sentences which contains the adjective but not the disjunction. (11) shows a PAQ. (12) and (13) show sentences with the disjunction.

- (11) *ku chayk-un caymi.iss-ni eps-ni?*
the book-TOP be.interesting-COMP be.not-COMP
 ‘Is the book interesting or not?’
- (12) **ku chayk-un caymi.iss-ni animyen eps-ni?*
the book-TOP be.interesting-COMP if.not be.not-COMP
 ‘Is the book interesting, or not?’
- (13) *ku chayk-un caymi.iss-ni animyen caymi.eps-ni?*
the book-TOP be.interesting-COMP if.not not.interesting-COMP
 ‘Is the book interesting, or not?’

Both *caymi.iss* ‘interesting’ and *caymi.eps* ‘not.interesting’ are lexical items listed in Korean dictionaries.³⁴ The morphemes of the words can be separated in a polar

³⁴ There are idiomatic phrases in which *caymi* ‘interest’ and *iss-ta* ‘have’ are separated by the nominative marker *ka*, but in that case, the phrase doesn’t have the original meaning ‘interesting.’

(i) *yosay cangsa caymi-ka iss-ni?*
recent business interest-NOM be-COMP
 ‘Is your business getting along?’

alternative question but cannot be separated in an alternative question.³⁵ The contrast between (12) and (13) shows that *caymi.eps* ‘not.interesting’ cannot be interrupted by the lexical disjunctive item. The ungrammaticality of (12) implies that *caymi.iss-ni eps-ni* ‘interesting or not’ is one syntactic unit.

Usually, the disjunction *animyen* ‘if not’ can be used to conjoin two clauses. I propose that the difference between the disjunctive and non-disjunctive syntactic structures is quite simple:³⁶ if there is a disjunctive coordinator, the sentence contains two clauses.

- (14) a. *sey-na-nun* [*nay chayk-i caymi.iss-nun-ci animyen*
Sena-TOP my book-NOM be.interesting-FIN-COMP if.not
- caki chay-i caymi.iss-nun-ci*] (lul) *mwul-ess-ta.*
her book-NOM be.interesting-FIN-COMP ask-PAST-DECL
 “Sena asked if my book is interesting or her book is interesting.” (alternative)
- b. *[*nay chayk-i caymi.iss-nun-ci animyen eps-nun-ci*] *mwulessta.*
my book-NOM be.interesting-FIN-COMP if.not be.not-FIN-COMP asked
 “(pro) asked whether or not my book is interesting.”
- c. [*nay chayk-i caymi.iss-nun-ci eps-nun-ci*] *mwulessta.*
my book-NOM be.interesting-FIN-COMP isn't-FIN-COMP asked
 “(pro) asked whether or not my book is interesting.” (polar alternative)

Since the existence of possible alternative propositions is already expressed by the co-occurring positive and negative polarity predicates in PAQs, morphological disjunction is not motivated in terms of economy.

The facts concerning fixed predicate order, mandatory identical complementizers, the negative auxiliary *mal*’s ungrammaticality as a stand-alone predicate, and the

³⁵ This phenomenon of splitting a word into two morphemes is very similar to what happens in Chinese A-not-A questions (cf. the example (18) in this chapter)

³⁶ Research on the acoustic correlates of PAQs could be illuminating.

prohibition against lexical disjunction in Korean PAQs suggest that these structures are composed syntactically of a single clause rather than two separate clauses linked by a null conjunction.

4.2 The structure of Korean PAQs within the Minimalist Program

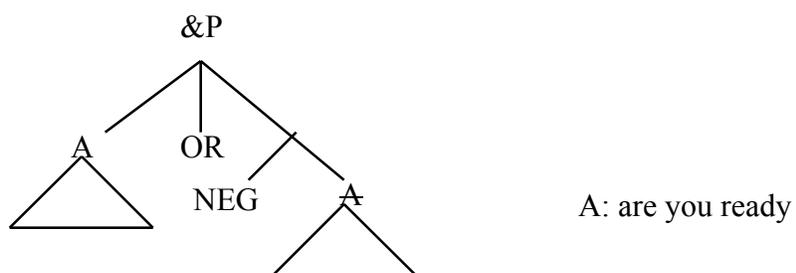
4.2.1 Introduction

Starting from the claim that Korean PAQs consist of a single clause, in this section I investigate the structure of the clause. The structure of polar alternative questions in main clauses has rarely been discussed linguistically. Not only has the structure of Korean PAQs not been addressed in the literature, but even the structure of English main-clause polar alternative questions has not been presented explicitly. If I interpret their proposals correctly, Quirk et al. (1985) and Huddleston and Pullum (2002) propose a structure for English PAQs in which the sentence (15) is derived by deletion of duplicate items in (16), so the tree structure will be as in (17).

(15) Are you ready or not?

(16) Are you ready or are you not ready?

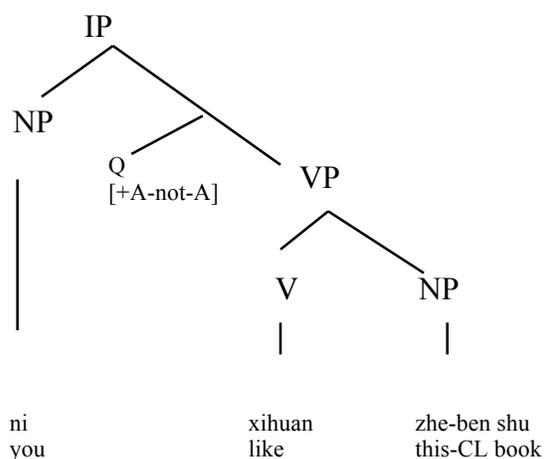
(17)



If we consider that the Chinese A-not-A form, shown in (18), may be a type of polar alternative question, then the structure for Chinese A-not-A questions suggested in Huang et al. (2009) may also be relevant to our discussion. These authors propose that the underlying source of Chinese A-not-A questions is a simple sentence with an interrogative functional head, located in the same position as the negation head of a negative clause; this is shown in (18) and (19) below.³⁷

- (18) ni xi-bu xihuan zhe-ben shu?
you li(ke)-not like this-CL book
 ‘Do you like or not like this book?’

(19)



(Huang et al. 2009: 253)

Thus we may consider that two hypotheses have been proposed for PAQs in the literature: a disjunctive and a non-disjunctive structure. This thesis will adopt the non-

³⁷ Huang et al. (2009: 260) treat Chinese A-not-A questions as constituent questions whose A-not-A constituents are subject to scope interpretation in LF. They distinguish Chinese A-not-A questions from disjunctive questions (alternative questions).

disjunctive approach, and argue that the functional head of polar alternative questions is located in Force P, instead of being located in the head of the negation projection.

4.2.2 The properties of PAQ complementizers

As a first step to analyzing the internal structure of Korean PAQs, this section examines closely the properties of PAQ complementizers. By examining the shared properties of lexical complementizers that occur in Korean PAQs, discussed in section 3.2, I propose a set of features associated with PAQ complementizers. This proposal is couched within the Minimalist Program. According to Chomsky (2008), lexical items enter into a computation with their features. I assume in this thesis that a lexical item, as a member of “the simplest possible lexicon” (Chomsky 2008: 139), is a bundle of features including the edge-feature; the edge-feature is a feature that permits operations such as Merge (Chomsky 2008).

Employing the mnemonic FORCE for a category that expresses illocutionary force in the C system, the first features of the head of FORCE might be [C] and [FORCE]. It is controversial whether or not the category/feature distinction is necessary. Adger and Svenonius (2011) acknowledge that the category/feature distinction is commonly assumed within Minimalism. They argue that it is not ϕ -features of C or T that determine their first merge position, it is their “C-ness or T-ness” (Adger and Svenonius 2011: 30). They consider C-ness and T-ness to be categories, which are defined as positions within the system. In that sense, [C] is a positional feature.

Adger and Svenonius explain that a feature is a property that distinguishes some elements from others; the inventory of features in a language is a set $F = \{\alpha, \beta, \gamma, \dots\}$ (Adger

& Svenonius 2011, p. 31). Adger and Svenonius assume properties of features and feature classes as in (20) and (21).

(20) Features:

- a. Syntax builds structure through recursive application of Merge
- b. The smallest element on which Merge operates is a syntactic atom
- c. A syntactically relevant property of a syntactic atom which is not shared by all syntactic atoms and which is not derivable from some other property is a feature.

(Adger & Svenonius 2011, p.31)

(21) Feature class:

A feature class is a subset O of F, where the members of O share some syntactically relevant property.

(Adger & Svenonius 2011, p.35)

Following these definitions, Adger and Svenonius consider N, V, A, P, C, T, and D to be members of a feature class CATEGORY and NOM, ACC, DAT and GEN to be member of a feature class CASE. If CASE can be justified along these lines, assuming FORCE, FOCUS, TOPIC and FINITE as members of a feature class COMP is plausible. This thesis assumes ASSERTION, QUESTION, IMPERATIVE and EXCLAMATIVE as members of a feature class FORCE; and POLAR, POLARITY ALTERNATIVE, CONSTITUENT, TAG and ECHO as members of a feature class QUESTION.

The next task is to determine what features are not in common among question complementizers. In contrast to the polar question complementizer or the alternative question complementizer, the complementizers that realize polar alternative questions are the only ones that explicitly express both polar options. I propose a feature [POLARITY ALTERNATIVE] to account for their unique question force. Of course, the complementizer must also have a [QUESTION] feature, in addition to the features [C], [FORCE], and [POLARITY ALTERNATIVE]. To summarize, I propose that the complementizer used in main-clause Korean PAQs has the features shown in (22).

(22) PAQ complementizer : [C, FORCE, QUESTION, POLARITY ALTERNATIVE]

The feature [C] is a categorical feature that is distinct from [D] or [V] in the position of Merge. [FORCE] is also distinct from [FOCUS], [TOPIC], and [FINITE] within the C system. [QUESTION] is distinct from [ASSERTION] and [COMMAND]. On top of the features in (22), I also assume that the ϕ -feature (PERSON) and a feature [TOPIC] are properties of the main-clause PAQ complementizer. I discussed the agreement relationship between the ϕ -feature (PERSON) of the subject and the ϕ -feature (PERSON) of FORCE complementizers in section 3.2.2. The claim that the head of C in Korean has an uninterpretable ϕ -feature has precedents in the analyses proposed for West Germanic languages (Carstens 2003; van Craenenbroeck and van Koppen 2002), Bantu (Carstens 2005), and Haitian Creole (Takahashi and Gracanin-Yuksekk 2008). The ϕ -feature of complementizers is like the Case-feature of a noun; it must be checked by an interpretable feature in the structure. Specifically, the uninterpretable ϕ -feature of a complementizer must be checked by an

interpretable ϕ -feature (PERSON) of the subject. Disagreement between the subject and the complementizer yields an ungrammatical sentence, as in (23).

- (23) a. *wuli/na/*ne/*ku* -*nun* *ka-l-kka* *mal-kka?*
*we/I/*you/*he* *TOPIC* *go-MOOD-COMP* *not.MOOD-COMP*
 ‘Should or shouldn’t we/I/*you/*he go?’
- b. *ne/*we/*na/*ku* -*nun* *ka-l-lay* *mal-lay?*
*you/we/*I/*he* *TOPIC* *go-MOOD-COMP* *not.MOOD-COMP*
 ‘Are you/*we/*I/*he going or not?’

The ϕ -feature (first-person) of *wuli* ‘we’ or *na* ‘I’ agrees with the ϕ -feature (first-person) of the complementizer *kka* in (23a) and the ϕ -feature (second-person) of *ne* ‘you’ agrees with the ϕ -feature (second-person) of the complementizer *lay* in (23b). The ϕ -features (person) of other kinds disagree with *kka* or *lay* in Korean PAQs.

In addition to the uninterpretable ϕ -feature on PAQ complementizers in main clauses, I propose a feature [TOPIC] to account for the asymmetry between the required occurrence of a topic (identified by marker *nun*) in main clauses and its prohibition in embedded clauses. The fact that the subject in Korean main-clause PAQ always takes the topic marker rather than a nominative marker implies that the PAQ main clause complementizer carries a [TOPIC] feature.³⁸ The ϕ -feature and Topic feature of PAQ complementizers seem to be correlated. Miyagawa (in press, cited in Chomsky 2008) argues that agreement (ϕ -feature for English) and Focus (Focus for Japanese) are two values of the same parameter. Like Korean, Japanese shows an alternation of topic/focus markers on subjects. The relationship between the C system (Force, Topic and Focus) and agreement (ϕ -features) requires further investigation.

³⁸ A topic is required in PAQs and alternative questions only. In other question types, either a nominative or a topic is acceptable.

Completing the discussion of the features of main clause complementizers, there is evidence that Force and Finiteness are expressed in a single head. The force complementizers *ni*, *e*, *lay*, *tay* or *kka* express Force, as we have seen, but they also indicate that the clauses in which they are contained are finite clauses. When a finite clause is embedded as a direct quotation, the direct quotation marker *lako* ‘that’ (which co-occurs with a finite clause) appears (cf. 4.2.4). In other words, the indicator of the finiteness and force of a sentence coalesce into a single item in Korean (cf. section 3.3).

Based on the discussion in this section, the full features of the Korean main-clause PAQ complementizer should be as in (24).

- (24) PAQ complementizer : [C, FORCE, QUESTION, POLARITY ALTERNATIVE, FIN, $u\phi$ -feature, u TOPIC]

4.2.3 The structure of Korean PAQs in main clauses

With the features of the PAQ complementizer established, this section explores the structure of Korean PAQs in main clauses within the framework of the Minimalist Program (Chomsky 1995, 2008; Hornstein et al. 2005; Adger & Svenonius 2011; Nunes 2011). The fundamental assumption within MP is that the language faculty comprises a lexicon and a computational system. The derivational steps for (25) within MP start from a possible numeration, as shown in the two variants in (26).³⁹

³⁹ It is not clear whether or not the topic case marker *nun* and the COMP *ni* enter the numeration as in (27). They are indeed lexical elements in Korean and listed in Korean dictionaries. This is parallel in relevant respects to the proposal of Hornstein et al. (2005:336) to include English *there*, *did* and *to* in the lexical array (numeration), although these can be considered functional items. If English lexical items can

- (25) ciwu-nun ca-ni an ca-ni ?
Jiwoo-TOP sleep-COMP not sleep-COMP
 ‘Is Jiwoo sleeping or not?’

- (26) a. $N_0 = \{ \mathbf{ni}_2, T_1, v_1, ciwu_1, nun_1, \mathbf{ca}_2, an_1 \}$
 b. $N_0 = \{ \mathbf{ni}_1, T_1, v_1, ciwu_1, nun_1, \mathbf{ca}_1, an_1 \}$

An issue that arises in the numeration of Korean PAQs is whether the numeration contains two instances of *ca* and *ni*, as postulated in (26), or only a single instance of each item. Chomsky (1995, p. 227) suggests that lexical items should be marked as distinct if they enter the derivation via different applications of Select (cited in Nunes 2011, p. 147). Nunes (2011) suggests that if the lexical items σ_1 and σ_2 are copies in the numeration, then it is not necessary for the two items to enter as distinct, provided that we allow the computational system to recognize the copy of the lexical item. How the computational system distinguishes between lexical items that have the same set of features needs to be determined and I admit that addressing the scope of the Copy Theory within MP is beyond this thesis. However, in recognition that PAQs, in contrast with polar questions, involve the use of two verbs and two complementizers, and for the sake of providing a concrete proposal, this thesis assumes the numeration (26a) for (25).

The next issue which arises in the study of Korean PAQs considers how the three different forms of the negative predicate are derived at PF: these are pre-verbal negation,

enter the syntactic derivation equipped with Case features or in an inflected state, then it is likewise possible for a proper noun to enter the numeration already equipped with topic marker, as in (1).

(1) $N = \{ni_1, T_1, v_1, ciwu-nun_1, ca_1, an_1\}$

inherently negative predicates, and the negative auxiliary *mal* (see Chapter 2). The numeration of (27) is complicated.

- (27) na-nun pyenci-lul ssu-l-kka mal-kka?
I-TOP letter-ACC write-MOOD-COMP not.MOOD-COMP
 ‘Should I write a letter or not?’

The mood marker *l* in the affirmative predicate is lexicalized as part of *mal* in the negative predicate. Also, there is no full verb in the negative predicate. Consequently, the negative form must be specified, and the positive form is then predictable.

- (28) $N_0 = \{ kka_2, T_1, v_1, na_1, nun_1, pyenci_1, ssu_1, l_1, mal_1, \}$

To address this issue, I will need to choose between two approaches available within MP, the Lexicalist Minimalism approach (Chomsky 1995) and the approach of Distributed Morphology (Halle & Marantz 1993, 1994; Embick & Noyer 2007). If we follow the Lexicalist MP hypothesis that lexical items as a locus of computation enter with their full features - including phonological features- into the numeration, then the three distinct forms of the negative predicate will potentially be entered separately into the numeration. If we follow Distributed Morphology, the shared underspecified syntactic features of the three negative predicates will be inserted in the numeration. Do inherent negative predicates enter into the numeration with full phonological features or are they inserted after spell-out and before PF? If they are inserted after spell-out, what and when is the interface point between PF and LF? Answering these questions is not the main focus of this thesis. Which approach accounts most economically for the empirical data in Korean PAQs will be left for future study.

Acknowledging these unsolved issues, the possible numerations (26) for (25) contains features of lexical items, including the features of lexical complementizers.⁴⁰ These features are summarized in (29). The lexical item *ni* has an underspecified [FORCE] feature because *ni* is not interpreted as a question complementizer in the exclamative construction.⁴¹ I assume that *ni* converges at PF where the PAQ complementizer co-exists with the sub-mood feature [REALIS]; *ni* carries an interpretable ϕ -feature [1st, 2nd, 3rd person].

(29) Formal features of lexical items (simplified)⁴²

Lexical items	Gloss	Interpretable features	Uninterpretable features
<i>ciwu</i>	Jiwoo	NOUN, Proper, ANIMATE, ϕ -feature[3 rd], TOPIC	CASE
<i>nun</i>		TOPIC	
<i>ca</i>	sleep	VERB, INTRANS, [PRES]	
<i>an</i>	not	NEG, AFFIX	
C _{PAQ}		FORCE, QUESTION, POLARITY ALTERNATIVE, FIN	ϕ -feature, TOPIC
T		TENSE [PRES]	CASE
v			TENSE

The verb *ca* ‘sleep’ Merges with *an* {an{an-ca}}, and *ciwu* Merges within the structure of vP, and moves to [Spec, TP], forming the TP structure [TP *ciwu* [_{VP} t [_v [VP an-ca] v]] T]. Then *ciwu* moves to [Spec, Topic], and from there moves to [Spec, Force], yielding the phrase structure in (30).

⁴⁰ Dr. McGinnis advises that the lexical items in (29) are Vocabulary items in the sense of Distributed Morphology: underspecified items that are inserted into fully specified syntactic nodes.

⁴¹ For instance, *elmana wun-i cohu-ni* ! ‘How lucky you are!’ and *elmana yeyppu-ni* ! ‘How pretty you are!’

⁴² It is assumed that the finite Infl [TP] is inherently specified as carrying NOMinative Case (Hornstein et al. 2005). Should we assume that the nominative marker *ka* is covert at PF in the main clauses?

adjoins to Force. The uninterpretable features in Force⁰ trigger the movement of the lexical items, and once all uninterpretable features are valued and after successive applications of Merge and Agree, the derivation yields the structure in (30).

In this section, I have presented a close examination of the features and structure of Korean PAQs in main clauses. The next section continues to explore the features and structure of Korean PAQs in embedded environments.

4.2.4 The properties of PAQ in embedded clauses

4.2.4.1 The distribution of Korean PAQs in embedded clauses

Korean PAQs can occur in embedded clauses in two distinct formats: complementation, when the PAQ is part of a direct quotation, and subordination, when the PAQ is expressed in what is traditionally considered “indirect discourse”. The Korean PAQ in the embedded clause in (32) is a complement of the matrix verb *mwul-ess-ta* ‘asked’. The complementizer of this embedded clause is *lako* ‘that’, and the subject occurs in the second person, reflecting the point of view of the subject of ‘ask’, the mother (Speas 2004).

(32) emma-nun [ne-nun ku chayk-ul sa-ss-ni an sa-ss-**ni**
mom-TOP you-TOP the book-ACC buy-PAST-COMP not buy-PAST-COMP

lako] mwul-ess-ta.

that ask-PAST-DECL

‘Mom asked, did you buy the book or not?’

This thesis does not further investigate directly quoted Korean PAQs, because the embedded structure of direct-quotation Korean PAQs is the same as the structure of Korean PAQs in main clauses.

The “indirect speech” type of embedded Korean PAQ forms is characterized by the use of two lexical COMPs, *nun* and *ci*, also discussed in chapter 3. In (33), a paraphrase of (32), the subject of the embedded clauses occurs in the first person *nay* ‘I’, reflecting the speaker’s point of view. Note that the nominative case marker identifies the subject, rather than the topic marker, as in (32).

- (33) *emma-nun* [*nay-ka* *ku chayk-ul* *sa.ss-nun-ci* *an sa.ss-nun-ci*]
mom-TOP I-NOM the book-ACC bought-FIN-COMP not bought-FIN-COMP
- mwul-ess-ta.*
ask-PAST-DECL
 ‘Mom asked whether or not I bought the book.’

The direct-quotation complementizer *lako* ‘that’ seen in (32) cannot occur in this context. In contrast, the finite COMP *nun* cannot be omitted in (33) and cannot occur in (32).

By contrast with the wide variety of distinct finite complementizers available in the right periphery in main clauses, the finite complementizers in embedded Korean PAQs are neutralized into one complementizer, *ci*. The form of the sentence in (33) which employs *ci* is the unmarked form for embedded polar alternative questions. Thus the domain of embedded clauses shows a reduced and neutralized range of complementizers in comparison with main clauses. Based on these findings, I propose that the properties of complementizers differ between main and embedded clauses. In

particular, the ϕ -feature (PERSON) relevant for complementizers in main clauses does not enter into an agree relationship with embedded complementizers.

The neutralization of complementizer selection happens in all kinds of embedded questions in Korean. *ci* occurs whenever the matrix verb is a verb of questioning, such as *mut-ta* ‘ask’, *kwungkumha-ta* ‘wonder’, or one of the serial verbs *alko-sip-ta* ‘want to know’ or *sangkwan-eps-ta* ‘doesn’t matter’. The interrogative forms that are licit in embedded contexts are polar, alternative, polar alternative, and constituent questions, as illustrated in (34).⁴³

- (34) a. *sey-na-nun* [*nay chayk-i caymi.iss-nun-ci*] (*lul*) *mwul-ess-ta*.
Sena-TOP my book-NOM be.interesting-FIN-COMP ask-PAST-DECL
 ‘Sena asked if my book is interesting.’ (polar)
- b. *sey-na-nun* [*nay chayk-i caymi.iss-nun-ci*
Sena-TOP my book-NOM be.interesting-FIN-COMP

caki chay-i caymi.iss-nun-ci] (*lul*) *alko-sipe ha-n-ta*.
her book-NOM be.interesting-FIN-COMP want to know-PRES-DECL
 ‘Sena wants to know whether my book is interesting or her book is interesting.’
 (alternative)
- c. *sey-na-nun* [*nay chayk-i caymi.iss-nun-ci eps-nun-ci*] *mwulessta*.
my book-NOM be.interesting-FIN-COMP be.not-FIN-COMP asked
 ‘Sena asked whether or not my book is interesting.’ (polar alternative)
- d. *sey-na-nun* [*nay-ka mwues-ul ilk-ess-nun-ci*] *mwulessta*.
Sena-TOP I-NOM what-ACC read-PAST-FIN-COMP asked
 ‘Sena asked what I read.’ (constituent)
- e. *sey-na-ka* [*mwusun chayk-ul cohaha-l-ci*] **lul* *kwungkumha-ta*.
Sena-NOM what book-ACC like-FIN-COMP wonder-DECL
 ‘(I) wonder what kind of book Sena will like.’ (constituent)

⁴³ The accusative marker *lul/ul* is optional when the verb is *mutta* ‘ask’ or the serial verb *alko-sipta* ‘want to know’, but *lul/ul* is incompatible with the verb *kwungkumhata* ‘wonder’. This calls to mind the distinction in English between the verbs which do (*ask, know*) or do not (*wonder*) permit a DP complement.

On the basis of these distributional facts, I conclude that the main clause complementizers *ni*, *e*, *kka*, and *lay* and the neutralized embedded complementizer *ci* are spelled out in distinct environments. The structure and properties of complementizers in embedded clauses are the topic of the following sections.

4.2.4.2 The features of the lexical complementizer *ci* in embedded clauses

The structure of the embedded clause PAQ, which I refer to as a polar alternative interrogative (PAI) in (35b) is different from the structure of the main-clause PAQ in (35a) in terms of: i) the occurrence in (35b) of the finite complementizer *nun*; and ii) its co-occurrence with the neutralized complementizer *ci* with concomitant lack of subject/force agreement phenomena; and iii) illegitimate occurrence of the topic marker *nun* on the subject of the embedded clause.

- (35) a. *ciwu-nun ca-ni an ca-ni?*
Jiwoo-TOP sleep-COMP not sleep-COMP
 ‘Is Jiwoo sleeping or not?’
- b. *na-nun ciwu-ka ca-nun-ci an ca-nun-ci kwungkumha-ta.*
I-TOP Jiwoo-NOM sleep-COMP-COMP not sleep-COMP-COMP wonder
 ‘I am wondering whether or not Jiwoo is sleeping.’

In consideration of the observed properties of embedded Korean PAIs, this thesis proposes that the embedded PAI complementizer contains a different set of features from those of the main-clause complementizers. The properties of the embedded PAI complementizer must be shared with the lexical item *ci*. As a complementizer, *ci* must have the feature [C], but I argue that it lacks the feature [FORCE]. Support for this claim comes from the fact that embedded questions do not require an answer; this suggests that these questions lack illocutionary force. I assume that Korean *ci* occupies the same

position that Rizzi (2001) postulates as Int(errogative) P (see discussion in section 3.1.) However, use of this projection does not appear to be restricted to interrogatives in Korean: the embedded declarative complementizer *kes*, distinct from the matrix declarative complementizers *ta*, *e*, *lay* and *tay* in Korean, appears in the same position as *ci*. Therefore, I use the term TypP instead of IntP, as this projection can select either declarative clauses or interrogatives without illocutionary force.⁴⁴

As just noted, the neutralized embedded complementizer *ci* shows no evidence of agreement with the subject, so I conclude that *ci* does not carry an uninterpretable ϕ -feature. Moreover, I propose that *ci* has a feature [FIN] that licences the embedded structure. The [FIN] feature in embedded Typ⁰ derives a finite projection and the [FIN] feature in Fin⁰ agrees with the lexical items *nun* or *l* in Korean (cf. section 3.3.2). This thesis proposes that the features of *ci* are as summarized in (36). The features of *ci* are underspecified except the feature {C}. The parentheses indicate that the features are underspecified.

(36) *ci*: [C, (FORCE, QUESTION, CONFIRM (TAG), TYP, INT, FIN)]

As noted in 3.2.1, *ci* appears in embedded interrogatives and also occurs in constituent questions and tag questions. Its features in the context of an embedded PAI are further specified as in (37):

⁴⁴ To clarify, Ginsburg (2009) uses the term TypP and ForceP in a manner opposite to the way that TypP is used in this thesis though their hierarchical positions is the same. He considers TypP to contain clausal typing elements, and ForceP to contain an element that indicates that a clause is embedded (p.38). This thesis follows Rizzi's C system, except I replace his IntP with TypP. Cheng (1997) and Denham (2000) use the notion 'Clausal Typing'.

(37) ci_{PAI} : [C, TYP, INT, POLARITY, $uFIN$]

Notice that the features [FORCE], [QUESTION], [TOPIC], and [ϕ -feature] are lacking from the feature set in (37), whereas I argued in section 4.2.2 that these features are present in PAQ complementizers in main clauses (see (24)). See Adger and Quer (2001) and Roussou (2010) for insightful discussion into the properties of interrogative complementizers.

4.2.5 The structure of embedded Korean PAIs

Following discussion from previous sections, the numeration of the complex sentence (35b), which is repeated here in (38), is presented in (39).

(38) na-nun [ciwu-**ka** ca-**nun-ci** an ca-**nun-ci**] kwungkumha-ta.
I-TOP Jiwoo-NOM sleep-COMP-COMP not sleep-COMP-COMP wonder-DECL
 'I am wondering whether or not Jiwoo is sleeping.'

(39) $N = \{ \{ ta_1, T_1 \}, \{ v_1, na_1, nun_1, kwungkumha_1 \}, \{ ci_2, T_1, nun_2, an_1 \}, \{ v_1, ciwu_1, ka_1, ca_2 \} \}$

(cf. Hornstein et al. 2005: 360)

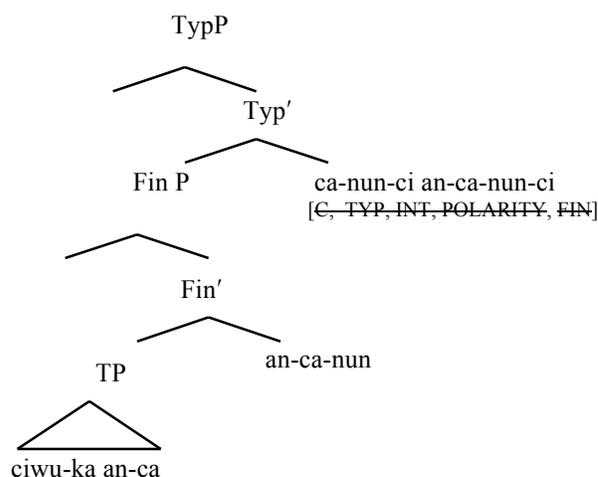
The main difference between features in main clauses and embedded clauses centers on the head of TypP. The features of the lexical items present in the embedded clause in (38) are listed in (40).

(40) Formal features of selected lexical items (simplified) in the embedded clause

Lexical items	Gloss	Interpretable features	Uninterpretable features
ciwu	Jiwoo	NOUN, PROPER, ANIMATE, ϕ -feature (3rd)	CASE
ka			CASE [NOM]
ca	sleep	VERB, INTRANS, [PRES]	
nun		C, FIN	
an	not	NEG, AFFIX	
C _{PAI}		C, TYP, INT, POLARITY ALTERNATIVE	FIN
T		TENSE [PRES]	CASE [NOM]
v			TENSE

On the basis of this illustration of the features of complementizers, I postulate that the structure of the Korean PAIs in the embedded clause in (38) is as shown in (41).

- (41) na-nun [ciwu-ka ca-nun-ci an ca-nun-ci] kwungkumha-ta.
I-TOP Jiwoo-NOM sleep-COMP-COMP not sleep-COMP-COMP wonder-DECL
 ‘I am wondering whether or not Jiwoo is sleeping’.



As in main clauses, the intransitive verb *ca* ‘sleep’ and the negative element *an* [NEG, AFFIX] merge and form [_{VP} an ca]. The nominative case marker *ka* agrees in its formal [CASE] feature with the [CASE] feature of the proper noun *ciwu* in [Spec, vP]. It moves to

[Spec, TP]. Whether or not *ciwu-ka* moves to [Spec, TypP] is an empirical question for future study. I assume it does not move. *an-ca* merges with the finite head *nun*, and *an-ca-nun* checks the [FIN] feature of *ci* and merges with *ci*_{PAQ} [C, TYP, INT, POLARITY ALTERNATIVE, FIN] to yield the phrase structure shown in (41). The head of TypP is proposed to have the uninterpretable [FIN] feature on the basis of the observation that *ci* is interpreted differently between main clause questions (without the head of Finite *nun*) and embedded questions (with the head of Finite *nun*); the interpretation of *ci* in (39) has its source in the contribution of the Finite complementizer *nun*, which expresses the dependency of embedded clauses.

4.2.6 Summary

In this section, I have characterized the features of complementizers and the structure of Korean PAQs in terms of their clausal status: main clauses and embedded clauses. The features of Korean PAQ complementizers in main clauses are [FORCE] and [QUESTION]. I have proposed that the features [FORCE] and [QUESTION] combine to produce an answer-requiring question force which is part of the syntactic structure of Korean main-clause PAQ. I have observed that variant forms of complementizers appear in the head of Force, whereas only the neutralized *ci* appears in the head of TypP; *ci* does not enter agreement with subjects or question types. I argue that the wide range of possible complementizers in main clauses is due to the fact that the head of Force in main clauses carries the uninterpretable ϕ -feature and [FIN]. In section 4.2.4, I claim that this ϕ -feature is lacking in Typ⁰. The lack of agreement in embedded clauses is another indication that embedded clauses are distinct from main clauses. This thesis explains this distinction through the

claim that embedded clauses lack illocutionary force (and therefore lack Force P) but are capable of distinguishing the forms of declaratives and interrogatives (therefore, have TypP). In other words, ForceP and TypP encode illocutionary force and locutionary form, respectively. In main clauses, TypP which encodes locutionary form, always appears with illocutionary force, so I have not been able to distinguish the forms of ForceP and TypP in main clauses. Possibly the study of exclamatives could ultimately be illuminating. This thesis assumes that in main-clause PAQs Force and Typ are expressed in a single head, necessarily Force (c.f. Rizzi 1997).⁴⁵ Discussion related to illocutionary force will be presented in depth in section 4.3.3 after the presentation of more empirical data showing an asymmetry between main clauses and embedded clauses.

4.3 Compatibility of Korean PAQs and wh-questions

In addition to the appearance of different functional items between main and embedded Korean PAQs, there is more evidence that the two are different in essence. This section discusses the fact that Korean PAQs are incompatible with constituent questions in main clauses, but compatible with them in embedded clauses. I account for the distinct behaviour of PAQs in the two types of clauses by proposing an interface between speech act theory and syntax. I propose that Korean PAQ is incompatible with constituent questions in main clauses because main clauses are associated with illocutionary force (Austin 1975; Degand 2006; Allan 2006).⁴⁶ I claim that a question has just a single

⁴⁵ I thank Dr. McGinnis for raising the question of where the form of PAQs is determined in main-clause PAQs.

⁴⁶ Bayer (2004) claims that root clauses interface with the discourse, and as a result, root clauses are licensed in a different way than dependent clauses are.

illocutionary force. That means that a main clause complementizer can contain only one sub-category of question force feature such as [POLAR],[CONSTITUENT],[POLARITY ALTERNATIVE], [CONFIRM], and so on. A question with multiple *wh*-words is possible, because the sentence still has only a single kind of illocutionary question force. In comparison, as the head of the complement of a matrix verb, an embedded complementizer is not associated with illocutionary force at all: embedded questions do not require an answer. Since complementizers in embedded clauses lack specification for illocutionary force, they involve only the features [C, TYP, (INT), (POLARITY ALTERNATIVE), FIN]. If the Typ⁰ hosts the complementizer carrying an [INT] feature, we shall refer to this as ‘interrogative’ to distinguish this property from the property of being a ‘question’, which only pertains to matrix clauses. The next two sections consider empirical data demonstrating these points.

4.3.1 Incompatibility of Korean PAQs and constituent questions in main clauses

The data below show that Korean PAQs are incompatible with constituent questions in independent clauses. In fact, the same is true of their English translations. To the best of my knowledge, this fact has not received attention in the literature.

- (42) a. **nwu-ka hakkyo-ey ka-ss-e/ni mos ka-ss-e/ni?*
 who-NOM school-LOC go-PAST-COMP cannot go-PAST-COMP
 * ‘Who could go to school or not?’
- b. **na-nun mwes-ul sal-l-kka mal-kka?*
 I-TOP what-ACC buy-MOOD-COMP not.MOOD-COMP
 * ‘What should I buy or not?’

c. *ne-nun mwes-ul sal-l-lay mal-lay?
 you-TOP what-ACC buy-MOOD-COMP not.MOOD-COMP
 *‘What would you buy or not?’

If we follow the assumption that wh-elements occupy the Spec of Focus (Rizzi 1997) and a question complementizer [+Q] occupies Force P, there is no reason for the examples in (42) to be ungrammatical. I argue that the ungrammaticality of (42) is due to a failure of feature checking. As argued above, the PAQ complementizer contains the features [QUESTION, POLARITY ALTERNATIVE] (simplified). I assume that a constituent question complementizer contains the features [QUESTION, CONSTITUENT] (simplified). The assumption I make here is that Force⁰ can have only one question feature from among the set Question = { POLAR, CONSTITUENT, PAQ, ECHO, TAG... }. The derivation will fail if this feature does not match with the feature of a lexical item from the numeration during the computation.

The syntactic analysis thus runs along the same lines as a conceptual approach, according to which a question force requires that there be only one message to convey and a sentence cannot have two different question forces.

4.3.2 Compatibility of Korean PAIs and wh-phrases in embedded clauses

In contrast to the limitation on main-clause Korean PAQs discussed above, the same construction can appear grammatically in embedded clauses, as shown in (43). The English counterparts to these sentences are grammatical also.

- (43) a. *pro* [nwu-ka hakkyo-e kass-nun-ci mos kass-nun-ci]
who-NOM school-LOC went-FIN-COMP cannot went-FIN-COMP

kwungkumha-ta/alko-sip-ta/molun/mwuless-ta.
wonder/want to know/don't know/asked-DECL
 '(I) wonder/want to know/don't know/asked who could or couldn't go to school.'

- b. na-nun [mwes-ul sa-l-ci mal-ci] ppali kyelcenghay-ss-ta.
I-TOP what-ACC buy-FIN-COMP not.MOOD-COMP quickly decided-DECL
 'I quickly decided what I should or shouldn't buy.'

I account for the asymmetry between main and embedded clauses by reference to the concept of illocutionary force. I claim that the two different question types are compatible in embedded clauses because the heads of embedded clauses do not have an illocutionary force that requires a hearer to answer. In other words, the illocutionary force of the matrix clauses in (43) are statements and there is no illocutionary force in the embedded clause. The complements of these matrix verbs can be understood as equivalent to *something* or *facts*. In the sentence *I asked something*, *something* can contain a hundred questions, but *something* does not possess question force. Therefore, *something* is interpreted as an interrogative rather than a question in embedded clauses. The structure of the sentences in (43) can be understood as arising not from the co-occurrence of two different question forces, but from the lack of illocutionary question force within the structure of the embedded clause. The head of an embedded clause does not have the feature [FORCE] regardless of whether it is declarative or interrogative. I argue that the interpretations of the Korean complementizers *ci* and *kes* 'that', and the English complementizers *if*, *whether* and *that* appearing in embedded clauses are determined based on the fact that the head of TypP lacks the feature [FORCE].

This analysis, which accounts for the asymmetrical properties of main clauses and embedded clauses in terms of illocutionary force, can also be supported by two further empirical facts about Korean: a) a number of different force complementizers can appear in main clauses, but only the neutralized finite complementizer *ci* occurs in embedded clauses; b) a honorific marker *yo* can occur in main clauses but not in embedded clauses.⁴⁷ Data relating to (a) has been extensively discussed in this thesis; the implications of (b) will be left for future study.

4.3.3 Illocutionary question force versus interrogative

I propose to use the term *question* in this thesis to indicate illocutionary force and *interrogative* to indicate a question-type form lacking illocutionary force. Huddleston (1994) uses the term *question* to refer to a category of meaning and the term *interrogative* for a category of grammatical form. Huddleston also claims that interrogative is a clause type rather than a sentence type; a sentence cannot be assigned to any kind of sentence type if the sentence consists of a coordination of declarative and interrogative clauses. In speech act theory, it has been widely accepted since Austin (1975, cited in Degand 2006) that speech consists of both illocutionary and locutionary acts. Degand (2006, p. 675) explains that a locutionary act is understood as a speaker's act "using words to form sentences". In contrast, an illocutionary act is understood in relation to the intention or the force behind the wording of the speakers. Following our discussion on the nature of question versus interrogative and illocutionary act versus locutionary act, it seems natural

⁴⁷ As noted above in section 4.2.4.1, direct embedded clauses with the quotative complementizer *lako* 'that' behave differently from indirect embedded clauses with *ci*.

to me to use the term *question* to refer to an illocutionary act (or illocutionary force), and the term *interrogative* to refer to a grammatically question-like form that lacks this illocutionary *question* force act.

Although I have used the term “Korean PAQs in embedded clauses” in previous sections, I believe the term *polar alternative interrogative* describes embedded Korean PAQs more accurately. Being *interrogatives* rather than *questions*, these clauses do not have an illocutionary force that requires an answer, and they show the distinct syntactic properties discussed in sections 4.2.2 and 4.3.2.

4.3.4 The interpretation of PAQs in main clauses and embedded clauses

In this section, I attempt to explain why the interpretation of PAI with wh-words in embedded clauses is possible. Whereas it is impossible to interpret multiple question forces in a main clause PAQ, this interpretation succeeds in embedded clauses.

Unexpectedly, the clause receives the interpretation of an inclusive disjunction; in fact, the embedded clause is interpreted as neither a constituent question nor a polar alternative question; such clauses are semantically equivalent to the inclusive disjunction {A} and/or{B} construction. We see this in the embedded clause in (45), which is the embedded form of (44); its interpretation is paraphrased in (46).

(44) * nwu-ka hakkyo-e ka-ss-ey mos ka-ss-e?
 who-NOM school-LOC go-PAST-COMP cannot go-PAST-COMP
 * ‘Who could go to school or not?’

(45) *pro* nwu-ka hakkyo-ey kass-nun-ci mos kass-nunc-i
 who-NOM school-LOC went-FIN-COMP cannot went-FIN-COMP

kwungkumha-ta/alko-sip-ta/molun/mwuless-ta.
wonder/want to know/don't know/asked-DECL
 '(I) wonder/want to know/don't know/asked who could or couldn't go to school.'

- (46) “ I wonder/want to know/ don't know/asked two things: {who could go to school} and {who could not go to school}.”

The inclusive disjunction reading is not possible in main clause polar alternative questions because in that construction the disjunction involves polar-opposite propositions which are incompatible semantically or pragmatically. The interpretation of disjunctive ‘or’ in English is correlated with whether or not illocutionary force is present. The main clause (44) can only be interpreted as exclusive disjunction (‘either but not both’). In other words, in questions, either the arguments or the truth of a proposition are targeted. A detailed semantic analysis of interrogatives in embedded contexts will be left for future study.⁴⁸

If Force is present in main clauses and lacking in embedded clauses, the complementizers’ interpretation depends on the presence or absence of Force. More evidence of this in Korean is readily available: *ci* in non-constituent questions is interpreted as forming a confirmative question in main clauses but not in embedded clauses; *ko* is interpreted as forming an echo question in main clauses but not in embedded clauses (see section 3.2).

Therefore, I propose that the [FORCE] or the subset features [POLAR], [CONSTITUENT], [POLARITY ALTERNATIVE], [CONFIRM] and [ECHO] of complementizers

⁴⁸ Early and recent works on the semantics of questions in main and embedded clauses can be found in Karttunen (1977) and George (2011). George acknowledges the difficulty and complication of semantic analysis of alternative questions.

are only valued in the head of main clauses, and unvalued in the head of embedded clauses.

4.4 Summary

This chapter has explored issues in the analysis of Korean polar alternative questions. I have proposed a set of features of complementizers in Korean PAQs. I argue that the lexical items associated with illocutionary force are interpreted with a specific question force such as the PAQ, but without illocutionary force the complementizers of embedded clauses merely indicate clause types such as interrogative or declarative.

The discussion in this chapter suggests that the distinct properties of the heads of main and embedded clauses may provide a rich area for further study. When researchers discuss clause types in terms of the C system, the generally accepted distinction is between declarative, interrogative, and imperative. However, it is also possible to draw a distinction between main and embedded clauses in terms of the C system. This type of argument seems not to have been much in vogue in recent years. Before Baker (1970) introduced the claims that both direct and indirect questions contained an initial question morpheme, there were debates about whether or not embedded clauses could be considered to be truly interrogative (Curme 1931, Jespersen 1909-49, Long 1961, cited in Baker 1970). Recently, some researchers have observed that complement clauses possess distinct properties. Bayer (2004) claims that root clauses interface with discourse, and as a result root clauses are licensed in a different way than dependent clauses. Roussou (2010) investigates embedded clause complementizers and observes their dual capacity: a) being selected by a matrix predicate; and b) selecting a clause. She does not discuss the

asymmetry between main and embedded complementizers, but it is obvious that main clause complementizers are not selected by matrix predicates.

This thesis recalls some early arguments by Curme and reconsiders whether or not embedded interrogative clauses can truly be considered “questions.” I propose that we need to consistently separate the term *question* from *interrogative* in syntax.

Chapter 5

5.0 Conclusion

The main-clause Korean PAQ complementizer *ni* in *ciwu-nun ca-ni an ca-ni?* ‘Is Jiwoo sleeping or not?’ can be replaced by *e*, *lay*, *kka*, or *tay* in the context of different subjects and mood. However, only the neutralized complementizer *ci* appears in embedded clauses. The additional asymmetries between main clauses and embedded clauses that I have observed in this thesis are: a) the finite complementizers *nun/l* occurs only in embedded clauses; and b) only a nominative case marker but not a topic marker may be attached to the subject of embedded clauses. Conversely, only a topic marker may be attached to the subject of main clause-PAQs. Remarkably, Korean PAQs are incompatible with constituent questions in main clauses, but compatible with them in embedded clauses. These empirical data strongly suggest that main and embedded complementizers are quite different.

This thesis claims that main clause complementizers in Korean PAQs carry illocutionary question force, whereas embedded clause complementizers do not carry illocutionary force at all (cf. Cristofaro 2003); they carry only a locutionary form, which may be either interrogative or declarative. Furthermore, polar alternative questions carry a question force [POLARITY ALTERNATIVE] that is different from polar question force or constituent question force. The head of ForceP carries only one kind of illocutionary question force, rendering a polar alternative question containing a constituent question incoherent.

A theoretical account of the empirical data can be found in Rizzi (1997; 2001). This thesis provided strong evidence in support of Rizzi's extended complementizer system, of which ForceP, (TopicP), IntP, (TopicP), FocP, and FinP are all members. I claimed that Korean PAQ main clause complementizers sit in ForceP, and the complementizer *ci* in embedded clauses sits in TypP (corresponding to IntP in Rizzi 2001); moreover, I distinguished the Finite complementizers *nun/l* from the Typ complementizer *ci*.

In addition to the above claims, this thesis presented a full featural analysis of Korean PAQs. Within the framework of the Minimalist Program (Chomsky 1995, 2008; Hornstein et al. 2005; Adger and Svenonius 2011; Nunes 2011), I proposed and defended a set of properties which Korean PAQ complementizers must possess; I demonstrated that a single feature[Q] (Cheng 1997; Beck & Kim 1997, 2006; Han & Romero 2004a; Ko 2005; Kwon & Zribi-Hertz 2008; Ginsburg 2009; Hwang 2010) is not sufficient to account for all question-related complementizers in Korean. For instance, I claim that Korean PAQs have a complementizer which is distinct from those employed in other question types, and bears the features [POLARITY ALTERNATIVE, TOPIC, ϕ -feature]. This analysis was undertaken with a view to understanding the occurrence of lexical items in the heads of ForceP and TypP.

The distinct properties of Korean PAQ complementizers between main and embedded clauses showed that the notion of *question* is necessarily separate from the notion of *interrogative* in syntax (cf. Huddleston 1994).

5.1 Remarks

Following the conclusion, I discussed some consequences and theoretical implications of my analysis. Firstly, I observed that the asymmetry found between main and embedded clauses in terms of illocutionary force in Korean occurs in English as well. This raises the question of whether the distinction between ForceP and TypP might be shared across all languages. Furthermore, I leave open the question of whether or not Korean PAQs represent a variation on the English PAQ and/or the Chinese A-not-A questions. If the Korean construction discussed here is in fact related to these other phenomena, is there a unified approach to the variations? PAQs need to be reconsidered in a cross-linguistic perspective. Lastly, semantic approaches to polar alternative questions remain to be solved. The analysis of distinct syntactic behaviours of Korean PAQ complementizers will contribute to our understanding of polar alternative questions, and also can be extended to the study of questions in general.

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