

UNIVERSITY OF CALIFORNIA

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The Generation of Implicit Propositions
in “Alleged” Korean Topics

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Linguistics

by

Ji Eun Kim

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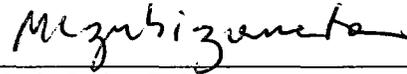
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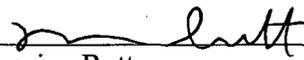


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To my Mom and Dad in Korea and Mom and Dad in US

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ABSTRACT OF THE DISSERTATION

The Generation of Implicit Propositions in “Alleged” Korean Topics

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Our communication process is composed of the flow of information between interlocutors. It is well known that the information is not always delivered in explicit ways or merely by literal meanings. In addition to the literal meanings of the lexical items and their combination into utterances, both speakers and listeners calculate pragmatic factors such as a context in which the utterance is stated and general pragmatic procedures such as obedience to the Maxims of Conversation (Grice 1975) (Potts 2008).

There are linguistic devices that do not have the semantic lexical meaning but that interact with non-linguistic factors of the utterance and generate implicit meanings.

In this dissertation, I discuss one of these types of linguistic devices, a particle – *nun* in Korean combined with a prosodic accent. Not only the identification of meaning and function of –*nun* but also the realization of it combined with an accent is studied. I will provide the results of a series of three experiments, all of which investigate the realization of –*nun* both in its aspect and in its linear placement within a sentence. Through this, I will raise a doubt on the well known idea that the particle –*nun* marks the informational status of ‘Topic’. The experimental results suggest that we should separate –*nun* from marking an information structure component ‘Topic’ and urge reconsideration of this well-studied particle.

I suggest that the function of –*nun* is to generate implicit propositions. The discussion focuses on the accented cases since the function of an accent, Focus, instigates the implicit propositions generated by –*nun*. One of the implicit propositions is existential presupposition. The existential presupposition generated by –*nun* establishes a structure that I call Contrast Structure, which explains the formation of the contrastive meaning of –*nun*. Pragmatically, the generation of an existential presupposition renders an apparently irrelevant or infelicitous utterance felicitous and vice versa through the process of informative accommodation in some contexts. In this analysis, the particle –*nun* works in the borderline of semantics and pragmatics (the term from Kadmon 2001).

Chapter 1

Introduction

1.1 Introduction

Language is the medium in which we can observe the flow of information between interlocutors. However, it is not always the case that the interactive information is overtly revealed. There are also implicitly delivered pieces of information. Like overt information, implicit information may cause infelicity when it is not delivered in an appropriate way, but sometimes, implicit information may rescue what would apparently otherwise be an infelicitous utterance.

In this thesis, we are interested in the meanings that an utterance may have in addition to compositional meanings and in the discourse effects that these additional meanings have. There must be linguistic tools to generate these meanings so that the implicit meanings can be integrated into the overall meaning that is delivered. The linguistic tools deployed for this purpose vary depending on the language. For instance, in English, prosodic accent, called ‘pitch accent’ by some analysts, is one of these linguistic devices used to produce different connotations from compositionally identical sentences. Consider the following conversations, focusing on the answers. Capital lettered constituents are prosodically prominent and ‘#’ means infelicity of a sentence in

a given context. “/ \” means a falling intonation contour and “\ /” means a rising intonation contour.

- (1) a. Q: Who passed the exam?
A: #Mary [/DID\]
- b. Q: Who passed the exam?
A: [/MARY] did.
- c. Q: Who passed the exam?
A: [MARY/] did.

The sentences in (1) are all grammatical and deliver comprehensible meanings. However, the answers in (1) that consist of the identical strings of words exhibit different felicity judgments. The answer to (1a) is grammatical but it is infelicitous in the given context. The answer to (1b) is felicitous. This comparison exhibits the point that in English, the felicity of a sentence may be decided by the proper location of prosodic prominence. The prosodic prominence has to be placed on the newly introduced constituent ‘Mary’, not on the constituent already given in the question.

The function of accent reflecting a discourse context has been recognized for a long time in linguistics, having been called Focus (Halliday 1967, Chomsky and Halle 1968, Bolinger 1968, Jackendoff 1972, Selkirk 1984, 1995 among many others). The discourse category Focus is different from the grammatical categories ‘subject’ or ‘predicate’. The latter categories specify the constituent’s status in an argument relation in the composition of a sentence. Focus is a term related to the way information is organized in a discourse. It does not necessarily limit its relation to a constituent within a sentence. Depending on how much information has been provided in the preceding context, the status of information given in the utterance changes. Thus, Focus as a feature

of information status is context dependent. In the answer in (1a), the constituent already given in the preceding question is accented, which leads to the infelicity of the sentence as a proper answer in this context. In contrast to this, in (1b), the newly updated information is in Focus and prosodically prominent, which makes it a felicitous answer in the given context.

In (1), there is another type of a minimal contrast, seen in (1b) and (1c). In the minimal pair (1a) and (1b), the placement of the prosodic prominence matters while in (1b) and (1c), the type of pitch contour matters. In contrast to the pair (1a) and (1b), the difference that appears between (1b) and (1c) does not cause a felicity contrast but generates a meaning difference. Sentence (1b) has the connotation that Mary and no one else passed the exam, while (1c) has a weaker connotation that Mary passed and probably no one else did, but the speaker is not as certain about the fact as in (1b). However, in addition to the meaning difference, the accent type affects felicity of an utterance in a given context. Here is an example.

(2) [Context] There are several people having a party with several kinds of food.
A: Who ate what? What about Fred? What did he eat?

- a. B: \FRED/ ate the /BEANS\.
- b. B':#/FRED\ ate the \BEANS/..

(3) [Context] There are several people having a party with several kinds of food.
A: Who ate what? What about the beans? Who ate them?

- a. B: #\FRED/ ate the /BEANS\.
- b. B': /FRED\ ate the \BEANS/.

Jackendoff 1972

In the answers in (2) and (3), the shape of the pitch contour for each constituent is different and the shapes are not exchangeable. These pitch contours, which create

prosodic prominence, are called 'accents'. The usage of accent here is in an abstract sense, unlike the phonetically based term 'pitch accent', which we will study in Chapter 2. The examples (2) and (3) seem to raise an issue similar to that in (1a) and (1b), that is, the contextual factor such as the type of preceding question, what the question asks about, etc. is reflected as the realization of prosodic accents on the proper constituents. However, the felicity contrast between the (a) and (b) answers in (2) and (3) shows that one must consider not only the assignment of an accent to the proper constituent but also the type of accent. A specific type of an accent, the rising accent, indicates is called Contrastive Topic, a term first introduced in Bolinger (1968) followed by numerous studies, including Jackendoff (1972), Buring (1997, 2003), Roberts (1996), among others.

Usually when these felicity issues arise regarding prosodic properties, the factors that are reflected through prosodic realization in English are considered to be a matter of HOW the utterance is delivered, not WHAT the utterance delivers. How the content is expressed has been called Information Packaging in Chafe (1976) and Information Structure in Vallduvi (1992). Where an accent is assigned and what type of an accent is assigned do not affect truth value conditions and thus, these factors are not considered to affect the semantics of an utterance. However, the boundary between the infelicity triggered by how the information is delivered and the infelicity caused by inappropriate content is blurred. In particular, in cases where implicit meanings are involved, it is hard to decide whether it is because the utterance does not deliver what it is supposed to or because the way it is delivered is not appropriate.

This problem is not solely a question of English accent types. The data in Korean that I will discuss in this thesis raises the same issues. The linguistic item to which this thesis devotes special attention is the Korean particle *-nun*. This particle, as well as the corresponding Japanese particle, *-wa*, are well known as a Topic markers in Topic-prominent languages (Li and Thompson 1976) such as Korean and Japanese. Topic is generally thought to have ‘aboutness’ meaning, i.e. what a sentence is about (= sentential topic) or a whole paragraph is about (= discourse topic) (Kuno 1972).

- (4) *Minwu-nun UCLA-uy haksayng-i-ta.*
 Minu-Nun UCLA-Gen student-be-dec
 ‘(As for Minu), Minu is a UCLA student.’

Sentence (4) is a typical sentence with a Topic-Comment or Topic-Focus articulation.¹ ‘Minu’ with *-nun* and without an accent is a Topic or Theme about which the remainder of the sentence is predicated. However, sentence (5) expresses a connotation that other people may not be UCLA students, a connotation missing in (4).

- (5) [*MINWU-NUN*] *UCLA-uy haksaying-i-ta.*
 [MINU-NUN] UCLA-Gen student-be-dec.
 ‘[MINU] is a UCLA student (but not other people).’

When *-nun* is combined with an accent in a discourse, it generates connotations that differ from those associated with case-marking (‘subject’ or ‘object’), and sometimes it causes infelicity. The problems raised by the usage of *-nun* are similar to those illustrated by the accent types in English above.

¹ Theme-Rheme, Link-Tail, psychological subject-psychological predicate, Background-Focus are all along the similar lines with the division of Topic-Focus.

Since apparently the interpretation of accented *-nun* is different from that of the unaccented counterpart, standard theories separate *-nun* into two independent morphemes depending on accentedness (Kuno 1972, Kuroda 1965, 1988, 2005, Heycock 1993, 2007 among many others). Accented *-nun* has been called ‘contrastive *-nun*’, distinguished from unaccented *-nun*, which is called ‘thematic *-nun*’ in Kuno (1972). By postulating two types of *-nun*, one can account for the differences in felicity between accented and unaccented *-nun* without having to seek a unified meaning for a single morpheme.

However, there are problems in this stipulation. It accounts for the full range of usage of *-nun* but intuitively and economically, one would like to have a unified analysis of *-nun*. Secondly, the existing analyses of contrastive *-nun* do not fully cover even the data where accented *-nun* appears (Chapter 3). Thirdly, those who distinguish two *-nun*’s sometimes blur the distinction. These problems will be stated more explicitly in the process of illustrating the puzzling patterns that *-nun* shows. We will examine these patterns in the following section and proceed to discuss the problems and how these problems can be understood in a broader linguistic picture.

1.2 The Puzzles

We will study the problem of information packaging and investigate whether all the related phenomena can be explicated simply as an improper way of delivering information. Consider the following examples from Korean, where the responses to (6) and (7) differ only in the particle attached to the subject.

(6) Ann: *anthakkapkeyto, nwukwun-ka ku salin-ul mokkyek hay-ss-e.*
 Unfortunately, someone-Nom the murder-Acc witness-do-pst-ind
 Unfortunately, someone witnessed the murder.

Bill: *Alayo. [BEN-I] hay-ss-eyo.*
 Know. [BEN-Nom] do-pst-ind
 I know. [A-accBEN] did.²

(7) Ann: *anthakkapkeyto, nwukwun-ka ku salin-ul mokkyek-hay-ss-e.*
 Unfortunately, someone-Nom the murder-Acc witness-do-pst-ind
 Unfortunately, someone witnessed the murder.

Bill: *#Alayo. [BEN-UN] hay-ss-eyo.*
 Know. [BEN-NUN] do-pst-ind
 #I know. [B-accBEN] did.

The capital lettering in Korean indicates prosodic prominence as in the English examples. In (6) and (7), the prosodic prominence is assigned to the same constituent but the morphological marker attached to the subject in the answer is the variable. In (6), the particle is a nominative case marker *-ka* and in (7), it is a different particle, *-nun*. In the English examples in (2-3), we have seen so-called Contrastive Topic (Bolinger 1968, Jackendoff 1972, Roberts 1996, Buring 1997, 2003). Due to the interpretational similarity to the English B-accented construction and to the long acknowledged function of the morphological marker *-nun* as an indication of Topic, the *-nun* marked constituent with an accent, *Ben-un* in (7), has been called Contrastive Topic in Korean (Lee 1999, 2000, 2003), Hara (2004, 2006) in Japanese among many others).³

² Even though in the gloss of English, the meaning difference is expressed as an accent type, I do not intend to equate the function of respective particles in Korean to those of accent types in English. Since the interpretational difference induced by the markers is best expressed with each accent, I used the accent types in the gloss. In the literature, each correspondence is treated as realizations of the identical constructions in different languages and indeed they share many properties. However, I leave the exact connections for future research.

³ Korean *-nun* and Japanese *-wa* are treated as counterparts in the respective languages.

Descriptively, based on the infelicity of the answer with *-nun* in (7), it seems to be that in Korean, the proper location of prosodic prominence and the choice of the morphological marker correlates with a context and affects felicity. This is the role of the location and the type of accent in English. In other words, the infelicity of the *-nun*-marked answer in (7) seems to suggest that when context requires that a constituent be new information, *-nun* marking is not compatible with this requirement for the alleged Topic. The contrast between (6) and (7) seems to be explained as the right indication of information status of the subject in the sentence. This reasoning fits well with the dichotomy articulation of Focus and Topic, which are treated as disjoint. That is, this pair seems to support the *-nun* as Topic marker regardless of an accent. However, the comparison of the following conversation pairs raises some doubt about this reasoning.

In the following two Korean conversation pairs, the subjects have different particles, *-ka* and *-nun* respectively, but in contrast to the above case in (6) and (7), both of them are good answers as a response to a wh-question.

(8) Ann: *(Ben, Sue, John cwungey) nwuka ku salin-ul mokkyek hay-ss-ni?*
 Ben, Sue, John among Who the murder-Acc witness do-pst-Q
 ‘(Among Ben, Sue, and John) who witnessed the murder?’

Bill: *[BEN-I] hay-ss-eyo.*
 [BEN-Nom] do-pst-ind
 [A-acc BEN] did.

(9) Ann: *(Ben, Sue, John cwungey) nwuka ku salin-ul mokkyek hay-ss-ni?*
 Ben, Sue, John among Who the murder-Acc witness do-pst-Q
 ‘(Among Ben, Sue, and John) who witnessed the murder?’

Bill: *[BEN-UN] hay-ss-eyo.*
 [BEN-Nun] do-pst-ind
 ‘[B-acc BEN] did.’ (‘but others did not’ or ‘but I do not know about others’)

In the above conversation, the subject is put in the position of updating of information, the alleged Focus position as in (6) and (7). In contrast to the infelicity shown in (7), however, in (9), when *-nun* marks the subject, the sentence is felicitous. That is, the presence of the *-nun* marker is compatible with Focus. Since both of the *-nun*-marked items in (6)-(9) are prosodically accented, the argument that the infelicity of (3) is because Topic is placed in the new information position, which is not allowed considering the disjoint relation of Topic and Focus, cannot be firmly established.

In the approach to account for the infelicity of the *-nun* marked sentence in (7) merely as incompatibility of an alleged Topic phrase in the position which is supposed to be Focus, the felicity of (9) must be a puzzle. Studies of Contrastive Topic in English already have raised controversial issues similar to this. Some studies have focused on identifying the properties of Contrastive Topic using the existing conventions of Information Structure and combining those properties. The trend in these studies has been to postulate various types of Information Structure categories (bi-partite approach of Focus-Topic articulation in Prague school tradition, tri-partite approach: Hajičová, Partee, and Sgall (1998), Vallduvi (1992), quadra-partite approach: Steedman (2000)). The data in Korean might look as if the bi-partite division of Focus and Topic is inadequate, and that a multiple division of categories to indicate informational status of a constituent is required.

However, to identify the accented *-nun* construction is more than finding related features from the existing categories such as Focus and Topic. If we observe the data of *-nun*, its behaviors in various discourse environments require more explanation than

merely specifying a proper category for the constituent to which *-nun* is attached. An explanation for the function of *-nun* with an accent is required, which will lead to an account of the behaviors of this particle in discourse. For instance, in the following example, the informational status of the marked item (the subject, 'I') is not as clear as that in the previous examples.

(10) A: *Minwu-ka i yangpok-ul sa-l kelako sayngkak-ha-ni?*
 Minu-Nom this suit-Acc buy-fut that thought-do-Q
 'Do you think Minu would buy this suit?'

B: #*kulssey, [NAY-KA] hwaksilhi an sa-l-ke-ya.*
 Well, I-Nom certainly Neg buy-fut-that-dec
 'Well, [A-acc I] certainly wouldn't.'

(11) A: *Minwu-ka i yangpok-ul sa-l kelako sayngkak-ha-ni?*
 Minu-Nom this suit-Acc buy-fut that thought-do-Q
 'Do you think Minu would buy this suit?'

B: *kulssey, [NA-NUN] hwaksilhi an sa-l-ke-ya.*
 Well, I-Nun certainly Neg buy-fut-that-dec
 Well, [B-acc I] certainly wouldn't (but Minu may buy it.)

Translated from Buring (1994)

In (10) and (11), the subject in the answer which we are interested in here does not seem to function as update of information or fill the lack of knowledge in the preceding utterance. Rather the appearance of a new subject 'I' can be understood as the introduction of new Topic. I will leave studying the definition of this new category for later and concentrate on describing the phenomena here. As in the previous examples, B's utterance as a sentence by itself is not ungrammatical but as a response to A's question, it cannot be felicitously used. One might provide a solution as follows: B's utterance does not provide proper information requested from the inquirer. That is, the inquirer requests information about 'Minu' but the provided answer is about 'I'. This

seems to successfully account for why (10B) is an infelicitous answer. However, the apparent solution to the question raised in (10) raises another question in the following example (11). If unmatched semantic content causes the infelicity problem, then why can (11B) become a felicitous answer in contrast to (10B)? The only difference found in written forms of these sentences is a particle following each subject. In (10B), the particle is a nominative case marker *-ka* and in (11B), it is the particle, *-nun*.

Generally this felicity problem appears when a following utterance does not correspond to the preceding one in a proper way. What this ‘proper way’ is is the key to solving this problem. One way to approach this problem has been shown from (6) to (9) as asking whether the information status in the answer is appropriate. However, the problem related to *-nun* is not solved by addressing the same question. Let us consider one more example of accented *-nun*. The function of *-nun* is not only pragmatic. Even without a contextual environment, it affects the felicity of a sentence. The following sentences exhibit contrast in felicity regardless of the contextual environment.

(12) [FRED-KA][KHONG-UL] mek-ess-nuntey, [TIM-I] [SSAL-UL] mek-ess-e
 Fred-Nom BEAN-Acc eat-pst-while Tim-Nom RICE-Acc eat-pst-ind
 ‘While [A-acc FRED] ate the [A-acc BEANS], [A-acc TIM] ate the [A-acc RICE].’

(13) #[FRED-KA][KHONG-UN] mek-ess-nuntey, [TIM-I][SSAL-UN] mek-ess-e
 Fred-Nom BEAN-NUN eat-pst-while Tim-Nom RICE-NUN eat-pst-ind
 ‘While [A-acc FRED] ate the [B-acc BEANS], [A-acc TIM] ate the [B-acc RICE].’

The clauses conjoined by *nuntey* ‘while’ are in a contrastive relation. The conjunction does not cause any problem with case markers but it triggers infelicity with *-nun*. It shows that the effect of *-nun* on the felicity of a sentence is not limited to utterances in discourse contexts.

In the situation where the marked constituent is not required to be prosodically accented, however, the alternation between *-ka* and *-nun* does not exhibit a felicity difference. Compare the following unaccented versions of answers, in which both markers are good, to the accented version in (6) and (7).

(14) A: *Minwu-ka i yangpok-ul sal kelako sayngkak-ha-ni?*
 Minu-Nom this suit-Acc will buy that thought-do-Q
 ‘Do you think Minu would buy this suit?’

B: *Ung, Minwu-ka hwaksilhi [SA-L-KE-YA]*⁴.
 Yes, Minu-Nom certainly BUY-FUT-THAT-DEC.
 ‘Yes, Minu will certainly buy it.’

(15) A: *Minwu-ka i yangpok-ul sal kelako sayngkak-ha-ni?*
 Minu-Nom this suit-Acc will buy that thought-do-Q
 ‘Do you think Minu would buy this suit?’

B: *Ung, Minwu-nun hwaksilhi [SA-L-KE-YA]*.
 Yes, Minu-Nun certainly BUY-FUT-THAT-DEC
 ‘Yes, Minu will certainly buy it.’

The felicity problem arises when the marked items are in the position to be prosodically accented. Thus far, the problem can be summarized as follows: the particle *-nun* in Korean has different felicity requirements than case markers. At the center of these puzzles is the prosodically accented *-nun*.

Although the description could be simplified by separating accented *-nun* from unaccented *-nun*, it cannot avoid the impression of being an artificial stipulation. Even without mentioning the following comment by Heycock (2007) regarding Japanese *-wa*, a unified account for both versions of *-nun* or *-wa* would be ideal.

⁴ The intonation pattern here does not seem to be fixed. Depending on which constituent, between the adverb ‘certainly’ and a verb ‘buy’, a speaker wants to highlight, one of them or both of them seem to be accented for me.

“It is clear that there is considerable scope for further research; in particular a formal treatment of the relation between contrastive and noncontrastive wa is badly needed, both for a satisfactory description of Japanese but more generally for the light that it might shed on the concept of topic writ large.”

This thesis will first focus on explicating the meaning and function that a specific particle *-nun* generates with an accent and a specific construction called Contrastive Topic in Korean. Once the analysis for the accented *-nun* is established, I will try to extend its application to the unaccented version.

1.3 Suggestion

The meaning of a sentence is based on the semantic meaning of lexical items in the sentence systematically combined by syntactic rules. This process creates the literal propositional meaning of a sentence that decides its truth condition. However, conversations are more complex than the delivery of the truth conditions of literal propositions. Some linguistic devices generate rich meaning that cannot be handled by only the truth conditions of the sentence and its literal meaning. The richer the meaning is, the greater the complexity for the sentence to be compatible with the given context or situation. The extra meaning of a sentence is obtained in different ways. It may be through the presupposed cooperation of conversation partakers and the given situation or through the function of a linguistic entity in connection with a given context. The way that the former type of extra meaning is obtained is called conversational and the later type is called conventional (Grice 1975, Potts 2003).

I suggest that the particle *-nun* is one of these devices used to generate richer meaning in a sentence beyond the literal meaning. I will suggest that *-nun* has the semantic/pragmatic function of forming extra propositions. What the propositions are, how they are derived, and how they affect the felicity of a sentence will constitute the main discussion in this thesis. For the utterance that includes *-nun* to be felicitous, each proposition denoted by an utterance should be compatible with the pragmatic environment. The concept of “pragmatic environment” in this usage will be also discussed in the following chapters. If an utterance with accented *-nun* is infelicitous, the reason for the infelicity is not always the same. This reason is related to the type of pragmatic environment that the meaning generated by *-nun* is not compatible with.

The questions that we will be addressing can be summarized as follows.

(16) Questions about *-nun*

- a. Is the *-nun* marker a direct regulator of the pragmatic condition?
- b. If it is, how does it function? If not, what does the *-nun* marker do and how can it be connected to the pragmatic condition?
- c. Is the prosodic accent crucial? If it is, how does it correlate with the morphological marking?
- d. Is the prosodic accent a direct regulator of the pragmatic effect?
- e. If it is, how does it function? If not, what does the accent do and how can it be connected to the pragmatic condition?

The study of accented *-nun* is not merely a study to identify a specific particle. This study is an attempt to understand how implicit meanings as well as explicit compositional meanings interact in a discourse and what kind of discourse effects are

derived from the process. That is, the study of *-nun* can be one of the cases in which we can observe the implicit flow of information.

In addition, if we step back a bit, we can ask what this proposal implies about more general linguistic concepts. The current proposal can be connected to further discussion related to various linguistic concepts such as contrastiveness, givenness, and definiteness. These concepts are all related to the status of a noun or the referent of a noun. One of the linguistic studies that initially expressed interest in all these concepts is Chafe (1975). His interest in these properties is revealed even from the title of the article, “Givenness, Contrastiveness, Definiteness, Subjects and Topics”. Since this is one of the earliest pieces of research about the status of NPs in a discourse, the terminology and theory was not as refined as they are now. Also, Chafe does not present a theoretical analysis concerning the above concepts. However, even though it has loose ends, its significance cannot be overestimated. Chafe himself has acknowledged that his main purpose was not to find satisfying answers for all the questions raised in the discussion, but to make readers realize that these questions require much contemplation and to stimulate further research on the issues. His intention was quite successful, leading to a considerable amount of follow up research. The research in this thesis will try to enlighten the concept of contrastiveness and givenness in Chafe’s sense by studying the particle *-nun*. If the concept of ‘contrast’ is dealt with in the study of accented *-nun*, the concept of ‘givenness’ is going to be dealt with in the process of extending the analysis of accented *-nun* to the unaccented version. That is, the study starting from explicating the

meaning of *-nun* will be extended to explaining how the meaning generated by *-nun* is related to properties such as contrast and givenness.

The approach that is going to be taken in this thesis seems to deviate from the discussion of Information Structure. However, through studying the usage of *-nun* and its correlation with other linguistic devices such as prosodic prominence, we will also think about the concepts that characterize Focus and Topic and their role in a context. Therefore, understanding how Focus and Topic are assigned, how they are interpreted, and how they function in a context is also essential for our study.

1.4 Structure of Thesis

The discussion will proceed as follows. In Chapter 2, we will study the pragmatic factors that prosodic accent identifies in Korean and English. First we will study in more detail the prosodic property of accent, which marks Focus. Another aim of this chapter is to report on experimental studies conducted in South Kyoungsang Korean. The contrastive meaning only occurs when *-nun* marked item is prosodically marked in Korean and thus, the correlation of accent and *-nun* needs to be investigated. In addition, since the counterpart meaning in English is expressed using a prosodic means, it has not been clear how much prosody and what kind of prosody is correlated to the formation of the meaning or function of accented *-nun*. Along the lines of English, Lee (2000) has suggested accent type in Korean is also related to the function of accented *-nun*. Part of this investigation has been done in experimental ways to explicate the opaque correlation. The experimental result confirms the necessity of investigation of *-nun* in different ways from those conventionally used.

In this chapter, an alternative approach of marking Topic in Korean is suggested, along the lines of Rizzi (1997) (for Korean, Choi (1995), for Japanese, Vermulen (2008)). He argued that the Topic feature is at a high position above IP in the syntactic hierarchy, which usually derives movement of a Topic constituent to the left periphery. According to the proposal here, what is truly meant by Contrastive Topic is realized as an accented *-nun* marked item in the left-periphery position. This means that in the previous literature, the notion of Contrastive Topic has covered two types of independent meanings in Korean: one is Focused Topic and the other is not necessarily a Topic but has just the meaning of Contrast.

In Chapter 3, I will propose an interpretation of the meaning/function of the *-nun* marker. First, I will introduce the previous literature on *-nun* by Lee and its Japanese counterpart, *-wa*, by Hara. I will discuss their shortcomings and suggest another approach to this problem. I will suggest that *-nun* functions to generate implicit propositions. One is an existential presupposition and the other is an exhaustive implicature. In the first half of the chapter, I will show that the two propositions differ in status, which leads the respective propositions to work in different ways in a discourse. The existential presupposition plays a crucial role in deciding the felicity of the sentence, while the exhaustive implicature does not. In the last half of the chapter, I will inspect how the existential presupposition is connected to the function of *-nun* as having a contrastive meaning. I will account for what Contrast means and how it constructs the structure within a sentence. I will show that *-nun* in fact operates over the whole sentence, not just the constituent to which it is attached.

In Chapter 4, based on the function of accented *-nun* as generating existential presupposition and exhaustive implicature, the felicity contrast that appears between *-nun* and case markers in a discourse will be explained. By adopting the analysis of the generation of a presupposition as a function of *-nun*, we do not need to stipulate any additional pragmatic function of *-nun* but only to utilize the existing theory related to presupposition, which is called ‘accommodation’, to explain the pragmatic behavior of *-nun*. Therefore, a large part of the discussion will be about accommodation phenomena and most of the problems introduced in the introduction will be solved in this chapter.

In Chapter 5, I will extend the analysis obtained from accented *-nun* to unaccented *-nun*. One might question the direction of this extension. Intuitively, the *-nun* without an accent must be pristine and accented *-nun* derived. However, the meaning of *-nun* alone is hard to capture since it is a discourse item that reflects subtle elements, sometimes even the cognitive state of the interlocutors. I will provide three characteristics of unaccented *-nun* and examine how the presupposition analysis established in Chapter 3 accounts for these three characteristics.

In Chapter 6, I will summarize the discussion and suggest the future research prospective.

Chapter2

Context, Prosodic Prominence, and Felicity

In this chapter, we will study how prosodic prominence conveys context-dependent meaning to an utterance as introduced in Chapter 1. In the previous chapter, I have used the word ‘accent’ to represent prosodic prominence without elaboration. This is an abstract usage of the term ‘accent’. The way an accent is realized varies from language to language depending mainly on the built-in prosodic system of the language. For instance, English is a stress language and its ‘accent’ is realized as an intonation contour that is connected to stress, which is called *Pitch Accent* (Pierrehumbert 1980, Beckman and Pierrehumbert 1985, Hirschberg and Beckman 1984, Ladd 1996). I will briefly outline how prosodic prominence is realized in various kinds of contextual environments in English. With the realization of English prosodic prominence as background, we will turn to our main interest, which is the realization and function of prosody in Korean. We will examine the correlation of prosody with morphological markers through experiments.

2.1 Interpretation of Prosodic Prominence in English

2.1.1 Pragmatics and Prosodic Prominence

In a sentence, words are produced with different levels of pitch, amplitude, duration, etc. These elements affect the listener's perception as to which constituent is more prominent than another one and which one is the most prominent among the constituents in the sentence. These properties are not recognized until they are actually spoken. It is hard to indicate (or signal) every property of each prosodic constituent in detail in the written version of sentence, so in representations here, the most prominent word in a sentence, which is what matters, will be marked with capital letters and the primarily stressed syllable of the prominent word will be marked in bold.

- (1) Alexandra is moving to Madagascar.
- (2) Q: Is Alexandra moving again? Where is she moving to this time?
A: Alexandra is moving to [MADAGASCAR]!
- (3) Q: Wow! Who is moving to Madagascar?
A: [ALEXANDARA] is moving to Madagascar.

We can perceive the word 'Madagascar' most prominently in (1) and (2) while in (3), the subject, 'Alexandra', is most prominent. Within the words, the third syllables sound most prominent. The factors that make a word most prominent in a sentence and those that make a syllable most prominent in a word are different. The former is related to a semantic/pragmatic interpretation and the latter is related to a lexical property. The lexical prominence of the word is fixed. This is called 'Stress'. According to the observation of the pitch contours of 'Alexandra' and 'Madagascar' in the above examples,

the change of contour always occurs in the third syllable and sometimes both in the first and the third syllable.

Not only the amplitude but the tonal change of this syllable contributes to our perception of prominence of this syllable in the utterance. In the framework of Autosegmental-metrical (AM) intonational phonology of English (Pierrehumbert 1980, Beckman & Pierrehumbert 1986, Ladd 1996), the tonal change which is connected to the stressed position is called pitch accent. When a sentence is composed of several words, more than one word can have a pitch accent. How many words or which words have pitch accents depends on various factors—speakers, contexts, the number of words within the sentence, etc. Content words are primarily eligible for the assignment of pitch accents. Among these multiple pitch accents, there is one that is most prominent. It is called ‘Nuclear Pitch Accent’ (henceforth, NPA). When there are plural numbers of pitch accents as in (1)-(3), the last pitch accent of a phrase that is terminated by a boundary tone and a minor phrase-final lengthening (called an Intermediate Phrase) is the NPA and others that precede the NPA are called ‘pre-nuclear pitch accents’.

The definition of NPA here, which follows Pierrehumbert's, is used in a phonetic sense, without reference to pragmatic factors. NPA in a phonetic sense refers to a phonetic property of the last pitch accent of an Intermediate Phrase (called ‘phrase accent’). This NPA is the point where pragmatics makes connection to phonetics in English, i.e. the pragmatic realization at PF. Pragmatic meaning is marked by the phonetic property, NPA, to convey its meaning. The way that pragmatic meaning is realized at PF will be illustrated in the following

2.1.2 Prosody Correlated with Pragmatics I: Location of NPA

2.1.2.1 An Answer to a Wh-Question

Comparison of the sentence in (4) and the answers in (5a) and (5b) shows how pragmatics regulates the realization of NPA.

- (4) John introduced Bill to SUE.
- (5) a. Q: Who did John introduce to Sue?
A: #John introduced [_F Bill] to SUE.
- b. Q: Who did John introduce to Sue?
A: John introduced [_F BILL] to Sue.

In (4), 'Sue' has NPA because it is the last lexical word, which usually has a pitch accent in the Intermediate Phrase. In (5), a context is given and the given context affects the location of NPA. Example (5a) is the same sentence as (4), and thus, we might expect the NPA to be on 'Sue'. However, contrary to expectation, maintaining NPA on 'Sue' causes infelicity of the utterance as an answer to a wh-question in (5a). NPA must be on 'Bill' to be felicitous. Focus is assigned because of the status of 'Bill' as new information and is realized through NPA on 'Bill'. There are two major accounts for how NPA is assigned to a Focused constituent. One is to have a negative condition that given items in a discourse ('Sue' in (5a)) cannot have an NPA and the other is to have a positive condition that a focused constituent has to have an NPA (Selkirk 1995, Truckenbrodt 1995 among many others). We will not attempt to choose between these accounts since this is beyond the scope of this dissertation.

2.1.2.2 Presence of a Salient Alternative

Here is another type of pragmatic factor regulating the realization of NPA.

- (6) a. An American farmer was talking to a Guernsey COW.
b. An AMERICAN farmer was talking to a CANADIAN farmer.
c. John is neither EAGER to please, nor EASY to please, nor CERTAIN to please.

In (6a), the pitch accent that appears on ‘cow’ is the NPA, making it the most prominent constituent in the sentence. In (6b) and (6c), the NPA appears in the adjectival modifiers of nouns and on adjectival predicates respectively, not on the neutral NPA positions, ‘farmer’ and ‘please’. Through the deviant accent pattern of (6b) and (6c), we can tell that Focus is assigned to the constituents that have NPAs.

Despite of the lack of a context calling for the update of information, the items in the parallel positions in the sentence, ‘American’ and ‘Canadian’, are most prominent constituents in their Intermediate Phrases. The pragmatic factor that regulates the prosodic prominence in this case is different from the factor that functions in wh-question and answer pairs.

The sentences in (6b) and (6c) were introduced in Chomsky (1971) and have been discussed since then as a representative examples of ‘symmetric contrastive Focus’ (Ladd 1980, Rochemont 1986, Rooth 1992 and many others). In contrast to the previous cases of question answer pairs, the examples in (6b) and (6c) do not require that the prosodically prominent items be sensitive to the context. The phrase ‘an [X] farmer’ constitutes a parallel construction with the phrase, ‘a [Y] farmer’. The constituents that contain X and Y form parallel constructions and the X and Y should be different but in the same category. What this ‘category’ is cannot be specified in advance, since the kind varies depending on the context. The category functions as limiting a set for the potential variables. These distinctive alternatives in parallel positions that are from a set of the

same category are described as being contrastive to each other. The examples here show that Focus assignment is done not only by indicating informational status as new information but by the existence of salient alternatives. Both of them are described as NPA assignment being affected by pragmatic environment. The cases as in (6) are specifically called ‘contrastive Focus’.

The usage of ‘contrastive’ in the contrastive Focus illustrated above is descriptive in the sense that the term describes how focus is marked. Since it is a descriptive subtype of Focus, there has not been much discussion regarding its theoretical property in using the notion of contrast. It needs to be noted that the notion of ‘contrast’ here will be different from what I will define as ‘Contrast’ in Chapter 3.

In this section, we have discussed how Focus is realized through an accent in English when a sentence is put into a specific discourse context. As previously mentioned, in this thesis, ‘accent’ is used as an abstract term to represent the prosodic realization of Focus following Gussenhoven (1981). This accent is realized through the last and most prominent pitch accent, NPA in English. That is, the placement of NPA can be changed depending on its pragmatic situation.

2.1.3 Prosody Correlated with Pragmatics II: Shape of Pitch Contour

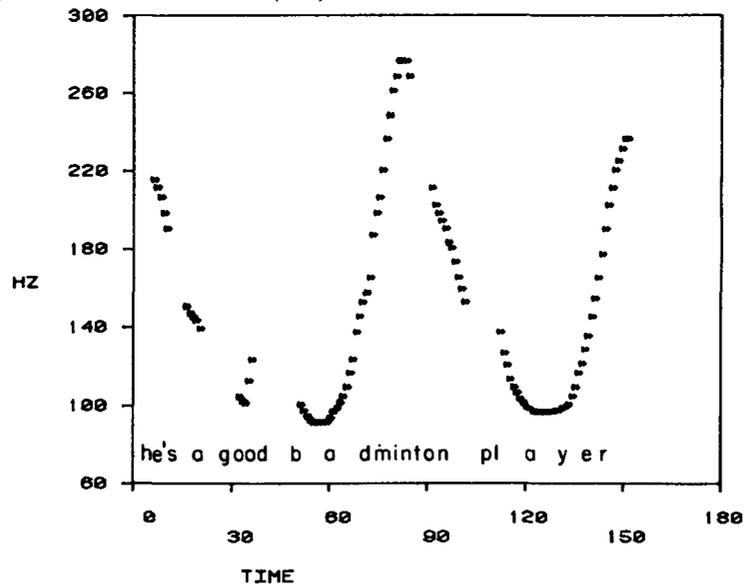
A prosodic accent, which is indicated by an NPA in English, has been illustrated as identifying Focus. In this section, another prosodic means correlated with pragmatic factors in English will be introduced. Halliday (1967) and Bolinger (1968) noted that a rising intonation contour has a pragmatic meaning. Bolinger called it B-accent distinguishing it from a falling intonation contour, which he called A-accent.

2.1.3.1 Fall-Rise Accent

Ward and Hirschberg (1985, 1988) have extensively discussed a construction including this rising accent from both phonetic and pragmatic perspectives. Their example is cited here with a figure of the intonation contour.

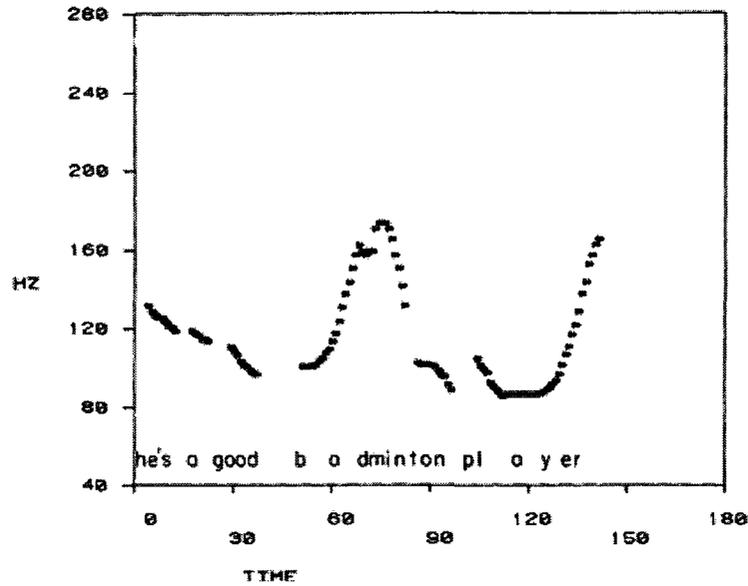
For the sentence “He is a good badminton player,” they compare the two contour shapes: Figure 1 has a rising accent whose low tone is mapped to the primary stressed syllable, followed by a high boundary tone, and Figure 2 has a rising accent whose high tone is mapped to the primary stressed syllable, followed by a high boundary tone. In Pierrehumbert’s ToBI (Tones and Break Indices) labeling, Figure 1 is L*+H L-H% and Figure 2 is L+H* L-H%¹. Ward and Hirschberg noted that Bolinger identifies the following contours as the same type.

Figure 1. The Fall-Rise (FR) Contour



¹ The detailed discussion for the labeling will be followed.

Figure 2. The A-Rising Contour (Bolinger's AC contour)



According to ToBI, a prosodic transcription system based on intonational phonology of English, all tonal events are transcribed as structured strings of Low (L) and high (H) tones. The accent shape, i.e. the type of pitch accent, will be transcribed by two levels of tones (H: high, L: low) with the starred (*) tone associated with the stressed syllable. A H or L tone followed by ‘%’² is a boundary tone and is used when the tonal event appears at the end of intonational phrase and is not part of pitch accent.

In the FR construction, since the rising pitch accent (L*+H) is followed by a low phrase accent (L-) and a high boundary tone (H%), the rising accent in FR always corresponds to the last pitch accent of an intermediate phrase, i.e. Nuclear Pitch Accent (NPA). Ward and Hirschberg (1985, 1988) argued that FR delivers the implicature of the

² This symbol ‘%’ will be used to indicate a type of infelicity of a sentence in Chapter 3.

speaker's uncertainty. Constant (2006) has a good summary of Ward and Hirshberg's (1985) proposal of the implicature that FR delivers.³

- (7) a. Uncertainty about whether it is appropriate to evoke a scale at all.
- b. Uncertainty about which scale to choose, given that some scale is appropriate.
- c. Given some scale, uncertainty about the choice of some value on that scale.

According to the analysis here for FR, if the sentence “he is a good badminton player” with FR in Figure 1 is used as a response to an utterance “Alan is a real klutz” (Ward and Hirshberg 1985:769), it roughly means as follows: “You think Alan is very sloppy and clumsy but I know that he is at least good at playing badminton. I am not sure whether this is a good enough answer to your comment but this is the best answer that I can give you.” The meaning of the whole FR contour may not be composed from only the meaning of a rising pitch accent. Considering that a boundary tone has a meaning (Pierrehumbert and Hirschberg 1990, Gussenhoven 2004), the meaning must consist of the combination of the rising pitch accent and the boundary tone.

2.1.3.2 Contrastive Topic

Another usage of rising pitch accent that has been treated as independent from Ward and Hirschberg's FR is Contrastive Topic. Consider the following examples.

- (8) Q: Who ate the beans?
 A: [FRED] ate the beans.
 H* L- L%

³ Constant (2006) adopts Pierrehumbert's (1980) descriptive term “rise-fall-rise” (RFR) for Ward and Hirschberg's FR contour. However, since I will introduce Ward and Hirschberg's analysis of the interpretation of intonation contours, I will follow Ward and Hirschberg's original term Fall-Rise contour in order to avoid confusions.

the ‘aboutness’ Topic is thought to have alternatives. The following example from Krifka (2007) illustrates the point of Contrastive Topic as ‘Focus within a Topic’.

- (10) A: Where were you (at the time of murder)?
B: [[I]_{Focus}]_{Topic} [was [at HOME]_{Focus}]_{Comment}

The intuition of combining Focus and Topic is assumed in many studies, although apparently some studies take slightly different approaches by not necessarily stipulating Contrastive Topic as ‘aboutness’. In Buring (1997), the semantic function of forming a set of set of alternatives is argued and in Roberts (1996) and Buring (2003), the function of Contrastive Topic as a discourse strategy is emphasized.

Both FR and Contrastive Topic contain a rising pitch accent (L*+H). The most crucial difference between FR and some specific types of Contrastive Topic constructions such as Jackendoff’s ‘bean’ example in (9), Krifka’s example in (10), and Buring (1994, 1997)’s examples, called ‘bridge contour’, is the presence of a falling pitch accent. That is, while an FR construction contains a single NPA (L*+H), Contrastive Topic constructions that are called bridge contours contain two NPAs, one rising accent (L*+H) and the following high accent (H*) (some. e.g. Jackendoff (1972), call it falling accent). In order to figure out whether these two constructions have a unified analysis, understanding the meaning and function of a rising accent (L*+H), which is common in both types of constructions, is essential. However, there is not a consensus as to whether they can be unified.⁵

⁵ See Constant (2006) for a detailed discussion.

In this section, we have discussed two prosodic factors, both of which are related to pragmatic meaning and function. One is the location of NPA, and the other is the prosodic shape of pitch accent. In English, these prosodic factors correlate with contextual factors.

2.2 Function of Prosody and the Particle –*nun* in Korean

2.2.1 Prosody

Korean, like English, signals Focus through prosodic prominence. How the prominence is achieved has been the subject of many studies, e.g. Jun (1993, 2006, 2007), Jun and Lee (1998), Kenstowicz and Sohn (1997). The general agreement among these Focus prosody studies is that Korean Focus employs the method of raising the pitch of a Focused constituent and making it the highest point in a sentence. The details are not exactly same in English and Korean since the prosodic systems are different. Even within Korean, the way that Focus is realized may not be unified in a strict sense, since there are at least two prosodic systems in Korean depending on the dialect. One is the non-pitch accent system employed in Standard Korean and the west part of Korea, studied in Jun (1993), and the other is the lexical pitch accent system employed in the east part of Korea, studied in Chung (1993), Kenstowicz and Sohn (1997), Jun et al. (2006), and Lee (2008) for Northern Kyoungsang Korean and in Ramsey (1973) and Kim (2008) for South Kyoungsang Korean among many others. In a pitch accent language, a pitch contour for a pitch accent and its location are lexically assigned. Therefore, ‘pitch accent’ in Korean is different from pitch accent in English. While a pitch accent in English has pragmatic meanings (as introduced in the previous section), a pitch accent in Korean makes a lexical distinction. For instance, in English, regardless of whether you read ‘eggplant’

with a rising contour or a falling contour, you mean ‘eggplant’ but with a different implicature in a discourse. In Kyoungsang Korean, if you read *kaci* with a rising tone (LH), it means ‘eggplant’ but if you read it with a falling tone (HL), it means ‘a kind’. In as much as tonal pattern is lexically distinctive, Korean works like a tone language. There are reasons for calling Kyoungsang Korean a ‘pitch accent’ language, not a ‘tone language’, but the discussion is beyond the scope of this thesis. The point of mentioning this fact is that dialects of Korean that have a pitch accent system cannot use a pitch contour shape of a pitch accent as the means of marking pragmatic distinctions.⁶ I will provide figures of pitch contours of South Kyoungsang Korean, which is one of the ‘pitch accent’ dialects Korean. Jun (2006, 2007) for Standard Korean and Kenstowicz and Sohn (1997) for North Kyoungsang Korean (NKK) suggest ideas for how Focus affects prosody. Their common proposal can be summarized as follows.

(11) Focus Prosodic Effect in Standard Korean and North Kyoungsang Korean

- a. Pitch raising of the focused word
- b. Beginning a new Intermediate Phrase (ip) at the beginning of the focused word
- c. Suppression of the pitch in the post-focus words

Their observation appears to hold in my recordings of South Kyoungsang Korean Focus sentences. The Focus effect concerns the prosodic domain as well as the pitch. The Focused word begins a new ip, whose domain is defined based on prosody. When a pitch peak does not follow a phonetic downtrend, a new ip domain boundary is assumed to be present. Representation of Focus in Korean is straightforward as illustrated above, but

⁶ However, boundary tones can mark pragmatic meanings (Park 2004).

questions arise regarding the appearance of *-nun* marked answers that are prosodically prominent. In the next subsection, we will investigate the particle *-nun*.

2.2.2 A Particle *-nun*

The Japanese counterpart of *-nun*, *-wa*, has been long acknowledged as representing Theme (Kuno 1973 among many others), and there is rich literature on this topic. Since it is generally assumed that Japanese *-wa* and Korean *-nun* exhibit identical patterns, I will use the analysis of unaccented *-wa* as a starting point to discuss *-nun*. The following example illustrates the function of thematic *-wa*, a term which comes from Kuno (1973), which I call unaccented *-wa* and Heycock (1993, 2007) and Vermulen (2008) call uncontrastive *-wa*. In (12) is an example of *-wa* with the ‘aboutness’ reading, i.e. the reading of ‘Theme’ or ‘Topic’, ‘LINK’ in Vallduvi’s (1992), Heycock (1993, 2005), and Tomioka (2000), and (13) is another type of usage of *-wa*, which is called contrastive *-wa* that appears with an accent..

- (12) *wa* for the theme of a sentence: “Speaking of ..., talking about ...”

John wa gakusei desu.
John-*wa* student is
‘Speaking of John, he is a student.’

- (13) *wa* for contrasts: “X ..., but ..., as for X...”

John ga pai wa tabeta ga (keeki wa tabenakatta)
John GA pie WA ate but cake WA ate-NEG
‘John ate (the) pie, but he didn’t eat (the) cake.’

Like *-wa*, the *-nun* marking that accompanies prosodic prominence is called contrastive *-nun*. In order to be neutral, however, I will call this “accented *-nun*”, which does not mean that the marker is accented but that the whole marked phrase is under the

effect of prosodic prominence. However, there has not been a systematic study of the phonetic aspects of accented *-nun*. Therefore, whether so-called contrastive *-nun* has prosodic characteristics of Focus or its own prosodic property is not clear. This will be studied through a series of experiments, described in the next subsection.

The meanings of *-nun* with an accent is studied in detail in Lee (1999, 2000, 2003) and *-wa* with an accent is studied in Hara (2004, 2006), Heycock (1993, 2007), and Tomioka (2006, 2008) among many others. The examples in (14) and (15) illustrate the appearance of accented *-nun* in a discourse.

(14) a. Q: How was the party?

A: [*UMSIK-UN*] *mas iss-ess-e*.
 [FOOD-NUN] taste exist-Pst-Dec
 ‘[_{B-Acc} THE FOOD] was good (but others aspects were not that good).’

b. Q: Do you get along with your parent?

A: [*EMMA-LANG-UN*] *cal cinay*.
 [MOM-WITH-NUN] well get along
 ‘I get along well [_{B-Acc} WITH MOM] (but not with dad).’

Tomioka (2006) in Japanese

(15) Q: What about her? Did she arrive yet? Did she go on the stage?

A: [*O-KI-NUN*] *hay-ss -e*
 COME -Nmz-Nun do-Pst-Dec
 ‘She [_{B-acc} ARRIVED].’

Lee (2003)

The interpretation of these Contrastive *-nun* examples is similar to the meaning of FR. Recall the meanings suggested for FR in the previous subsection. Lee (1999, 2000, 2003) and Hara (2004, 2006) provides similar analyses for the above constructions with Ward and Hirschberg's (1985) analysis of FR construction: Lee argues that accented *-nun* in Korean functions to generate scalar implicature and Hara argues that accented *-wa* in

Japanese functions to generate uncertainty implicature. I will discuss their analyses in detail in Chapter 3.

Accented *-nun* and accented *-wa* are called Contrastive Topic in the respective languages, and Lee and Hara argue that their analyses account for this function. I do not want to dispute whether we should treat accented *-nun* as equivalent to FR or to Contrastive Topic. In English, there is not a consensus yet whether FR and Contrastive Topic should be treated in a unified way or not (see the discussion of Constant 2006).

In Korean and Japanese, when Lee and Hara make arguments respectively that accented *-nun* and accented *-wa* are Contrastive Topics, the arguments are based on the assumption of the one-to-one mapping of the markers to Topics. They do not concern the controversial discussion of FR and Contrastive Topic constructions. I reject the one-to-one mapping of accented *-nun* and accented *-wa* marked constituents to the category of Contrastive Topic. Rejecting this premise, I suggest the *-nun* should be studied without assuming that *-nun* is a Topic marker. One way to avoid the one-to-one mapping of accented *-nun* to the ‘aboutness’ Topic is to stipulate two types of *-nun*. However, as I stated in the introduction, I will not distinguish two types of *-nun* depending on whether it has accent or not. Instead, I propose the following explanation of the meaning of accented *-nun*: i) ‘aboutness’ Topichood is indicated by syntactic position, ii) *-nun* generates the Contrastive meaning being a Contrast operator, and iii) an accent provides a quantified domain for the realization of ‘Contrast’.

A couple of questions arise regarding this suggestion. One is how the three proposals above disconnect the one-to-one mapping of accented *-nun* marked items to

Contrastive Topic. Second, the suggestions above do not look completely new. What would be the new contribution of the proposals?

As for the first question, by attributing Topichood to syntactic position as argued in Choe (1996) in Korean, Vermulen (2008) in Japanese, and Rizzi (1993), we deny that every accented *-nun* marked item, which is called Contrastive Topic in the literature, is a Contrastive Topic. Contrastive Topic may be a subset of accented *-nun* marked items. That is, if accented *-nun* marked items are Topicalized, they become Contrastive Topic. To support this argument, I conducted prosodic experiments (section 2.3). I will examine whether the accent that appears in the *-nun* marked items appears to be the same as the case marked items that are considered to be plain Focused items. If the property of accent turns out to be different depending on the morphological markers, that factor could play a crucial role in distinguishing a plain Focus and the so-called Contrastive Topic. However, if the accent turns out to be the same in Focus and *-nun* marked items, we are sure that the property distinguishing *-nun* marked items from case-marked Focus resides only in the different morphological markers.

Once it is confirmed that the function of the morphological marker *-nun* is to distinguish the constituent that it attaches to from being a plain Focus, I will provide an alternative explanation for what *-nun* is in Chapter 3. I will provide a new proposal that *-nun* has a 'Contrast' property. I will provide a systematic linguistic account for how the *-nun* marked item obtains contrastive interpretation not merely relying on native speaker's intuition that it has contrastive meaning. This answers to the second question as to what is the new contribution of the above proposal.

2.3 Experiment

Having the knowledge of different types of pitch accent (B-accent for Contrastive Topic and FR, and A-accent for Focus) in English as a background, let us consider the Korean cases. In the conventional framework, although we know that both Focus and accented *-nun* are prosodically prominent, it has not been actually demonstrated whether the prosodic prominence in Focus and the accented *-nun* are the same kind. Although Lee (2003) mentioned that Korean Contrastive Topics also has a specific rising accent, which is the counterpart of English B-accent, he showed only one pitch track of a phrase without comparison with other types of examples. We are going to examine the prosody of *-nun* marked phrases through the following two experiments.

2.3.1 Hypotheses for the Three Experiments

Here are the hypotheses for the three experiments. First, if *-nun* marking forms its independent category of Topic, one would not expect it to be in Focus position. Under this assumption, an answer to a wh-question should be accented but should not allow *-nun*. That is, even though the constituent is accented, the answer to the wh-question with *-nun* would be rejected in the judgment tests because of the presence of *-nun* itself.

The second scenario is that *-nun* does not mark Topic. We assume then that the Focus as an information category does not care about the presence of *-nun* since it does not mark another informational category conflicting with Focus. Under this assumption, we expect the prosodic property of *-nun* marked constituents to be identical to Focus and the answers to be judged to be felicitous.

We will first check the judgment results. If there are productions of *-nun* marked items that pass the judgment tests under Focus generating context, we will compare the prosody of *-nun*-marked and case-marked constituents under the context of wh-Q/A.

2.3.2 Experiment One: Different Morphology for the Answer to a Wh-question

2.3.2.1 Design

The following is the first in the series of three experiments. These experiments were designed to collect the subject's usage of the target sentences in as natural way as possible. For this purpose, the MATLAB program was used to run the experiments. This program made it possible to collect subjects' self controlled responses. These experiments differ from most of the existing Focus experiments of Korean in that in past experiments, the subject's judgment was not collected as part of the experimental process. In those experiments, the script was prepared with obvious Focus examples such as question answer pairs or corrective cases, and subjects were asked to read them given the context. In the current experiments, one more process was added to the paradigm. Subjects were asked for felicity judgments first, and if the target sentence is felicitous, they were asked to read it.

The target sentences are simple transitive sentences with three or four words (the number of words depends on the type of experiment). The procedure is as follows.

(16) Procedure

- i. Pre-reading: One day before the actual experiment, the subjects read the context and questions so that they are familiar with the context in advance.
- ii. Computer Display: The computer screen displays only the context and question (not the answer), and only when the subject has understood the context and question completely, is he/she allowed to click 'Enter'.

iii. Judgment: A new screen with one of the answers appears and the subject judges the acceptability of the sentence on a scale of 0-3. The meaning of the scale is as follows.

0: I would not speak in this way

1: I would not speak in this way but not terribly bad

2: I would be hesitant to speak in this way but usable.

3: This is the way that I speak in this situation

iv. Production: If the subject chooses either 2 or 3, he/she is required to produce the answer sentence two times as he/she would normally say it in the situation.

The experiment was conducted in the recording lab in Pusan National University (PNU) in Pusan, Korea in the summer of 2008. Twelve native Korean speakers (specifically, South Kyoungsang speakers, seven females and five males) participated in this experiment. The speakers were in their early twenties. All were students of PNU. They did not have any pre-knowledge of linguistic theory or theoretical background of the experiment. Among them, the results of nine subjects⁷ for three experiments were analyzed using *PitchWorks* speech analysis software (Scion R & D).

In (17) is an illustration of the script given to the subjects. The item that we are examining is the one that answers the wh- object question. An answer consists of four constituents: a subject, an object, an adverb and a verb. Generally, object arguments tend to form one Accentual Phrase (AP) with a following predicate although phrasing depends in part on the speaker, the number of syllables, and the semantic closeness between the object and the verb. In order to avoid an object forming an AP with a predicate as a default, I placed an adjunct between them.

⁷ Three subjects were excluded for the following reasons: i) not having a consistency in utterances, ii) unnatural reading (like reading a book), iii) not faithful to the directions (only read one time).

In constructing the examples, two additional factors were considered. First, the tonal patterns of the words were chosen to be consistent across all target sentences since South Kyoungsang Korean is a pitch accent language. Every target word starts with a low tone and ends with a low tone. Secondly, the target syllables are sonorant sounds to assure a clear pitch track. The following is one of the eight sets of conversations for this experiment⁸.

(17) An Example Dialog

Q: *tayk-uy ai-ka mwue-lul melli ponay-ss-eyo?*
 Your child-Nom what-Acc far send away-Pst-Dec?
 ‘What did your child send away to a far place?’

A: a. *wuli ai-ka [MENGMENGI-LUL] melli ponay-ss-eyo.*
 My child-Nom PUPPY-ACC far send away-Pst-Dec

A: b. *wuli ai-ka [MENGMENGI-NUN] melli ponay-ss-eyo.*
 My child-Nom PUPPY-NUN far send away-Pst-Dec
 ‘My child sent [_F A PUPPY] far away.’

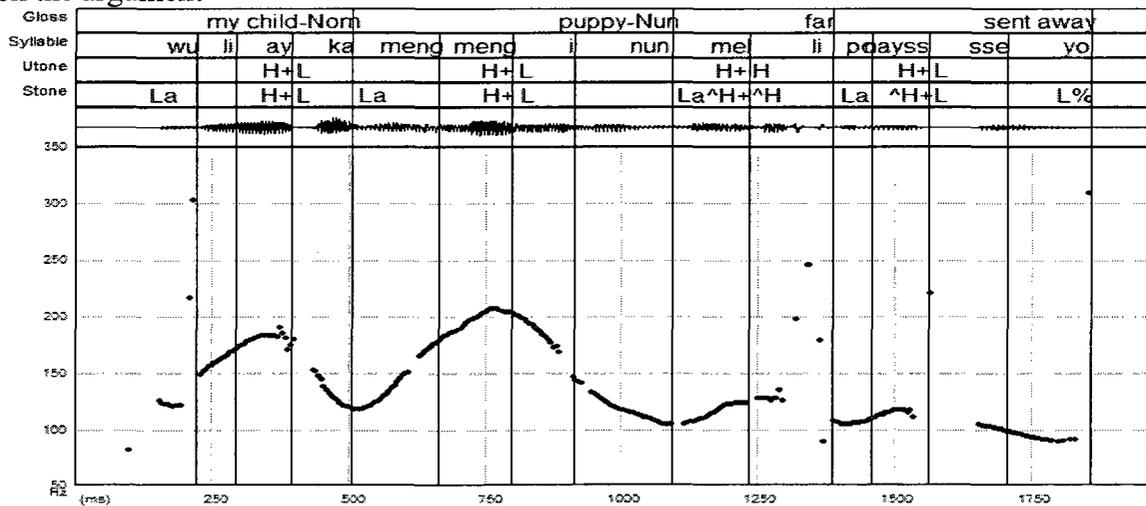
Seven people participated in this experiment. Since each person had eight sets of conversations, the number of total judgments for each type of answer is fifty six. That is, we have fifty six judgments for A-a answer and for A-b answer respectively. Also, since the subjects were asked to produce a sentence two times if the sentence was felicitous, the estimated total number of utterances is one hundred twelve if every sentence is felicitous ($56 \times 2 = 112$). The A-a type answer is a canonical answer for a wh-question. We will discuss whether speakers accepted the A-b answers and what type of prosodic pattern they exhibited when they answered.

⁸ The scripts for the experiments are provided in an appendix at the end of the dissertation.

2.3.2.2 Results and Discussion

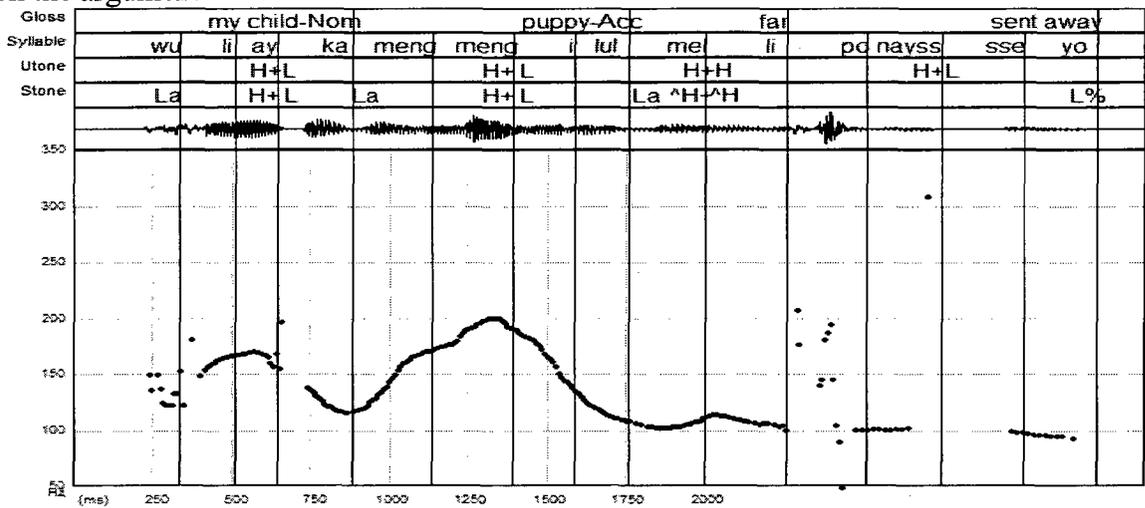
The judgment test results between the case-marked object (A-a type answers) and *-nun* marked object (A-b type answers) turned out to be different as follows. For the *-nun*-marked answers, thirty-four out of fifty-six (60.7%) cases were judged to be infelicitous and thus, not recorded. The remaining twenty-two cases were judged to be felicitous and thus, recorded as forty-four utterances since each subject repeated a sentence twice in production. Among forty four recorded utterances, twenty nine (65.9%) utterances exhibited a pitch raising effect on the argument part of the object (*mengmengi* ‘puppy’ in the above example). Interestingly, seven utterances (15.9%) exhibited a pitch raising effect on the *-nun* marker, either only on *-nun* or both on the argument and *-nun*. I think the seven cases that exhibits pitch raising on *-nun* may correspond to what has been claimed as B-accent in Korean by Lee (2003). First, let us compare the pitch track of a *nun*-marked sentence to a case-marked sentence.

Figure 3. An example pitch track of an object with *-nun* (Speaker:M2) with pitch raising on the argument⁹



⁹ In the S-tone tier in the above pitch track, ^H means downstepped H.

Figure 4. An example pitch track of an object with *-lul* (speaker: M2) with pitch raising on the argument



Figures 3 and 4 are examples of pitch tracks of the sentence (17) produced by speaker M2. In the figures, there are four tiers. The first tier is divided by each accentual phrase, which corresponds to the word in Korean and provides glosses for Korean words. The second tier is divided by a syllable of Korean words that is written following the Yale Transcription system, to which the tones in the third and fourth tiers are aligned. In the third and fourth tiers, underlying tones (Utone) and surface tones (Stone) are provided respectively. Underlying tones in the third tier are lexically assigned pitch accents. Surface tones in the fourth tiers include both the pitch accent tones realized in the surface after undergoing prosodic processes such as prosodic phrasing and the boundary tones which are post-lexically aligned to prosodic boundaries. The same format will be consistently used in other pitch tracks in this thesis.

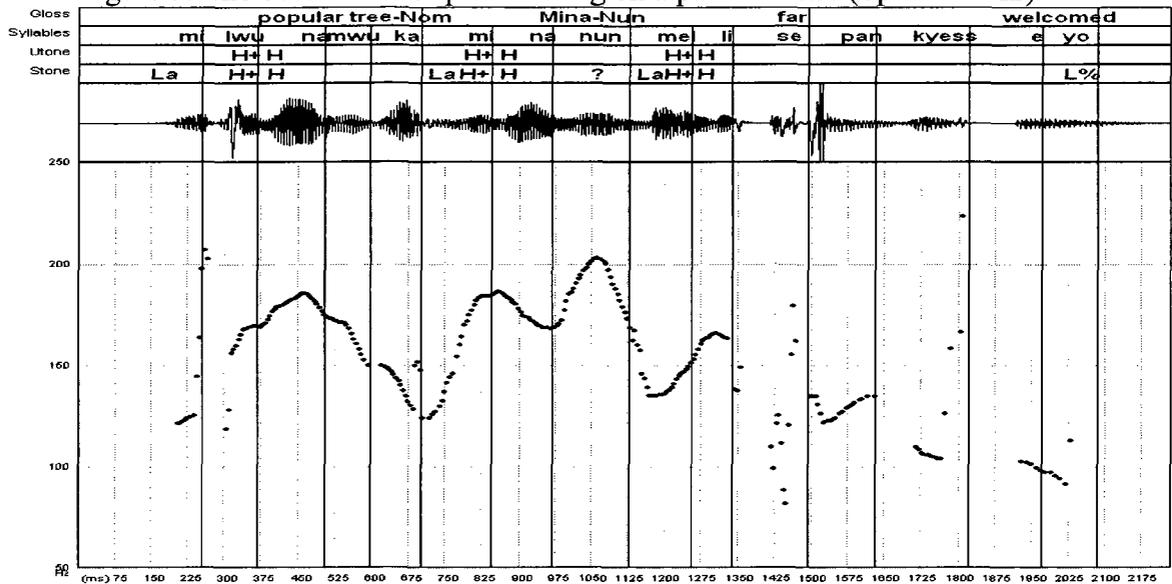
In the above pitch tracks, the speaker starts with his normal pitch 160-180Hz. Because of phonetic downtrend, we would expect the second Accentual Phrase (AP),

mengmengi ‘puppy’ to be lower than the subject phrase. If the second AP forms a new intermediate phrase (ip), which is possible in the neutral situation, it would not need to follow the phonetic downtrend. Instead, the second AP is either equal or slightly higher in value than that of the previous AP. When an AP is focused, however, its peak is much higher than that of the preceding AP, suggesting that the second AP is focused. In both figures, the pitch peak is realized on the second syllable of the second AP and the amount of the pitch raising is similar. The post-focal effect that appears in the following phrases also looks similar: ip boundary is not found and the pitch of the following phrases are suppressed.

Figure 5 is a pitch track of an answer sentence (18) where the focused object is followed by *-nun* as the sentence in Figure 3. However, it exhibits a somewhat different pattern from that in Figure 3. It is identical to Figure 3 in that the pitch raising effect appears on the object argument, but differs from it in that the effect appears on the particle *-nun* as well as on the argument ‘Mina’.

- (18) *milwunamwu-ka Mina-nun melli-se panky-ess-eyo*
Poplar tree-Nom Mina-Nun far-from welcome-Pst-Dec
‘Poplar tree has welcomed Mina from far.’

Figure 5. The occurrence of pitch raising on a particle *-nun* (Speaker: M2)



In the above pitch track, the argument ‘Mina’ has Focus effect since it has higher pitch than the preceding phrase. Interestingly, *-nun* attached to ‘Mina’ looks as if it is accented, having even higher pitch than the argument. There are two candidates for the account for the appearance of the high pitch on *-nun*: 1) it forms its own independent AP and the high pitch is the pitch accent of a newly formed AP, i.e. the pitch raising effect targets the pitch accent of *-nun*. 2) The high pitch is a pragmatic boundary tone. Jun (2009) in her Japanese-Korean Conference presentation found similar phenomena of pitch raising on the particle in Complex NP Focus data. When a complex NP is the domain of Focus, the pitch on the particle *-ka* or *-lul* was raised.¹⁰ Jun (personal

¹⁰ Sun-Ah Jun (personal communication) suggests that this tone may be a boundary tone or a phrase accent. Since it carries some degree of prominence, a phrase accent might be a better category. This is not the same type of accent (prosodic prominence effect) given to Focus since she notes that she found the same boundary marking high pitch on a particle when the sentence was produced in a neutral/non-focus condition. In that case, it was surely not for emphasis, but for marking a syntactic constituent.

communication) suggests this as an edge marking tone ('H-') of an Intermediate phrase, and especially in this case, as marking the end of the focus domain.

As shown in the comparison of the two pitch tracks, the prosodic patterns turn out to be identical regardless of the morphological marker on the target (*-nun* or *-lul*) for the sentences judged to be felicitous. The production result confirms the following facts. Informational status of a constituent is decided by a given context, and it is indicated by the appearance of a prosodic accent. The morphological marking *-nun* does not prevent the constituent from being a target of Focus. However, the judgment result of infelicity of around 60% shows that this failure should be seriously considered in accepting the *-nun* marked sentences as answers to the wh-question. At this point, there is no consistent answer for either the production result or the judgment result. This necessitates the explication of the function of the marker *-nun* in a discourse combined with accent. We will explore what would be the difference between *-nun* and case marked constituents with an accent in Chapters 3 and 4.

In this experiment, we have examined whether *-nun* restricts the informational status of its host to being Topic, and the result turn out to be controversial. Once the answer with *-nun* is allowed to be Focused, regardless of the marking, it obtains an accent and exhibits the prosodic effect of Focus. It turns out that *-nun* does not show a different prosodic pattern from *-lul*. In addition, what has been thought to be B-accent in Korean for Contrastive Topic (Lee 2003) is not always observed. It has been suggested that the high tone on *-nun* may mark the edge of the constituent, which has also been found for a case marker in non-Contrastive Topic examples.

In the next experiment, we will examine the property of accented *-nun* marked items again. This time, the target items will not be put in Focus position to show new information as before. They will be put into contexts that are known to generate Contrastive Topics.

2.3.3 Experiment Two. Accented *-nun* Marked Items in Contrastive Topic inducing Contexts

2.3.3.1 Hypothesis

In the previous experiment, we have seen how an accent derived by a Focus inducing context is realized in case-marked constituents and in *nun*-marked constituents. In this experiment, I used contexts that have been used to induce Contrastive Topics in the literature. That is, in contrast to the previous experiment where we examined the alleged markers for Contrastive Topic in the position of Focus by update of information, in this experiment, we will examine whether we can actually obtain the alleged markers for Contrastive Topic from context and whether accented *-nun* is a sufficient condition for it. In addition, we will compare the production data of *-nun* marked items obtained from Focus generating contexts and Contrastive Topic generating contexts.

2.3.3.2 Design

The procedure for this experiment is identical to the first, except that the scripts given to the subjects are different. There are two types of contexts. One of them is a context like the ‘Fred’ examples in (8-9) from Jackendoff (1972), which derives so-called ‘pair list’ answers. An example context is as follows.

- (19) [WH-context] Minu, Sora and Yeona went to watch Broadway musicals. Since I was also interested in the musicals, Mamma Mia, Wicked, and Hairspray, I asked our mutual friend.

Q: *kulayse, nwuka mwue-lul pw-ass-no?*
 so who what-Acc watch-pst-whQ?
 ‘So, who watched what?’
Mamma Mia-nun? Wicked-nun? Hairspray-nun?
Mamma Mia-nun? Wicked-nun? Hairspray-nun?
 ‘How about Mamma Mia? Wicked? Hairspray?’

The question contains double wh-phrases. If there were only the first question, the answer would have contained double focus. However, the main question is followed by sub-questions referring to each musical. Considering that Contrastive Topic corresponds to a sub-issue of a main issue, the context of the type in (19) has been used as a Contrastive Topic inducing context. Under the context, a constituent in the answer that corresponds to the one asked in the sub-question is thought to be a Contrastive Topic. That is, the phrase that corresponds to the ‘depended on’ part, i.e. the musical, is the Contrastive Topic here.

Another type of context that has been used to derive Contrastive Topic contains a yes/no-question as follows.

- (20) A: Do you get along with your parents?
 B: *TITI-to-wa umaku itte-imasu.*
 father-with-top well go-be
 ‘I get along with [B-acc Father].’ Tomioka (2008)
- (21) Q: What about her? Did she arrive yet? Did she go on the stage?
 A: [*O -KI-NUN* *hay-ss-e*
 come-Nmz -Nun do-Pst-Dec
 ‘She [B-acc ARRIVED].’ Lee (2003)

In these examples, the context or question does not necessarily derive Contrastive Topic. That is, an answer to this type of question is not necessarily required to be

Contrastive Topic. Unlike (19), where a given context and question requires Contrastive Topic in an answer, in (20) and (21), the answer optionally takes the *-nun* marker in the answer and delivers a different meaning from the meaning with a case maker. We will examine this kind of context, too. An example is in (22).

(22) [Y/N-context] Minu, Sora and Yona went to watch Broadway musicals on Christmas Eve. Since I have heard that it is extremely hard to get a ticket without booking far in advance and I know that they didn't, I asked to their friend.

Q: *kulayse, kayneytul-i mywucikal pw-ass-na?*
so they-Nom musical watch-pst-y/nQ?
'So, did they watch a musical?'

For the answer part, two variations were tested with two types of target sentences and two types of filter sentences. One variation is a morphological marker, that is, whether the target has a case marker or *-nun* marker, and the other one is a linear word order, that is, whether the target is scrambled over a subject to the initial part of the sentence. The canonical word order of a sentence with a transitive predicate in Korean is subject+object+verb. Since Korean is a free word order language, except for the verb, whose position is fixed as sentence final, we can do scrambling and change the order of subject and object. Even though it is not uncontroversial, scrambling in Korean is thought not to have a specific semantic effect. The following sentences are one of the answer sets to the question in (19) and (22).

(23) [Answers] Four Types of Answers

Two Variations: a. Object Marker: Accusative Case Marker (CM) vs. *-nun* (NUN)
b. Word Order: Canonical S+O+V vs. Scrambled O+S+V

- (a) $S_{CM} O_{NUN} V$: *Minwu-ka* *Mamma Mia-nun pw-ass-e.*
 Minu-Nom M-M-*nun* watch-pst-ind
- (b) $O_{NUN} S_{CM} V$: *Mamma Mia-nun Minwu-ka* *pw-ass-e.*
- (c) $S_{CM} O_{CM} V$: *Minwu-ka* *Mamma Mia-lul pw-ass-e.*
- (d) $O_{CM} S_{CM} V$: *Mamma Mia-lul Minwu-ka* *pw-ass-e.*

These two sets of contexts form one set, and a total of five different sets were provided to the subjects. The given four types of answers are examined under two contexts, (19) and (22). Four types of answers are given as an answer to wh-questions and y/n-questions respectively. Therefore, one set examines eight answers (four answers X two types of questions). Among these answers, only the *-nun* marked answers (23a) and (23b) are our target of examination and the case marked ones, (23c) and (23d) form a filter set.

2.3.3.3 Result and Discussion

Table 1 below presents the results of subjects' judgments of the answers. The number of responses of (23a) and (23b) are noted depending on the scale in (16).¹¹ The initial letters before the hyphen in the type of an answer, 'wh-' and 'y/n-', indicate the

¹¹ For the convenience of the readers, I repeat the scale here:

(16) iii. Judgment: A new screen with one of the answers appears and the subject judges the acceptability of the sentence on a scale of 0-3. The meaning of the scale is as follows.

- 0: I would not speak in this way
- 1: I would not speak in this way but not terribly bad
- 2: I would be hesitant to speak in this way but usable.
- 3: This is the way that I speak in this situation

iv. Production: If the subject chooses either 2 or 3, he/she is required to produce the answer sentence two times as he/she would normally say it in the situation.

context where the answer is placed. The letters following the hyphen, ‘IN’ and ‘SN’, indicate the property of an answer: the word order is conventional or scrambled (In-situ versus Scrambled) with a *-nun* marker instead of an accusative case marker (N = *-nun*). That is, ‘WH-IN’ means an in-situ answer with *-nun* under the context of a wh-question. ‘YN-SN’ means a scrambled answer with *-nun* under the context of a y/n-question. For the convenience of the reader, a brief example of the data script is provided below the table for each type of an answer.

Table 1. The number of Responses of each scale in Experiment 2

	0 (Terrible: Unusable)	1 (Bad: Unusable)	2 (Okay: usable)	3 (Perfect: Usable)	Unusable (= 0+1: Not produced)	Usable (=2+3:Produced)
Wh-IN	9	18	11	7	27 (60%)	18 (40%)
Wh-SN	0	8	22	15	8 (17.7%)	37 (82.3%)
Y/N-IN	1	6	20	18	7 (15.5%)	38 (84.5%)
Y/N-SN	0	4	16	25	4 (8.8%)	41 (91.2%)

Wh-IN. Q: Who watched what?

A: Minu-*ka* Mamma Mia-*nun pw-ass-e*

Wh-SN. Q: Who watched what?

A: Mamma Mia-*nun* Minu-*ka pw-ass-e*

Y/N-IN. Q: Did they watch the musicals?

A: Minu-*ka* Mamma Mia-*nun pw-ass-e*

Y/N-SN. Q: Did they watch the musicals?

A: Mamma Mia-*nun* Minu-*ka pw-ass-e*

Following the scheme of the above scale (16), scale 0 or 1 means that the given answer cannot be felicitously used and scale 2 or 3 means that it can be used. Naturalness and preference decides where an answer will fall between 0 and 1 or between 2 and 3. If we analyze the result of the judgment tests, the scrambled answers with *-nun* are good in both the wh-question and the y/n-question contexts. In most cases, they turn out to be usable. In contrast to this, the in-situ answers (the IN-type) are not always good. Twenty-seven out of forty-five (60%) selections judged that the in-situ answer with *-nun*, ‘ $S_{CM}+O_{NUN}+V$ ’, is not felicitous in the wh-question contexts. However, this type of

answer is compatible with the y/n-question contexts. Thirty-eight (20+18) out of forty-five cases (84.5%) of in-situ and forty-one (16+25) out of forty-five cases (91.2%) of scrambled answers with *-nun* were reported to be acceptable in the y/n-question contexts.

A couple of questions arise from these results. First, why does word order matter, i.e. why does scrambling a marked object to initial position improve the felicity in a wh-question context? Second, why does this felicity difference appear only in the wh-question contexts but not in the yes/no-question contexts? It is too early to make a generalization regarding scrambling, *-nun* marking, and a context based only on the results of the judgments on felicity.

As a next step, we will investigate the production data. Speakers exhibited systematic patterns in their production. On the next page is the table that shows the results how the patterns appear in each type of an answer.

Table 2. The Pattern of Accent Appearances in Experiment 2

Number of Accents	Appearance of Accent	Post-Focus Effect	Wh-IN	Wh-SN	Yn-IN	Yn-IN
Two Accents (Focus Peaks)	Two Peaks Equal		4	10	4	2
	First Peak Higher		10	36	8	0
	Second Peak Higher		6	11	7	0
Total of Two Accents			20 (55.56%)	57 (77.03%)	19 (25%)	2 (2.44%)
One Accent (Focus Peak)	Accent on First AP	No Post Focus Effect	0	0	0	13
		Post Focus Effect	15	17	0	65
	Accent on Second AP		1	0	52	2
Total of One Accent			16 (44.44%)	17 (22.97%)	52 (68.42%)	80 (97.56%)
No Accent	Neutral Intonation		0	0	5 (6.58%)	0
Total			36(100%)	74(100%)	76(100%)	82(100%)

The accent pattern appeared largely in three types: i) two accent peaks of Focus, ii) one peak of Focus, and iii) neutral intonation pattern, which lacks any accent peak of Focus. In the neutral intonation pattern, the first AP has the highest pitch. When there are two accent peaks, the pattern is divided depending on which AP among the two has a higher pitch value. In cases where there is only one accent peak, I divide them into two depending on where the accent peak is placed. When the accent peak is on the first AP, it is divided into two patterns again depending on whether it exhibits the post-Focusing effect, which suppresses the pitch value of the following constituents. The last pattern is the neutral intonation pattern.

I do not provide the reasons and explanations for all the categorized patterns in the above table. I will only consider the first two factors of how many accent peaks appear and where the accent peak is placed. I do not consider the other factors shown in the third column in the table 2 that indicates which peak has higher value if there are two accent peaks and whether the post Focus effect appears if there is only one accent peak. Considering these two factors, I will provide the figure of a representative type of accent pattern that appears most frequently in each type of answer and try to explain how these figures should be interpreted in the following.

Figure 6 illustrates pitch tracks for the scrambled answers with *-nun* in wh-question contexts. In these pitch tracks, the object with *-nun* is scrambled to a position before the subject.

Figure 6. The pitch track of WH-SN (scrambled *-nun*) of ‘mamma mia’ example (speaker: F2)

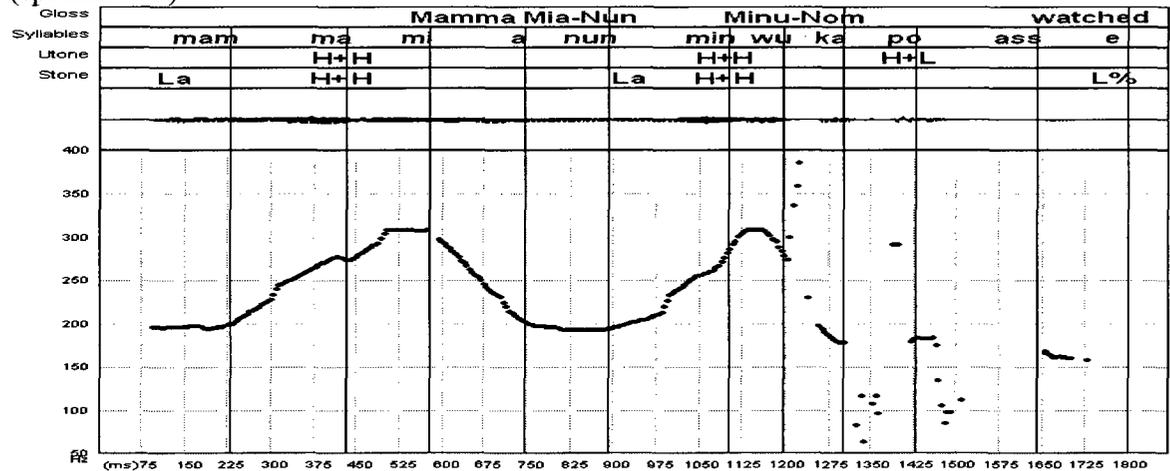
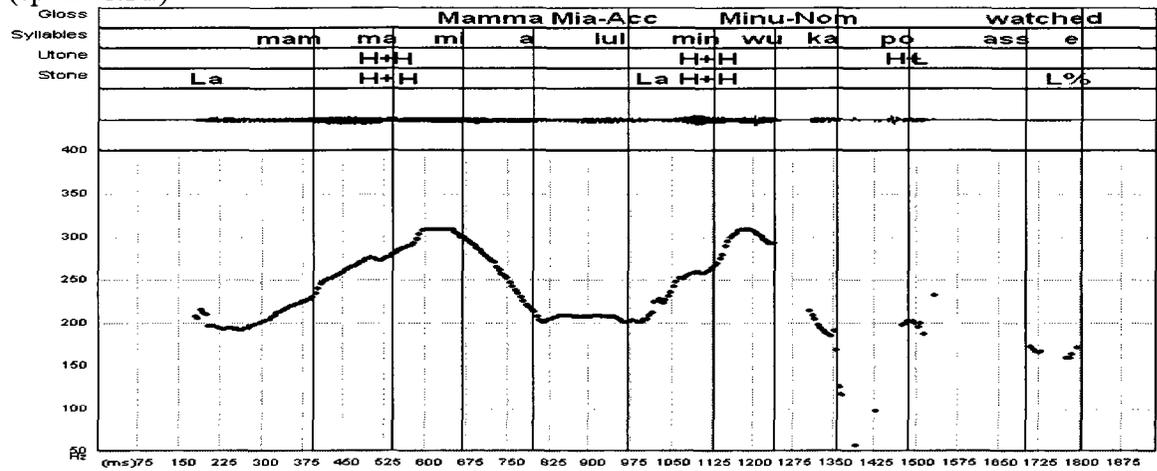


Figure 7. The pitch track of WH-SC (scrambled case marked answer) of ‘Mamma Mia’ (speaker:F2)



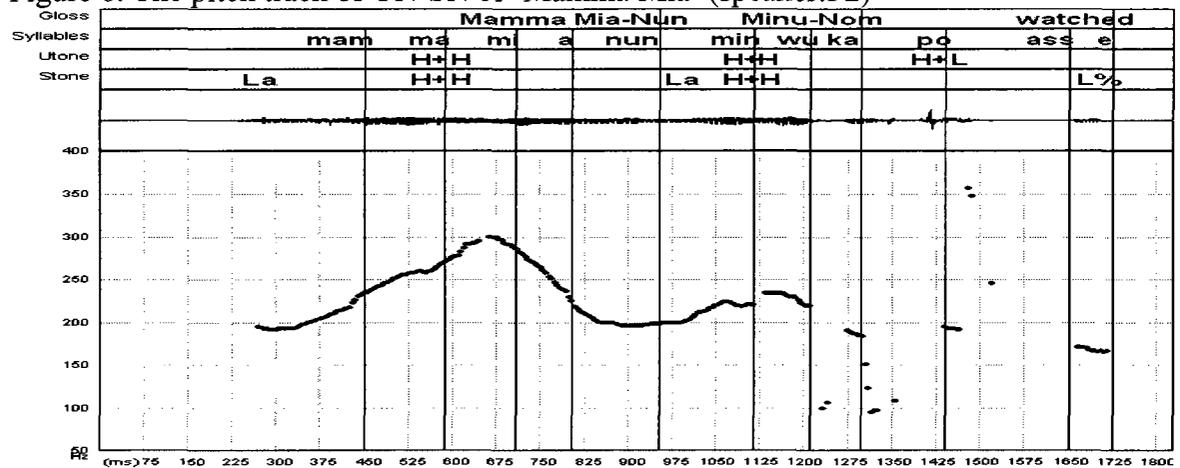
Scrutinizing pitch tracks, it appears that the property of the accent with *-nun* in Figure 6 is the same as the one that we find in the case-marked items in Figure 7. That is, there is only one kind of prosodic accent in Korean, which indicates Focus.

Turning our attention to the in-situ answer (IN-type) to wh-questions, from the judgment tests, it turned out that the percentage of ‘usable’ was lower than that of ‘unusable’ (40% vs. 60%). The tendency of disapproval of in-situ word order is not explained by any of the current suggestions of Contrastive Topic in Korean (or Japanese) since under those paradigms, any accented *-nun* marked items are Contrastive Topics irrespective of the location of the *-nun* marked item within the sentence, i.e. the subjects could accent the *-nun* marked item to make it Contrastive Topic. What prohibits the in-situ version of *-nun* from being a felicitous answer to wh-questions in a Contrastive Topic inducing context? The judgment result suggests that scrambling of a *-nun* marked phrase over a subject to sentence initial position is not optional but is required in this type of context. The production result also turns out to be hard to interpret by not exhibiting any

systematic pattern. Even though the type with two accent peaks appears more often (55.56%) than the type with one accent peak (44.44%), it cannot be evaluated as being a representative intonation pattern for this answer.

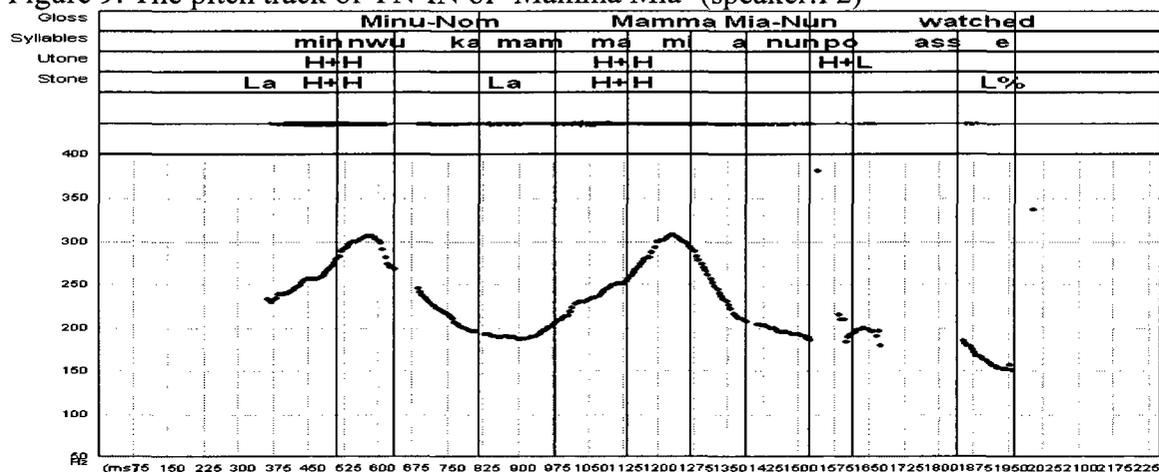
Y/N-question contexts derive different prosodic patterns in their answers from those of wh-question contexts. See how the prosodic pattern appears in the scrambled *-nun* marked answer in Figure 8.

Figure 8. The pitch track of YN-SN of ‘Mamma Mia’ (speaker:F2)



Only the scrambled *-nun* marked object is prosodically prominent, which is the accent of Focus, and the pitch of the subject is suppressed due to the post focal effect. This pattern contrasts with the wh-question context, which has two prosodic peaks both on the subject and on the object.

Figure 9. The pitch track of YN-IN of 'Mamma Mia' (speaker:F2)



Unlike wh-question contexts, y/n-question contexts allow the in-situ answers (IN-type). The accent pattern appears as in Figure 9. We have an accented *-nun* marked item in the middle of the sentence and this does not affect the prosody of the preceding subject. Unlike wh-question contexts, this y/n-question context does not seem to have the same requirement for the *-nun* marked item in its answers. What does the comparison between these two contexts tell us?

The difference is not on the so-called Contrastive Topic itself but on the prosody of the neighboring constituent and on the position of the target item in a sentence. First, as for the different prosody of a neighboring constituent, in wh-question contexts, the felicitous responses have accents both on the subject and the object, while in y/n-question contexts, the felicitous responses put accent only on the *-nun*-marked object. The difference in the number of accents, two in wh-question contexts and one in y/n-questions, is understood considering that the additional accent is assigned to the answer to each wh-phrase but not to a presumed Contrastive Topic. Since the y/n-question in the script does

not have any Focus triggering phrase, it does not cause any accent in the answer except for the presumed Contrastive Topic.

However, the semantic/pragmatic difference between question types does not tell us anything about the difference between them regarding the requirement of scrambling of the accented *-nun* marked item. One possible account might be that wh-question type contexts require a Contrastive Topic answer while y/n-question type contexts can optionally have a Contrastive Topic answer. This account presupposes that scrambling of *-nun* is an obligatory process for Contrastive Topic. In fact, this issue cannot be resolved at this stage. The questions raised here require more in-depth discussion of what *-nun* is and how Contrastive Topic is indicated in Korean. Answering these questions is one of the primary goals of this thesis and it will be discussed in the following chapters.

2.3.4 Experiment 3. Not All Accented *-nun*-marked Items are Contrastive Topics

2.3.4.1 Hypothesis and Design

From the previous experiments, the results imply that the presence of *-nun* with an accent does not guarantee that a Contrastive Topic shares the Thematic Topic property (see Krifka's example to illustrate Contrastive Topic as Focus within a Topic). A question that immediately arises from this conclusion is what indicates Thematic Topic. I have claimed that this is indicated by syntactic position. This has been theoretically argued in Rizzi (1993) and widely adopted. Even though there is not an especially strong counterargument against this, it is also hard to show a strong supportive argument for it since the concept of Topic itself is quite abstract and pragmatic.

This experiment examines the hypothesis that not all accented *-nun*-marked items are Contrastive Topics: accented *-nun* marked items which are in sentence initial position are Contrastive Topics, which will be distinguished from those that are in-situ.

The hypothesis that *-nun* is not a Topic marker makes the following prediction: the accented *-nun*-marked item (the so-called Contrastive Topic) need not be a Contrastive (or accented) Topic. We will compare scrambled accented *-nun*-marked items and in-situ accented *-nun*-marked items to examine the hypothesis that Thematic Topichood is decided by syntactic positioning. If they exhibit different patterns, it will support the argument that not all accented *-nun*-marked items should be treated in the same way.

The experiment was conducted in the same way as the previous ones. Here is one of the conversation pairs given to the subjects.

(24) In-situ *-nun* marked object argument

Q: *malpel-i nwukwu-lul mani mul-ess-no?*

Bee-Nom who-Acc a lot bite-Pst-whQ

‘Who did the bees bite a lot?’

A: *malpel-i [MINA-NUN] mani mul-ess-eyo*

bee -Nom Mina-Nun a lot bite-Pst-Dec.

‘Bees bit Mina a lot.’

(25) Scrambled *-nun* marked object argument

Q: *malpel-i nwukwu-lul mani mul-ess-no?*

Bee-Nom who-Acc a lot bite-Pst-whQ

‘Who did the bees bite a lot?’

A: *[MINA-NUN] malpel-i mani mul-ess-eyo*

Mina-Nun bee -Nom a lot bite-Pst-Dec.

‘Bees bit Mina a lot.’

2.3.4.2 Result and Discussion

Table 3 shows the results of the judgment tests.

Table 3. The Judgment result of Experiment 3

	Unusable (Scale 0 and 1)	Usable (Scale 2 and 3)
(24): in-situ accented <i>-nun</i>	58.3%	41.7%
(25):scrambled accented <i>-nun</i>	95.8%	4.2%

It was not possible to measure the prosodic property of ‘Mina-nun’ in each case for the comparison since 96% of cases were judged infelicitous with the left-dislocated accented *-nun*-marked item. However, the judgment result is meaningful. *Mina-nun* in (24) and (25) is in Focus being new information. As new information, the in-situ *-nun*-marked item is allowed in the updating position in the Q/A pair. In contrast to this, moving the accented *-nun*-marked item to the left-periphery is not allowed in this situation.

These results can be interpreted as follows: first, there is a distinction between accented *-nun* marked items depending on whether they are in-situ or moved to the left-periphery. The above context distinguishes felicitous of the accented *-nun* marked items based on whether they are moved or not. That is, a *-nun*-marked constituent is allowed to be in Focus position but when it is moved to the left-periphery, it becomes infelicitous. This implies its change of status, which cannot be compatible with Focus. The changed status by movement must correspond to the Thematic Topic, which is disjoint with Focus. This result supports the argument that a Topic phrase is moved to sentence initial position in order to mark its being Thematic Topic.

2.3.4 Summary of Experiments

We have studied three experimental results. In the first experiment, the constituents with different markings were examined under Focus inducing contexts. In contrast to the case markers, the *-nun* marking exhibited relatively low acceptance rate (39.3%). This shows that although *-nun* marking is not a preferred option, it is acceptable by a significant number of speakers. As for the production test, it demonstrated that the Focus prosody effect appeared the same regardless of the morphological marker. There was no special intonation contour or prosodic pattern for the *-nun* marked items.

In the second experiment, the *-nun* marked items were put into Contrastive Topic inducing contexts. Two types of Contrastive Topic inducing contexts introduced in the previous literature were used: wh-question type and y/n-question type. Each context produced a different result. The wh-question context had two peaks of prosodic prominence, allowing only the scrambled *-nun* marked constituent, while y/n-question context had a single peak of prosodic prominence, regardless of word order. The prosodic pattern (i.e. intonation contour) appeared the same as that for the *-nun* marked items under Focus. That is, in Korean, Contrastive Topic does not have a special prosodic property distinguished from a plain Focus construction.

In the third experiment, the location of *-nun* marked items were examined under Focus inducing contexts. When *-nun* marked items were scrambled to sentence initial position, the scrambled *-nun* marked items were judged not to be allowed for an answer to a wh-question (95.8% unusable).

2.4 Summary

In this chapter, through experiments, I asked the question as to whether we can hold the following two assumptions at the same time: the assumption that treats Contrastive Topic as a sub-category of Topic on a par with Focus as in Krifka (2007) (see example (10) in this chapter) and the assumption that the indication of Contrastive Topic is accented *-nun* marking. The third experiment in particular showed that not all accented *-nun* marked items can be treated as equal. Depending on the location within a sentence, some *-nun*-marked items were not compatible with Focus as an update of information.

We found the accent pattern of *-nun* marked items of Contrastive Topic from the second experiment to be as predicted. However, we still need to account for the respective patterns that appear in different contexts of wh-question and y/n-question, i.e. i) allowance of only the scrambled version in wh-question context and ii) the difference of the number of prosodic peaks. The problem is that we do not seem to have an account for both types. Let us consider Lee's (1999, 2000, 2003) analysis. He proposed that accented *-nun* marks Contrastive Topic and the function of Contrastive Topic is to induce scalar implicature (see Chapter 3). Lee's analysis of scalar implicature may be applied to the answers in yes/no-question contexts but not to the answers in wh-question contexts. That is, the alleged Contrastive Topic in a yes/no-question context seems to have the meaning of scalar implicature but not the one in a wh-question context. Does this mean that Contrastive Topic generates two kinds of meanings depending on context? I do not think that this is a plausible solution. The apparently different meaning of accented *-nun*

marked items is not due to the existence of two independent meanings of Contrastive Topic but to other factors that affect the interpretation of the accented *-nun* marked items. Contrastive Topic has a consistent meaning. But in experiment 3, we have identified that the accented *-nun* marked item is not always Contrastive Topic. What accented *-nun* is has not been clearly answered yet. This will be the topic we will study in the next chapter.

Chapter3

Contrast Theory of *-nun*

As observed in the beginning of the thesis, in Korean the presence of a morphological marker, in addition to prosodic prominence, may affect the felicity of a sentence in a discourse. Two particles, the nominative case marker *-i/-ka* and the so-called Topic marker *-nun* with an accent were introduced in Chapter 1. In this chapter, we will more deeply explore the particle *-nun* with an accent. The accented *-nun* (in Japanese, accented *-wa*) has been called “contrastive *-nun*” in a descriptive sense since it usually triggers contrastive interpretation. Consider the following examples.

- (1) *pi-ka nayli-ko nwun-i onta.*
Rain-Nom fall-and snow-Nom come
'It rains and it snows.'
- (2) *[PI-NUN] [NAYLI-KO][NWUN-UN] [ONTA].*
Rain-Nun fall-and snow-Nun come.
'[B-acc RAIN] [A-acc FALLS] and [B-acc SNOW][A-acc COMES].'

The sentence in (1) describes rain and snow falling down. In (2), where *-nun* is used instead of the case marker *-ka*, *pi* 'rain' and *nwun* 'snow' exhibit a contrastive relation. Even though both of them come down, one uses a predicate 'fall' and the other one uses 'come'. Thus, sentence (2) is not about the description of raining and snowing but is about using a different expression as a predicate for each phenomenon. Intuitively,

-nun is described as having a contrastive meaning and (2) is a case that clearly exhibits this. What would be the linguistic analysis of *-nun*? It has been long recognized as a Topic marker in Korean (Huh 1984, Sohn 1999 among many others). With an accent, it has been argued to indicate Contrastive Topic and without an accent, Thematic or Discourse Topic. Rejecting *-nun* as an indicator of Topic, I will provide a new account for the compositional function of *-nun* in this chapter and the behavior of sentences that contain *-nun* in the next chapter.

I suggest that the presence of *-nun* generates more than one proposition from a single sentence. That is, besides its assertive content (“at-issue meaning” in Potts 2005 or “what is said” in Grice 1975), extra meanings are generated by *-nun*. For instance, when the following sentence (4) with *-nun* is uttered, it asserts the proposition (4i) and presupposes and implicates two others.

- (3) *Arizona-eyse, McCain-i inki-ka manh-ass-e.*
 Arizona-in, McCain-Nom popularity-Nom much-Pst-Dec.
 ‘In Arizona, McCain was popular.’
- (4) *[ARIZONA-EYSE-NUN], [MCCAIN-I] inki-ka manh-ass-e.*
 [ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec
- i. Popular(m,Az)
 ‘In Arizona, McCain was popular.’
 - ii. $\exists x \exists y$ [popular (x,y) & $x \neq m$, $y \neq \text{Az}$].
 ‘In some state other than Arizona, some other person other than McCain was popular.’
 - iii. $\forall x$ [popular (m,x) \rightarrow $x = \text{Az}$]
 ‘In no state other than Arizona was McCain popular.’

The first meaning, (4i) is the at-issue meaning of the sentence in (4) and the others are derived from the requirement that *-nun* has in order for it to be used felicitously. I am going to distinguish different types of felicity in this section. This is related to the type of

non at-issue meanings, (4ii) and (4iii): whether they are entailments, presuppositions, or implicatures. The distinction among these types of propositions is sometimes blurry since the meanings can be interpreted along more than a single interpretational dimension, not only the semantic dimension that considers truth value and compatibility with a given world but also the pragmatic dimension that considers the appropriateness in a discourse context and the consideration for interlocutors. While the interpretation of a prosodic accent (=Focus) concentrates on the pragmatic dimension, the interpretation of *-nun* crucially requires the explanation of the semantic dimension. The explanation of the semantic requirement of *-nun* proffers us the explanation of how *-nun* affects the context flow in a different way from marking an information structure category.

A discussion of the meanings generated by the presence of *-nun* will be followed by a discussion of ‘Contrast’. I will claim that *-nun* is a Contrast operator and *-man* ‘only’ is an Exhaustive operator. This gives an explanation of why both of them are accompanied by an accent. What I want to argue here is not merely that *-nun* generates a contrastive interpretation. I try to provide a linguistic account of the syntactic/semantic realization of ‘Contrast’ in a sentence. I will argue that *-nun* creates a ‘Contrast structure’, which is independent from Information Structure. This proposal additionally accounts for one of the characteristic properties of *-nun*, the incompatibility of the particle *-nun* with a universal quantifier.

We will start with the analyses of the accented *-nun*-marked constituent discussed in previous literature. The main analyses of accented *-nun* marking fall under two headings: uncertainty and scalar implicature. Researchers on the accented *-nun* in

Korean/Japanese (Kuno 1972, Lee 1999, 2000, 2003, Hara 2004, 2006, 2008, Tomioka 2000, Oshima 2002) treat it as Contrastive Topic along the lines of the suggestion of Buring (1994, 1997, 2003), Jackendoff (1972), and many others regarding B-accent in German and English. Even though the language data that the proposal is based on is different, the characteristic properties that the construction exhibits are judged to be shared. Even though the marking in the respective languages generates an uncertainty implicature, the researchers on these East Asian languages make a clear point that Buring's analysis cannot completely account for the phenomena in these languages. Here are the most widely accepted opinions of Contrastive Topic in Korean/Japanese.

3.1 Review of Hara (2004, 2006) and Lee (1999, 2003)

3.1.1 Hara (2004, 2006): Overcoming the Limit of Knowledge of a Speaker

Hara, in her earlier work (Hara 2004), suggests that contrastive marking in Japanese (and in Korean) induces uncertainty implicatures.

- (5) Q: Who passed the exam?
 A: a. *MARY-wa¹ ukat-ta*
 Mary-Wa passed ‘[Mary]_{CON} passed’
 b. *MARY-ga ukat-ta*
 Mary-Nom passed ‘[Mary]_F passed’ (exhaustive answer)

Hara (2004) notes that (1a) is interpreted as the answerer knowing that Mary passed but not knowing for sure whether other people passed. In contrast to this, in (5b), the answer does not generate that uncertainty implicature and simply provides the information that Mary passed the exam. Instead of an uncertainty implicature, Hara adds the exhaustive meaning to the interpretation of (5b) that only Mary passed the exam.

¹ *Wa* is the Japanese counterpart of *-nun*. Hara calls the accented *-wa* ‘contrastive *-wa*’.

Considering the Maxim of Quantity in Grice (1975) that requires an interlocutor to provide as much information as possible, this exhaustive interpretation is generally attributed to focused phrases in context (see Chapter 2 for more discussion that the accented *Mary-ka* ‘Mary-Nom’ is treated as Focus).² Summarizing the idea, in (5b), Mary is the only one that satisfies the property of passing the exam, while in (5a), the possibility is open for people other than Mary. Hara (2004) argues that the reason why *-wa* marking is present in (5a) is to indicate the speaker’s lack of knowledge as to whether people other than Mary also passed the exam. She proposes that the uncertainty is from the speaker’s lack of knowledge about alternatives and the function of *-wa* is to indicate this speaker’s epistemic state.

However, uncertainty alone is not enough to describe all the properties of the contrastive *-wa* marking. Intuitively, the sentence in (5a) is also compatible with a situation in which Mary passed but other people did not pass. The following conversation is possible.

- (6) Q: Who passed the exam?
 A: *MARY-wa ukat-te/takedo, PETER-wa ukara-nakat-ta*
 Mary-Wa pass-and/Past.but, Peter-Wa pass-neg-Pst’
 ‘[B-accMARY] passed and/but [B-accPETER] didn’t pass’ Hara (2006)

In (6), let us assume that only Mary and Peter took the exam. The speaker has complete knowledge concerning whether Mary and Peter passed the exam. Still, the contrastive marking *-wa* can be attached to ‘Mary’ and ‘Peter’ in this context. Hara herself acknowledges the defect of the uncertainty analysis in her later work. In Hara

² The derivation of conversational implicature will be discussed in detail in Chapter 4.

(2006), she tries to relate this property of uncertainty to a more general pragmatic Gricean Principle.

She argues that accented *-wa* must have a scalar alternative in the context which is stronger than the assertion to be interpreted property³. Once the presupposition that there exists a stronger salient possibility than the assertion is satisfied, contrastive *-wa* indicates that this stronger alternative is false.

In the process of forming this analysis, the question remains as to how these independent analyses of uncertainty and negation of scalar implicature can be explained in a unified way. For this, she adopts the recent proposal of Spector (2003) and Schulz and van Rooij (2003) by which scalar implicatures are derived from exhaustivity. The aspect of their proposal that Hara is utilizing to develop her proposal of uncertainty is their assumption that even though a speaker knows that a certain individual does not hold the property P, Spector (2003) and Schulz and van Rooij (2003) do not count this as part of the speaker's knowledge about P. A speaker's knowledge is counted as knowledge only when the individual(s) under consideration of the speaker could have a positive value for the predicate. Consider the example of Mary's passing the exam. If the answerer does not actually know whether other people such as John or Bill passed the exam, the situation fits the original suggestion of *-wa* in Hara (2004). The problematic case was that the speaker knows that Mary passed and John and Bill did not pass and she still uses *-wa* in her utterance in describing this situation. Intuitively, Mary has knowledge of John and Bill. However, in Schulz and van Rooij (2003)'s system, Mary's

³ This is in a similar line with Lee's (1999, 2000, 2002) proposal regarding accented *-nun* in Korean.

knowledge that John and Bill have a negative property regarding passing the exam is not counted as possession of the knowledge.

Therefore, the negative value of alternatives regarding a given predicate P is integrated into the lack of the speaker's knowledge and eventually analyzed as an uncertainty implicature. Hara (2004, 2006)'s proposal of *-wa* can be summarized as follows: the fundamental function of an accented *-wa* is to indicate that the speaker has limited knowledge regarding the predicate P.

3.1.2 Lee (1999, 2000, 2003): Scalar Implicature

Lee (1999, 2000, 2003), as Hara (2004, 2006), called accented *-nun* Contrastive Topic and has extensively discussed the so-called Contrastive Topic constructions. Lee proposed that accented *-nun* induces scalar implicature in a conversation following Horn's (1972) theory of scale. He argues that *-nun* marked items induce implicatures and the marked item has the lowest status in a scale formed with its alternatives. If the Gricean quantity principle applies here, alternatives higher up in the scale have a negative property $\sim P$, which seems to be in a similar line with Hara (2006). It does not seem to be hard to understand the following example in the scalar meaning.

- (7) *SEY-MYENG-NUN tongkwa-hay-ss-e.*
Three-counter-Nun pass-do-Pst-Dec
'At least three have passed.'

Lee's account predicts that *-nun* places its argument 'three' in the lowest level of the scale and negates the predicate for all the elements in the upper scale, which will be interpreted as 'three people have passed but not four, five, etc.' In (7), the argument that *-nun* attaches to is a number, which is naturally compatible with a scalar meaning.

However, how would he deal with an individual item such as a personal name which does not inherently have a scalar meaning? Consider the following example.

(8) Contrastive Topic in Individual Items

Mary-nun tongkwa hay-ss-e. [Should Mary-nun be capitalized?]
Mary-Nun passing do-Pst-Dec
'Mary passed but not other people.'

The way that scalar implicature works in individual items is more interesting. What would it mean to say that 'Mary' is the lowest member of a scale? Placing an individual 'Mary' in a scale is different from the common value scale. Lee (1999) considers the scalar value of an individual using the concept of a set. He thinks that {Mary} is placed in a lower point of the scale than {Mary, Mary+John}. That is, 'Mary passed the exam' is in a lower scale than 'Mary and John passed the exam' in Lee's paradigm. Since *-nun* denies the upper scale values and 'Mary and John passed the exam' is in a higher scale than 'Mary passed the exam', naturally 'John passed the exam' is denied.

Lee distinguishes the Contrastive meaning in individual items and in predicates. Apparently, it is true that the so-called topic marker *-nun* appears even with predicates in the examples below. Lee has observed that Contrastive predicates have a stronger tendency to have scalar implicature than individual items do.

(9) Contrastive Predicate in Lee

Q: What about her? Did she arrive yet? Did she go on the stage?

A: a. She ARRIVED⁴_{CT}.

b. [O-KI-NUN] hay-ss -e

come-Nmz-Nun-do-Pst-Dec

She (only) arrived (but did not take any further steps).

Lee (2003)

Scalar implicature in the predicate case works in a similar way: the next step is that the predicate is negated. For instance, in (9), the predicate ‘arrive’ is marked with contrastiveness. This means that the next stage of predicate, such as going on the stage has a negative value. In Horn’s scale, going on the stage presupposes the arrival, therefore, it can be thought of as the result of the sum of these two behaviors.

Hara (2004, 2006) and Lee (1999, 2000, 2003) share this intuition that accented *-nun* (and *-wa*) makes the alternatives to the *-nun* marked item have a predicate that is the negative of the predicate of the *-nun* marked item. In Lee’s case, he uses scalar values to explain the process and in Hara’s case, she integrates this meaning with the uncertainty meaning. According to them, the meaning that *-nun* derives looks similar to the exhaustive meaning derived from *-man* ‘only’. Both of them propose an implication of the negative value of the alternatives to the marked item. The difference between them seems to be that for Lee, the *-nun* sets the scalar value among the alternatives first before the process of deriving exhaustive implicature while for Hara, *-wa* does not set scalar values.

Aside from the differences just mentioned, their accounts also have some limits in explanatory power. Consider the following example.

⁴ The gloss here is from Lee and does not follow the style of glossing in this thesis.

- (10) [MARY-NUN] [SWUHAK] *sihem-ul tongkwa hay-ss-e.*
 Mary-Nun math exam-Acc pass do-pat-Dec
 ‘Mary passed the math exam’ (others may have passed other kinds of exams)

This sentence means more than that people other than Mary did not pass the math exam. It is compatible with other people passing other types of exams. The interpretation of this sentence is similar to the interpretation that appeared in Buring’s Contrastive Topic (B-accent in English and German) in the following: the meaning of ‘Female’ in (11).

- (11) The [B-acc \FEMALE/] pop stars wore [A-acc /CAFTANS\]

Buring (1997)

Hara and Lee did not adopt Buring’s earlier semantic work on Contrastive Topic based on the cases where the *-nun* (or *-wa*) alone appears. (In Buring’s analysis, the B-accent, the alleged counterpart of *-nun* or *-wa*, should always be accompanied by A-accent, i.e. plain focus. For detailed discussion, see section 3.4 in this chapter). To support her argument, Hara showed, using Japanese data, that contrastive *-wa* obtains an uncertainty reading without being followed by Focus (=A-accent). Their point that Buring’s theory cannot cover the Korean/Japanese data supports their analysis for those kinds of data. Conversely, however, Hara and Lee’s analysis only covers their own data, not being able to explain data such as (10). The task that remains is to furnish an analysis to explain both types of data without appeal to a typological difference between English and Korean/Japanese.

3.2 Additional Propositions Derived by *-nun*

I will suggest a more comprehensive analysis of *-nun* that can account for its appearance in a variety of constructions. This account supplants the putative function of *-nun* as a Topic marker. In order to capture the semantics of *-nun*, I will start from (10), the construction that has two accents, one associated with *-nun* and the other one without *-nun*, which Hara (2006, 2008) and Lee (1999, 2000, 2003) did not discuss. Based on what we have identified about *-nun* in these constructions, I will show that the single accent data can also be explained.

I will first propose meanings that a sentence that contains *-nun* generates. The presence of *-nun* generates additional propositions besides its literal semantic meaning, which is sometimes called “at-issue” semantic content (Potts 2003) or “what is said” (Grice 1975). The additional propositions exhibit various properties. Depending on the relation of the extra propositions to the at-issue meaning, the types of meaning are generally categorized as presupposition, entailment, or implicature, which can be categorized as conventional or conversational depending on how they are generated. Some meanings are generated from the meaning of lexical items while others are generated in the interpretational process of considering various kinds of pragmatic factors.

Recently, there have been many studies on the status of propositional meanings. Linguistic studies on these additional propositional meanings have categorized various types of presuppositions, implicatures, and entailments while developing the tools to test the differences between them. For instance, like *-nun*, some adverbs or conjunctions such as ‘only’, ‘even’, ‘but’, ‘too’, and ‘therefore’, are known to generate more than one

proposition from a single sentence. A large amount of literature has been interested in the properties of the propositions generated from the above items (Horn 1969, König 1991, Beaver 2004, Ippolito 2005, Roberts 2006, among many others). The discussions have raised issues at the borderline of semantics and pragmatics. The study of *-nun* is also in this border area.

Let me start the discussion by introducing a sentence that contains two prosodic accents, one with the *-nun* marker and the other with a plain nominative case marker *-i*.

(12) *[ARIZONA-EYSE-NUN], [MCCAIN-I] inki-ka manh-ass-eyo.*
[ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
 ‘In [_{B-acc} ARIZONA], [_{A-acc} MCCAIN] was popular.’
 (in other States, this was not the case)

- a. ‘In Arizona, McCain was popular’
popular(m,Az) - *At-issue meaning of (12)*
- b. ‘There is a state other than Arizona, where a candidate other than McCain, was popular.’
 $\exists x \exists y$ [**popular (x,y) & x ≠ m, y ≠ Az**] - *Existential Requirement of (12)*
- c. ‘In no state other than Arizona, was McCain popular.’
 $\forall x$ [**popular (m,x) → x = Az**] - *Exhaustive Requirement of (12)*

(13) *Arizona-eyse, McCain-i inki-ka manh-ass-eyo.*
Arizona-in, McCain-Nom popularity-Nom much-Pst-Dec.
 ‘In Arizona, McCain was popular.’

Sentence (12) is true iff (12a) and (12b) are true. We can tell that the presence of *-nun* and prosodic accents seem to derive the existential proposition (12b) out of a single sentence when we compare it with a plain neutral sentence (13). In order to interpret sentence (12) merely as a string of words that we extract some meaning from, understanding of proposition (12a) and (12b) is enough. However, when we scrutinize the

proposition in (12b), we will recognize that some things are not clear. The domain that the phrase ‘a state other than Arizona’ refers to is not clear. In a neutral context, it refers to any state in US other than Arizona. However, the domain of the alternative state(s) to ‘Arizona’ can potentially vary depending on the situation.

The property of prosodic accent specifically assigned to ‘Arizona’ makes it possible to form a set of alternatives of Arizona from a given pragmatic context. It is the same for the domain of alternatives for the presidential candidate, ‘McCain’. Both of the domains depend on the context. The formation of the contextual domain of alternatives was explained based on the discussion of Focus in the last chapter. In deriving the above propositions in (12) from *-nun*, the function of Focus to form a set of alternatives was not essentially considered. However, eventually, the Focus factor has to be integrated into the definition since all the tests assume the contextual domain. We will examine the propositions in (12) to see how each proposition affects the sentential meaning. However, before we examine different types of meaning, we first need to distinguish two types of felicity.

3.2.1 Examination to Identify the Types of Propositions

In Chapter 1, I introduced several infelicitous examples arising from the presence of *-nun*. We also discussed examples that were infelicitous due to a misplaced assignment of a prosodic accent. We distinguished these cases from ‘ungrammatical’ examples since they are grammatical sentences that are invalid only in the given (linguistic) environment. If they are put into different (linguistic) environments, they can be improved as follows.

(14) Wrong Focus

Q: Who did John introduce to Sue?

A: #John introduced Bill to SUE.

(15) Right Focus

Q: Who did John introduce Bill to?

A: John introduced Bill to SUE.

(16) John introduced Bill to Sue.

In the above examples, felicity varies according to preceding environment. That is, we cannot decide the felicity of the responding sentences in (14)-(15) based only on the sentence in (16). In contrast to this, we can decide that (17) is infelicitous in the situation (=a model or a world) as given even in an out of the blue context, i.e. the sentence is infelicitous in any discourse context regardless of Focus marking.

(17) [Model: In the World Cup, Brazil, which has won most, has won five times and Italy has won four times.]

Q: Which country has won most in the World Cup?

A:% [_FBRAZIL] has won five times in the World Cup, too.

The answer in (17) is infelicitous, but in a different sense from (14). We cannot blame the infelicity of (17) on the wrong focus assignment. Furthermore, we cannot say that (17) is simply false, since Brazil actually has won in the World Cup five times. The reality in the world is that Brazil is the only country that has won five times and no country other than Brazil has done it. What the sentence (17) means does not completely fit the facts in this world. I want to distinguish the infelicity in (14) from the infelicity in (17): for the prior one, I will use the symbol “#”, which means infelicity in the linguistic context and for the latter one, I will use the symbol “%”, which means infelicity in the

world context. More in-depth discussion of the infelicity of ‘%’ will be taken up in the discussion of *-nun* in the next section.

3.2.1.1 Test One: A Test of Various Models

In this first test, we test the propositions of the ‘Arizona’ sentence in (12), which is repeated here, in several kinds of models (= worlds) that bear different truth conditions for each proposition.

- (12) [ARIZONA-EYSE-NUN], [MCCAIN-I] *inki-ka* *manh-ass-eyo*.
 [ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec
 ‘In ARIZONA, MCCAIN was popular (and it was not the case in other states)’
 a. In Arizona, McCain was popular *-At-issue proposition*
 b. There is a state other than Arizona, where a candidate other than McCain, was popular. *-Existential proposition*
 c. In no state other than Arizona, was McCain popular *-Exhaustive proposition*

The domain for alternatives commonly assumed in every model is as in (18).

- (18) Common assumption for every model
 a. There are three states in the US: Arizona (Az), Indiana (In), and California (Ca).
 b. There are two presidential candidates: McCain (Mc) and Obama (Ob)

In the following first model, McCain is popular in all three states: Arizona, Indiana, and California. I indicate a popular candidate in each state as follows: ‘Az:Mc’ means that In Arizona, McCain was popular.

- (19) Model One. Az:Mc, In:Mc, Ca:Mc

In this model, each proposition generated by the semantic meaning of lexical items and the requirement of *-nun* has the truth value as follows.

- (20) a. At-issue (12a): popular (m,Az): **True**
 b. Existential Requirement (12b): $\exists x \exists y$ [popular (x,y) & $x \neq m$, $y \neq Az$]: **False**
 c. Exhaustive Requirement (12c): $\forall x$ [popular (m,x) \rightarrow $x = Az$]: **False**

When each proposition of the sentence (12) has the truth value as in (20), the truth value of the sentence in (12) is hard to evaluate. The first proposition in (20a) is the semantic content of what is said in the sentence (12). McCain was actually popular in Arizona in the above context and thus, the proposition in (20a) is true. However, the proposition (20b) is false in the given model. There is no other state, where any other candidate except McCain was popular. The third proposition (20c) is also false in this model having McCain as a popular candidate in all other states. When the existential requirement and the exhaustive requirement fail to be satisfied, the sentence is infelicitous and fails to obtain its truth value.

(21) The felicity judgment of sentence (12) as uttered in Model One.

[ARIZONA-EYSE-NUN] [MCCAIN-I] *inki-ka* *manh-ass-eyo*.
 [ARIZONA-IN-NUN] [MCCAIN-Nom] popularity-Nom much-Pst-Dec
Truth-valueless (= Infelicitous in the world context ‘%’)

In the second model, in Arizona and Indiana, Obama was popular and only in California, McCain was popular.

(22) Model Two. Az: Ob, In: Ob, Ca: Mc

In this model, the truth value of each proposition appears as follows.

- (23) a. At-issue (12a): popular (m,Az): **False**
 b. Existential Requirement (12b): $\exists x\exists y$ [popular (x,y)&x≠m, y≠Az]: **True**
 c. Exhaustive Requirement (12c): $\forall x$ [popular (m,x)→x=Az]: **False**

In the second model, McCain was popular only in California, and Obama was popular both in Arizona and Indiana. In this model, the at-issue meaning of our example sentence becomes false but the existential requirement is satisfied. Different from the

truth condition of the sentence in the previous model, this sentence is false even though it satisfies the existential requirement.

(24) The truth value of sentence (12) in Model Two.

[[*ARIZONA-EYSE-NUN*] [*MCCAIN-I*] *inki-ka* *manh-ass-eyo.*] ^{M2}
 [ARIZONA-IN-NUN] [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
 = 0, **False**

In the third model, McCain was popular in Arizona and California and Obama was popular only in Indiana.

(25) Model 3. Az: Mc, In: Ob, Ca: Mc

In this model, each proposition of the sentence (12) has the following truth value.

- (26) a. At-issue meaning (12a): popular (m,Az): **True**
 b. Existential Requirement (12b): $\exists x \exists y$ [popular (x,y) & $x \neq m$, $y \neq Az$]: **True**
 c. Exhaustive Requirement (12c): $\forall x$ [popular (m,x) \rightarrow $x = Az$]: **False**

(27) The felicity judgment of sentence (12) as uttered in Model Three.

[*ARIZONA-EYSE-NUN*] [*MCCAIN-I*] *inki-ka* *manh-ass-eyo.*
 [ARIZONA-IN-NUN] [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
 :**Infelicitous (#)**

In the third model, both at-issue meaning and the existential requirement are true. However, uttering this sentence in this model is not felicitous. The result implies that the failure of the exhaustive requirement caused this infelicity of the sentence. The point becomes clear if we compare the sentence in the third model with that in the next model.

In the fourth model, McCain is popular only in Arizona and Obama is popular in Indiana and California.

(28) Model 4: Az:Mc, In:Ob, Ca:Ob

The truth value of the propositions are as follows.

- (29) a. At-issue (12a): popular (m,Az): **True**
 b. Existential Requirement (12b): $\exists x\exists y$ [popular (x,y)]&x≠m, y≠Az: **True**
 c. Exhaustive Requirement (12c): $\forall x$ [popular (m,x)→x=Az]: **True**

(30) The felicity judgment of sentence (12) as uttered in Model Four.

[ARIZONA-EYSE-NUN], [MCCAIN-I] *inki-ka* *manh-ass-eyo*.
 [ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
True and Felicitous

In the fourth model, the sentence is finally true and felicitous by satisfying both requirements introduced by *-nun*. The exhaustive requirement (12c) is necessary to explain the felicity difference between the sentences in the third model and fourth model. The exhaustive requirement affects the felicity of the utterance but does not affect the sentence's truth condition. The existential requirement affects the sentence in a different way from the exhaustive requirement. If we compare the first model and the third model, we can see the difference: the failure of the existential requirement caused the sentence to be truth-valueless while the failure of the exhaustive requirement simply caused the infelicity of the sentence but did not affect the truth condition. However, the failure of the existential requirement to hold did not directly cause the falseness in the truth condition of the sentence. In contrast to this, the failure of the at-issue meaning directly caused the falseness of the sentence: compare the first model and the second model.

It seems that the additional propositions generated by *-nun* have different properties. Both of the propositions are logically independent of the at-issue meaning: while the at-issue meaning causes the sentence to be false, the two propositions derived by *-nun* affect the felicity of the sentence. In the case of the existential requirement, it looks like a presupposition. Consider the following famous example.

(31) The king of France is bald

The sentence (31) can be said neither to be true nor to be false, since there is no king in France, which is presupposed by the definite NP, *the king of France*. This sentence is semantically infelicitous. Having the differences in mind, we will examine these propositions further, using tools developed to observe the behavior of propositions, and we will identify the properties of each type of a proposition.

3.2.1.2 Test Two. Refutation and Negation

In the second test, we will examine the contribution of the propositions by refuting and negating each of them. If the existential proposition is a presupposition, it cannot be directly refuted or denied since negation is a hole for a presupposition (Chierchia & McConnell-Ginet 1990, Kadmon 2001). Consider the following conversation. In the following, (32a), (32b) and (32c) are the continuation of Bill's utterances of 'No, it is not so'.

(32) Test of Refutation

[Context] Ann and Bill are talking about the popularity of president candidacy, McCain and Obama. They only consider Arizona, Indiana and California in this conversation.

Ann: [ARIZONA-EYSE-NUN], [MCCAIN-I] *inki-ka* *manh-ass-e*.
[ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
'In [ARIZONA], [MCCAIN] was popular (in other states, this was not the case).'

Bill: *aniya, kulehci anha*.
No, so is-not
'No, it is not so.'

a. Denial of the at-issue proposition (12a)

Arizona-eyse McCain-i inki-ka [EPS-ESS-E].
Arizona-in McCain-Nom popularity-Nom [NEG BE-Pst-Dec]
'In Arizona, McCain was not popular.'

b. Denial of the existential proposition (12b)

#amwuteyseto Obama-ka inki-ka epsesse.
anywhere Obama-Nom popularity-Nom Neg-exist
'In no states was Obama popular.'

c. Denial of exhaustive implicature (12c)

#[INDIANA-EYSE-TO] [MCCAIN-I] inki-ka manh-ass-e.
[INDIANA-IN-ALSO] [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
'Also in Indiana, McCain was popular.'

In the above conversation pair (32), Ann asserts that in Arizona, McCain was popular. When she asserts it, her usage of *-nun* implicitly requires that in some other state, some other candidate was popular. In (32a), Bill denies the at-issue meaning of Ann's utterance that McCain was popular in Arizona. He asserts that McCain was not popular in Arizona, which makes a good flow of conversation by refuting the preceding utterance in a felicitous way.

In contrast to this, in (32b), Bill denies the existential meaning, not the at-issue meaning. This utterance turns out to be an inappropriate denial of Ann's utterance. That is, the denial of existential proposition cannot be the denial of the whole utterance different from the case of the denial of the at-issue meaning.

In (32c), Bill refutes the exhaustive proposition of Ann's utterance by providing another state, Indiana, where McCain was popular. However, the refutation of the exhaustive proposition fails to refute Ann's claim. This test provides evidence to distinguish these two propositions from the at-issue meaning, even though this test does not provide distinctive results for the presumed presupposition and implicature.

Now, I will test the effect of negating the meaning of the sentence. Negation is a well-known hole for presupposition (Chierchia & McConnell-Ginet 1990, Kadmon 2001).

That is, a presupposition survives not being negated even though a sentence is negated.

See the following sentence.

(33) The king of France is not bald.

Even though we negate the sentence (33), the presupposition that there is a king in France remains intact. Our test here utilizes this property of a presupposition.

(34) Negation of the sentence (12)

[ARIZONA-EYSE-NUN] [MCCAIN-I] inki-ka manhunn-kesi
[ARIZONA-IN-Nun] [MCCAIN-Nom] popularity-Nom much-that
ani-ess-ta.
Neg-Pst-Dec.
'It is not that in ARIZONA, MCCAIN was popular.'

(35) Negation of the propositions (12a)-(12c)

- a. It is not the case that McCain was popular in Arizona.
:Entailed by (34)
- b. It is not that the case there is a state other than Arizona, in which a candidate other than McCain was popular.
:Not entailed by (34)
- c. It is not the case that there is no other state than Arizona where McCain alone was popular.
:Not entailed by (34)

As shown in (35), negation can only negate the at-issue meaning. It lets the existential and exhaustive meanings survive not being negated. This, again, supports the identification of the existential proposition as a presupposition. It is, however, hard to say that the exhaustive meaning is a presupposition since its behavior in the first test (the contrast between model 1 and model 3) was distinguished from the existential meaning.

3.2.1.3 Test Three. “Hey, wait a minute!” Test

Even though it turns out that we cannot directly deny or refute presupposed content, there should be some way that we can cancel or negate it. Von Fintel (2004) (attributing Shannon 1974) provides a way that we can deny the content of presupposition. We can doubt the presupposed content by stopping the conversation by coming back to the point of the presupposed content and raising a question about the presupposition. Von Fintel (2004) suggested that the expression, “Hey, wait a minute!”, can halt the advance of the conversation in this regard. Let us examine whether this “Hey, wait a minute!” test supports our argument.

(36) Ann: [ARIZONA-EYSE-NUN], [MAYKKAYIN-I] *inki-ka manh-ass-e.*
[ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
'In [ARIZONA], [MCCAIN] was popular (in other states, this was not the case).'

Bill: *kuntey, ceki, camkkanman.*
By the way, that is, wait a minute.
“Wait a minute!”

- a. #I had no idea that McCain was popular in Arizona.
- b. I had no idea that McCain was not the only popular one in all the states.
- c. I had no idea that there was some state where another person was popular.

Responding to Ann, Bill cannot say “Wait a minute!” to negate the at-issue meaning as in (36a). It can contribute some information that Bill did not know before, but this is not the intention that we have here. In contrast to this, the other two follow ups in (36b) and (36c) succeed in negating the existential and exhaustive meaning derived by *-nun*. This test again confirms the different property between the at-issue meaning and non at-issue meanings (existential and exhaustive meanings).

Through three tests, we have confirmed the difference of the non at-issue meanings from the at-issue meaning. I propose that the existential requirement of *-nun* is encoded in a presupposition and the exhaustive requirement of *-nun* is the result of an implicature. The distinction between a presupposition and an implicature is made based on the result of the first test, in which the failure of the requirements exhibited different kind of infelicity: the failure of the existence requirement resulted in the truth-valueless state of the sentence and the failure of the exhaustive requirement resulted in the improper usage of it in the given context.

Based on the suggestion that *-nun* derives the presupposition and the implicature, we will discuss how the existence of these non at-issue meanings affect the follow up sentences in a monologue. After we examine the pragmatic effect in a single utterance, we will discuss the dialogue context in the next chapter.

3.3 More on the Propositions of *-nun*

3.3.1 Exhaustive Implicature Derived by *-nun* + Focus

We have seen that besides the at-issue meaning of a sentence, the particle *-nun* introduces a presupposition for the interpretation of a sentence, which I repeat here.

- (12) [ARIZONA-EYSE-NUN], [MCCAIN-I] *inki-ka manh-ass-eyo.*
 [ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec.
 ‘In [_{B-acc} ARIZONA], [_{A-acc} MCCAIN] was popular. (it was not the case in other states)’

- a. ‘In Arizona, McCain was popular.’
popular (m,Az) - At-issue meaning of (12)
- b. ‘There is a state other than Arizona, where a candidate other than McCain, was popular.’
 $\exists x \exists y$ [popular (x,y) & x≠m, y≠Az] -Existential Requirement of (12)

- c. ‘In no state other than Arizona, was McCain popular.’
 $\forall x[\text{popular}(m,x) \rightarrow x=Az]$ *-Exhaustive Requirement of (12)*

In the process of testing, we have restricted the set of domains to only three states, Arizona, Indiana, and California. Likewise, for the presidential candidates, only McCain and Obama are under consideration. This is basically the function of Focus. However, the way the presupposition or implicature are defined in (12b) and (12c) does not exactly reflect the quantification of domain for the states and the presidential candidates. Now we will integrate this into our consideration of the presupposition of *-nun* as follows. In the corrected presupposition in (37), ALT (Az) means a set of alternatives for ‘Arizona’, ALT(m) means a set of alternatives for ‘McCain’, and R ranges over salient relations, e.g. ‘being popular in the past in the specified state’.

(37) a. **Existential Presupposition**

There is a member in the set ALT (Arizona), which is not Arizona and which stands in relation R to some member of ALT(McCain), which is not McCain
‘ $\exists x \in \text{ALT}(Az)[x \neq Az \ \& \ \exists y \in \text{ALT}(m)[y \neq m \ \& \ R(y,x)]]$ ’

b. **Exhaustive Implicature**

None of the members in the set ALT(Arizona) except Arizona stands in R to McCain.

‘ $\forall x \in \text{ALT}(Az) [R(m, x) \rightarrow x=Az]$ ’

The presupposition expresses the existence of an alternative to the *-nun* marked item that has the relation R with one of the alternatives of the following accented item in a sentence. That is, there must be at least a single other member in the set that stands in the relation R. By expressing the presupposition in this way, we connect the two Focused constituents. Let us keep in mind that these focused constituents are not independent. I will account for how their relation is linked to the point that I want to make regarding the function of *-nun* in section 3.4.1.

For a sentence with *-nun* to be used and interpreted means that the existential presupposition must be satisfied. This affects the use of the sentence with *-nun* in a discourse context. For instance, let us assume that we picked Indiana from the set, and if Obama was the one who was popular there, then the existence of Indiana and its relation to Obama satisfies the presupposition (37a). Therefore, the sentence (38) can follow the ‘Arizona’ example in (12) (repeated here as (38a)) since its at-issue meaning is compatible with the presupposition of the ‘Arizona’ example. Since the sentence (38b) also has *-nun*, it must have a presupposition. Its presupposition should be also compatible with (38a). The non at-issue meanings of (38b) are provided in (39), which has to be compatible with both the at-issue and non at-issue meanings of (38a) in order to be in the same context with (38a).

- (38) a. *[ARIZONA-EYSE-NUN], [MCCAIN-I] inki-ka manh-ass-eyo.*
[ARIZONA-IN-NUN], [MCCAIN-Nom] popularity-Nom much-Pst-Dec
 ‘In [_{B-acc} ARIZONA], [_{A-acc} MCCAIN] was popular (it was not the case in other states).’
- b. *kuliko [INDIANA-EYSE-NUN] [OBAMA-KA] inki-ka man-ass-eyo.*
 And Indiana-in-Nun Obama-Nom popularity-Nom much-Pst-Dec
 ‘And, in [_{B-acc} INDIANA], [_{A-acc} OBAMA] was popular (it was not the case in other states).’
- (39) a. Obama is popular in Indiana. – *at-issue meaning*
- b. In some other state, there is a person other than Obama who is popular.
 –*existential presupposition*
- c. In no other state, Obama alone was popular. –*exhaustive implicature*

Context (39a) satisfies the existential presupposition of (38a) while (39b) is satisfied by the at-issue meaning of (38a). The exhaustive implicature (39c) is true in the

context that (38a) makes. Therefore, these two sentences (38a) and (38b) are compatible under the same context. Compare this to the following sentence pairs in (40).

(40) a. [ARIZONA-EYSE-NUN] [MCCAIN-I] *inki-ka manhasse.*

b. #*kuliko* [INDIANA-EYSE-NUN] [MCCAIN-i] *inki-ka manh-ass-e.*
 And Indiana-in-Nun McCain-Nom popularity-Nom much-Pst-Dec
 ‘And, [_{B-acc} in INDIANA], [_{A-acc} MCCAIN] was popular (it was not the case in other states).’

(41) a. McCain is popular in Indiana. *–at-issue meaning*

b. In some other state, there is a person other than McCain who is popular.
–existential presupposition

c. In no other state, McCain alone was popular. *–exhaustive implicature*

We have a familiar sentence (40a), which states the popularity relation between Arizona and McCain followed by a new sentence (40b), which states the same relation between Indiana and McCain. These two sentences cannot be used felicitously under the same context. The exhaustive implicatures of (40a) and (40b) respectively imply these that in no state other than Arizona was McCain popular from (40a) and in no state other than Indiana was McCain popular from (40b). The exhaustive implicatures each contradict the other’s at-issue meaning. We can conclude from these contrastive pairs of sentences that the two sentences can be used felicitously under the same context only if none of their presuppositions and at-issue meanings contradict each other.

3.3.2 Consideration of Plural Semantics

Since Focus is functioning in the *-nun* construction, the formation of a set in alternative semantics is considered in the process of interpretation. In the previous example, we have seen that the appearance of the same presidential candidate in the two

consecutive sentences with *-nun* caused infelicity to the flow of sentences. Keep the lesson from the previous pairs in mind and compare that case to the following example. Examples (43) and (44) are propositional meanings of (42) and (43) respectively.

- (42) a. [ARIZONA-EYSE-NUN] [MCCAIN-I] *inki-ka manhasse*.
 b. *kuliko [INDIANA-EYSE-NUN] [OBAMA-LANG MCCAIN-I TA]*
 And INDIANA-IN-NUN OBAMA-AND MCCAIN-NOM both
inki-ka manh-ass-ta.
 Popularity-Nom much-Pst-Dec.
 ‘And, [in INDIANA], [both OBAMA and McCain] was popular
 (in other states, this was not the case).’

(43) Propositions derived from (42a)

- a. In Arizona, McCain was popular.
- b. In some state other than Arizona, someone other than McCain was popular.
- c. In no state other than Arizona, McCain was popular.

(44) Propositions derived from (42b)

- a. In Indiana, Obama and McCain were popular.
- b. In some state other than Indiana, a person other than Obama and McCain was popular.
- c. In no state other than Indiana, Obama and McCain were popular.

Given that *-nun* marks the states’ names, both of the sentences in (42) have non at-issue meanings as in (43b) and (43c), and (44b) and (44c), which should be compatible with each other when used in the same context. Let us examine whether the propositions of each sentence are compatible each other. Some contradictions are found between (43) and (44). The exhaustive implicature (43c) of the ‘Arizona’ sentence contradicts the at-issue meaning (44a) of the ‘Indiana’ sentence. Also, the exhaustive implicature in (44c) contradicts the at-issue meaning in (43a). Since some of the propositions of the sentences contradict each other, these two sentences in (42a) and (42b) are expected to be

incompatible as confirmed in the previous example (40). However, in contrast to our expectation, sentence (42b) turns out to be felicitous as a consecutive follow-up of (42a). That is, it actually turns out to be fine for McCain to be popular in another state, not Arizona.

What distinguishes the felicitous consequence of sentences in (42) from the infelicitous one in (40)? In the felicitous pair (42), the member of $ALT(\text{McCain})$ that is in the relation R with 'Arizona' in (42a) is not exactly identical with the member of $ALT(\text{McCain})$ that is in the relation R with 'Indiana' in (42b). We need to consider the plural semantics here, especially what it means to be an alternative in a set. When Focus quantifies a domain of alternatives, for example, the domain of presidential candidates, if we consider two candidates, 'McCain' and 'Obama', what would the set of alternatives be? Thus far, we have formed the set as $\{\text{McCain}, \text{Obama}\}$. However, when the set was formed like this, we could not account for the contrast between the infelicitous example in (40) and felicitous example in (42). We did not have a proper way to distinguish having McCain from having McCain and Obama. Based on the contrast, the set has to be like this: $\{\emptyset, \text{McCain}, \text{Obama}, \text{McCain} \oplus \text{Obama}\}$. That is, the concept of an alternative should consider not merely each individual but possible pluralities of them. According to this, the combination of McCain and Obama is an alternative to McCain. An alternative comprising pluralities of elements saves exhaustive implicature from a contradiction such as (40) and (42).

We have seen in this section how the propositions of a sentence with *-nun* should be compatible each other in a context. Considering the context, we have considered the

contextual domain, i.e. the set of alternatives, and also the plural semantics for the alternatives.

3.3.3 Why is the Particle *-nun* Not Compatible with a Universal Quantifier?

The observation in (40) and (42) has demonstrated that the exhaustive implicature of the sentences in the same context should not contradict each other's at-issue meaning or non at-issue meanings. We have not seen, however, an example in which the sentence becomes infelicitous due to the violation of the existential presupposition. The case of violation of existential presupposition will be a case in which there is no alternative to the *-nun* marked item that is not the *-nun* marked item itself. That is, the violation case would be either that there is only a single element in the alternative set, i.e. the *-nun* marked item by itself, or that all the elements in the set are *-nun*-marked. For instance, if we assume a context in which Arizona is the only state in the US, the use of the *-nun* marker on 'Arizona' would be infelicitous in this model. This shows us that the usage of the *-nun* presupposes at least one alternative besides the *-nun* marked item itself.

Also if a group of all the members in the set of alternatives have *-nun* attached, the sentence would be infelicitous. Let us assume a model in which the US has only three states: Arizona, Indiana, and California. In that world, if the following sentence is stated, it is felicitous.

- (46) [ARIZONA-LANG INDIANA -ESEY-NUN] [MCCAIN-I]⁵
 Arizona-and Indiana- -in-Nun McCain-Nom
inki-ka manh-ass-e.
 Popularity-Nom much-Pst-Dec.
 ‘In Arizona and Indiana, McCain was popular (this was not the case
 in another state).’

In (46), where there is a potential contrastive alternative, ‘California’, the sentence is fine. However, if the *-nun* marked item itself exhausts the set of alternatives, the usage of *-nun* is not allowed.

- (47) % [Arizona-lang Indiana-lang California MOTU-ESEY-NUN]
 Arizona-and Indiana-and California all-in-Nun
 [MCCAIN-I] *inki-ka manh-ass-e.*
 McCain-Nom Popularity-Nom much-Pst-Dec
 ‘In all the states, Arizona, Indiana, and California, McCain was popular.’

If the universal quantifier combines with *-nun*, it cannot satisfy the existential presupposition required by *-nun*. This results in a different type of infelicity from violating the pragmatic requirement in a context. Without a context, the sentence cannot be used in the given model. This infelicity is the one that we observed in Model 3 in section 3.2.1.1. By detaching *-nun* from (47), the sentence improves as in (48). This is possible since the existential requirement of *-nun* disappears along with the detachment of *-nun* in (48).

- (48) [Arizona-lang Indiana-lang California MOTU-ESEY]
 Arizona-and Indiana-and California all-in
 [MCCAIN-I] *inki-ka manh-ass-e.*
 McCain-Nom Popularity-Nom much-Pst-Dec.
 ‘In all the states, Arizona, Indiana, and California, McCain was popular.’

⁵ Every alternative is focused.

This leads to the conclusion that a *-nun*-marked phrase that includes the universal quantifier is unacceptable. Buring (1997) discusses why the following sentence in German can have only narrow scope of the universal quantifier to the negation.

- (49) *Alle Politiker sind nicht korrupt.*
all politicians are not corrupt
i. 'No politician is corrupt.'
ii. 'It is not the case that all politicians are corrupt.'
- (50) */ALLE Politiker sind NICHT\ korrupt.*
'It is not the case that all politicians are corrupt.' - only reading (42. ii)

Buring (1997) attributes the implausibility of the wide scope reading of universal quantifier in (49i) to B-accent. It cannot be concluded at this point that these are identical phenomena since we do not know whether B-accent in German and *-nun* in Korean are exact counterparts, but the existence of a similarity between the constructions is clear. However, the above explanation at least accounts for why *-nun* cannot go along with the universal quantifier 'every' or 'all'.

The discussion so far has concentrated on elucidating the propositional meanings of *-nun*. We have paid less attention to the *-nun* marked constituent itself and its relation to other constituents within a sentence. Turning to the function of *-nun*, although I have said that its function was to mark 'Contrast' of the attached item, we have not really discussed the meaning of 'Contrast'. It is time to make a connection between these. The connection point is this: the existential presupposition presupposes the Contrast relation of the marked item to its alternative, which is not itself. The syntactic/semantic aspect of 'Contrast' will be discussed here. We will study the structure that the *-nun* constructs within a sentence. The meaning of 'Contrast' that *-nun* marking indicates is not restricted

to only the exact constituent to which *-nun* is attached. In fact, the function of *-nun* operates with the whole clause that linearly follows it. The meaning of *-nun* constitutes a structure to make its marked item obtain Contrast.

3.4 Contrast

3.4.1 Contraster, Contrast Trigger, and R

In the sentence (51a), which I repeat here from (12), ‘Arizona’ is a “Contraster” and ‘McCain’ is a “Contrast Trigger”.

- (51) a. [ARIZONA-EYSE-NUN] [MCCAIN-I] *inki-ka* *manh-ass-ta.*
 Arizona-in-Nun McCain-Nom popularity-Nom much-Pst-Dec.
 ‘In Arizona, McCain had much popularity.’
- b. [INDIANA-EYSE-NUN] [OBAMA-KA] *inki-ka* *manh-ass-ta.*
 Indiana-in-Nun Obama-Nom popularity-Nom much-Pst-Dec.
 ‘In Indiana, Obama had much popularity.’

Contrast Triggers are linguistically marked with a prosodic accent and Contrasters are marked with the particle *-nun* in Korean with a prosodic accent. Contrasters and Contrast Triggers stand in a relation R.

- (52) a. Contraster: *nun*-marked, accented item
 b. Contrast Trigger: accented, not *nun*-marked
 c. R: the syntactic complement of Contraster minus Contrast Trigger

The constitution of Contraster, Contrast Trigger, and R reflects how the *-nun* marked item obtains its ‘Contrasting’ property. The Contraster and its alternatives are the objects that contain the contrastive property. For instance, in the ‘Arizona’ example, ‘Arizona’ and ‘Indiana’ exhibit a Contrastive relation: both of them stand in a popularity relation, R, with some presidential candidate, but in case of ‘Arizona’, the popularity

holder is ‘McCain’ while in the case of ‘Indiana’, it is ‘Obama’. This Contrast relation is established by satisfying each other’s non-at-issue meanings. The complement of the Contraster, the following Focus and unaccented constituents, corresponds to the predicate of Contraster and its alternative. Since the Contrast Trigger comprises a part of the predicate of the Contraster, depending on the item that fills the Contrast Trigger variable, the property of the Contraster is decided. For example, the property of the *-nun* marked item, i.e. ‘Arizona’ in (51a) depends on whether McCain or Obama fills the variable of plain Focus. Thus, without the variable for Contrast Trigger, the establishment of contrastive relation between Contraster, ‘Arizona’, and its alternative, ‘Indiana’, is not possible. This accounts for why the accented *-nun* items are followed by another Focus.

The unaccented constituents under the scope of *-nun*, i.e. the constituents following *-nun* in the linear order, form the relation of Contraster and Contrast Trigger common to both Contraster and its alternative. For instance, ‘Arizona’ and ‘Indiana’ are in a contrastive relation because both of them have a popularity relation to some presidential candidate and who the candidate is (Contrast Trigger) is dissimilar. Without the dissimilarity of presidential candidates, Arizona and Indiana cannot be contrastive to each other. Also, unless Indiana does not have the popularity relation R to a presidential candidate, it cannot be the contrastive counterpart of the Contraster, ‘Arizona’. What is crucial in the linguistic representation of these concepts of Contrasters, Contrast Triggers, and R is that Contrast Triggers have to follow Contrasters in the linear order. We will discuss this restriction in the following section.

3.4.2 A Constraint on Contrast Trigger and R

In Korean, which allows scrambling, (52a) and (52b) below denote the same content.

- (52) a. *John-i Bentley-lul [MARY-HANTEY-MAN] pal-ass-ta.*
 John-Nom Bentley-Acc Mary-to -only sell-Pst-Dec
 ‘John sold Bentley [_F TO MARY].’
- b. *John-i [MARY-HANTEY-MAN] Bentley-lul pal-ass-ta.*
 John-Nom Mary-to-only Bentley-Acc sell-Pst-Dec
 ‘John sold Bentley [_F TO MARY].’

However, when we introduce *-nun*, the story becomes different. Compare the following sets of utterances. There are two different contexts and depending on the relative linear order of *-nun* and *-man* ‘only’ marked items, one order is allowed in one context but not in the other.

(53) [Context] John owns a car dealer shop. He has his own philosophy in selling his cars. The Bentleys, different from other makes of cars that John has, are valuable and expensive. John wants to sell a Bentley only to a special person that he thinks deserves the car.

- a. *John-i [BENTLEY-NUN] [MARY-HANTEY-MAN] pal-ass-ta.*
 John-Nom Bentley-Nun Mary-to-Only sell-Pst-Dec
 ‘A Bentley, John sold it only to Mary (in contrast to this, for other cars, John sold it to anybody).’
- b. *#John-i [MARY-HANTEY-MAN] [BENTLEY-NUN] pal-ass-ta.*
 John-Nom Mary-to-Only Bentley-Nun sell-Pst-Dec
 ‘Only to Mary, John sold (at least) a Bentley (but not any other cars).’

(54) [Context] Because of the critical energy crisis, the government forced John to stop selling cars for awhile. However, John realized how much his friend, Mary, needs a car. He decided to sell a small car secretly only to Mary.

- a. *#John-i [SMART CAR-NUN] [MARY-HANTEY-MAN] pal-ass-ta.*
 John-Nom Smart Car-Nun Mary-to-Only sell-Pst-Dec.
 ‘A Smart Car, John sold it only to Mary (in contrast to this, for other cars, John sold them to anybody).’

(57) Propositions derived from (53b)

John-i [MARY-HANTEY-MAN] [BENTLEY-NUN] pal-ass-ta.
John-Nom Mary-to-Only Bentley-Nun sell-Pst-Dec.
'Only to Mary, John sold (at least) a Bentley (but not any other cars).'

- a. John sold Bentley only to Mary. – *at-issue meaning*
- b. Only to Mary, John sold Bentley but no other car than Bentley. – *non at-issue meaning*

In (56), the 'Mary' phrase accented without *-nun* is Contrast Trigger following *Bentley-nun*. The existential and exhaustive meanings are derived based on this Contrast structure. Even though the derived non at-issue meanings might look more complicated than what we have seen due to the meaning of *-man* 'only', the derived propositions from *-nun* maintain their meanings if we leave out the meaning of *-man* 'only'. What apparently does not fit the paradigm that I suggested is the case of (57). According to the proposed Contrast structure, the Contraster must have a Contrast Trigger. However, in (57), we cannot find any Contrast Trigger. The phrase, *Mary-hantey-man* 'only to Mary' precedes the Contraster, thus, it cannot be a Contrast Trigger.

Let us consider this problem after we examine one more pair of examples. Compare the following incompatible pairs in (58) to the compatible counterpart in (42), which I repeat in the following.

- (42) a. [ARIZONA-EYSE-NUN] [MCCAIN-I] inki-ka manhasse.
b. kuliko [INDIANA-EYSE-NUN] [OBAMA-LANG MCCAIN-I TA]
And Indiana-in-Nun Obama-and McCain-Nom both
inki-ka manh-as-sta.
Popularity-Nom much-Pst-Dec.
'And, [in INDIANA], [both OBAMA and McCain] were popular.
(in other regions, this was not the case).'

- (58) a. [MCCAIN-I] [ARIZONA-EYSE-NUN] *inki-ka* *manh-ass-ta*.
 McCain-Nom Arizona-in-Nun popularity-Nom much be-Pst-Dec
- b. #*kuliko* [MCCAIN-ILANG OBAMA-KA TA] [INDIANA-EYSE-NUN]
 And McCain-and Obama-Nom both Indiana-in-Nun
inki-ka *manh-ass-ta*.
 popularity-Nom much-Pst-Dec.
 ‘And, both McCain and Obama had much popularity in INDIANA (but not in other regions.)’

The contrast between (42) and (58) illustrates that change in the linear order between two accented constituents causes the felicity distinction. We have already discussed (42) and concluded that the Contrast Trigger {McCain} and {McCain \oplus Obama} should be treated as alternatives. In (58), neither ‘McCain’ in (58a) nor ‘McCain and Obama’ in (58b) are Contrast Triggers. Thereby, the non at-issue meanings derived from the Contraster become different. The existential and exhaustive meanings of (58a) express the same content: in no state other than Arizona is McCain popular. This non at-issue meaning contradicts the at-issue meaning of (58b) which states that McCain and Obama are popular since the assertion that McCain and Obama are popular entails that McCain is popular.

If the non at-issue meanings derived by *-nun* cause the incompatibility of the two sentences in (58), the deletion of *-nun* will prevent the formation of the implicature and will not cause the incompatibility. This expectation turns out to be right in the following.

- (59) a. [MCCAIN-I] [ARIZONA-EYSE] *inki-ka* *manh-ass-ta*.
 McCain-Nom Arizona-in popularity-Nom much-Pst-Dec.
 ‘[_{A-acc} MCCAIN] was popular in [_{B-acc} ARIZONA].’

- b. *kuliko* [MCCAIN-ILANG OBAMA-KA TA] [INDIANA-EYSE-NUN]
 And McCain-and Obama-Nom both Indiana-in-Nun
inki-ka manh-ass-ta.
 popularity-Nom much-Pst-Dec.
 ‘And, [_{A-acc} BOTH MCCAIN and OBAMA] were popular in [_{B-acc}INDIANA]
 (but not in other regions).’

Through the above comparisons, we have confirmed the constraint assigned to a Contrast Trigger relative to a Contraster: Contrast Trigger should be placed after Contraster. However, we have not solved the problem raised here. We have to deal with the problem of an apparent single occurrence of the *-nun* marked phrase alone.

3.4.3 Hidden Contrast Trigger

Apparently, there is a case where the Contraster appears alone. Not only the examples in (57) and (58) but the examples that introduced in the review of Hara and Lee in section 3.1 contain only a single prosodic focus. I bring one of Lee’s example, (7), here.

- (7) *Mary-NUN tongkwa-hay-sse.*
 Mary-Nun pass-do-Past
 ‘Mary has passed.’

As in (56) and (57), the alleged Contraster *Mary-nun* is not followed by a Focus, which is the alleged Contrast Trigger. One way to solve this is to postulate two types of *-nun*, one that appears with a following Focus and the other that appears alone. However, although its descriptive ability is not problematic, it is not a good solution.

I will argue that the apparent single occurrence of *-nun* can be unified as having the same underlying source construction as that seen in the normal Contrast structure such as ‘Arizona’ example. I will show that the location of the Contrast trigger misleads us into suggesting two independent constructions, such as the ‘Arizona’ example and

such as (57) and (58) or Hara's or Lee's example in (7). Let me account for this with the example (58a).

- (58) [MCCAIN-I] [ARIZONA-EYSE-NUN] inki-ka manhassta.
McCain-Nom Arizona-in-Nun popularity-Nom much be-Past
'[A-acc MCCAIN] was popular in [B-acc ARIZONA] but not in other regions.'

Not only is example (58) distinct in meaning from the previous cases that we have seen, but also it violates the constraint on the placement of the Contrast Trigger. As specified in (52c), the Contrast Trigger should be placed after the Contraster. Even though an accented constituent without any morphological marking appears in the same sentence with a Contraster, if it precedes the Contraster, it cannot be a Contrast Trigger.

However, if we carefully observe the meaning of example (58a), it is not the case that what is expected to be the Contraster, 'Arizona', loses its Contrastive relation to its alternative, Indiana. It is still contrastive to 'Indiana' in that McCain is popular there but not in Indiana. Here what changes is the relation R and the Contrast Trigger. R used to be ' $\lambda x. \lambda y. y$ is popular in x ' and the Contrast Trigger corresponds to the individual who is popular. In (58), R is ' $\lambda x(\text{Mc is popular in } x)$ ' and a Contrast Trigger y corresponds to the positivity/negativity polarity (see "Verum Focus" in Romero 2002). The stipulation that a polarity item is the Contrast Trigger accounts for why the focus following the Contraster is not found. We usually identify focus by recognizing the prosodic accent. In case we cannot find an accent, the Contrast Trigger can be the polarity item. According to the discussion so far, what constitutes Contrast Structure of the reversed 'Arizona' example in (58) is as follows.

(59) Contrast Structure

- a. Contraster: Arizona
- b. Contrast Trigger: Polarity (positive)
- c. R: λx (M is popular in x)

The Contrast Trigger, the positive polarity marker, forms its alternative set, $ALT(P) = \{\text{positive, negative}\}$. The fact that sentence (58a) is true and used felicitously, presupposes there is at least a state other than Arizona that is negated regarding McCain's popularity there.

Descriptively, the Contraster and its alternatives are evaluated regarding a property formed from the following constituents. They turn out to be contrastive since the items have distinctive value, which is decided by the Focused item that appears after the Contraster. Here, the role of the combination of Contrast Trigger (plain Focus) and its complement part, the relation R, is important. They allow the Contraster and its alternative to maintain the Contrastive property. However, we could also say that the predicate of 'Arizona' and 'Indiana' have different semantic content respectively. It is true but 'having different semantic content' is not enough to describe a property as 'Contrast'. In the following section, I will show that 'being in Contrastive relation' should be distinguished from 'having different semantic predicates'.

3.4.4 Contrast and Difference are Different

We have discussed the meaning of *-nun* marked items, which are called Contrasters. However, it is still not clear how a Contraster's being in the 'Contrast' relation with its alternative is different from being merely 'different' from its alternative.

To support the difference between presupposition of the ‘Contrast’ relation and merely having a ‘different’ relation, I will use a connective *nuntey* in Korean. This *nuntey* corresponds to an English ‘but’ or ‘while’. It requires that the elements it connects contrast. If non-contrasting propositions are connected by the connective *nuntey*, the sentence becomes infelicitous.

(60) The Condition for the Connective *nuntey* ‘while’

A nuntey B: The propositions *A* and *B* connected by *nuntey* should have contrasting meaning.

Having this property of *nuntey* in mind, let us observe the following data.

(61) #*Fred-ka* [_F *KHONG-UN*] *mekess-nuntey*, *Tim-i* [_F *SSAL-UN*] *mekesse*
 Fred-Nom BEAN-NUN ate-while Tim-Nom RICE-NUN ate
 ‘While Fred ate the [_{B-acc} BEANS], Tim ate the [_{B-acc} RICE].’

The sentence in (61) is infelicitous. The sentence in (61) is predicted to be interpreted as ‘While Fred ate the beans, Tim ate rice’, which seems to be a good sentence. However, contrary to expectation, the sentence turns out to be infelicitous. If we investigate the reason why (61) is infelicitous even though each conjunct has different semantic content, it would be helpful to understand how ‘being in the Contrast relation’ is different from ‘having a different semantic content’.

In order to demonstrate this, we need to show that the conjuncts are not Contrastive to each other. Both of them have the *-nun* marker. What does it mean that Contrasters are not in Contrast relation? One noticeable thing in this example is that both of the *-nun* marked items appear without overt Contrast Triggers. From the apparent lack of an accent after *-nun*, we can tell that the Contrast trigger would be on the polarity item. In the context in which three kinds of food (beans, rice and, seaweed) are under

consideration, in the first clause, the Contraster *khong* ‘beans’ has the property of ‘being eaten’. Thus, while only beans has the property of being consumed, one of alternatives, rice and seaweed, is presupposed as having not been consumed.

(62) The set of foods on the table = {bean *khong*, rice *ssal*, seaweed *kim*}

Fred-ka [_F *KHONG-UN*] *mekesse* [_F *Positive Operator*]

Fred-Nom bean-Nun ate

i. Fred ate the beans.

ii. At least one of rice or seaweed has the negative value regarding its being eaten.

The same analysis applies to the second clause needed to figure out the meaning of propositions formed from the Contrast operator. The meanings of the propositions are similar to the ones in (62), the proposition of the first clause, except for the agent of eating.

(63) [*Tim-i*] [*SSAL-UN*] *mekesse* [_F *Positive Operator*]

Tim-Nom rice-Nun ate

i. Tim ate rice.

ii. At least one of beans or seaweed has negative value regarding its being eaten.

We have the meaning of each clause not merely from the lexical meaning of strings of words but including the meaning from grammatical markers such as the Contrast operator and prosodic accents. It provides an environment to see whether these clauses satisfy the condition of the Contrast relation in (60) required by the connective *nuntey*.

Without the account that *-nun* represents a Contrast property and the details such as what Contrast means and how it works, it is hard to explain why the sentence in (61) is infelicitous. It clearly contains a marker that represent ‘Contrast’ and the compositional

meanings of the connected clauses are different. It is important to recognize that what is in the contrastive relation of *nuntey* in the two clauses in (61) is not the whole proposition in either clause. The objects to be evaluated as to whether they satisfy the contrast condition of *nuntey* are the entities marked by a Contrast operator, 'beans' and 'rice'. It matters whether they have the Contrast property or not in order to decide whether the contrast condition is satisfied. As illustrated in (62) and (63), 'beans' has the property of 'being eaten' and 'rice' also has the same property of 'being eaten'. One may argue against 'beans' and 'rice' having the same property because obviously 'beans' and 'rice' are eaten by different people. However, the Contrast operator takes its predicate only from the following part of the utterance but cannot see the preceding part of the utterance. The clauses connected by *nuntey* turn out to have Contrasters and these alleged Contrasters turn out to have identical properties. Therefore, the contrast condition for *nuntey* is violated.

Following the discussion so far, if the reason for the infelicity of (61) is really because of the failure of the contrast condition by Contrasters, we expect the infelicity to disappear if the properties of the Contrasters change to become distinctive from each other. The expectation turns out to be right, as shown in the following example. Example (64) is the same as (61) except that (64) has a negation marker *an* 'not' in the second clause predicate.

(64) [Context] There is some food on the table; beans, rice, and seaweed.

Fred-ka [KHONG-UN] mekess-nuntey, Tim-i [SSAL-UN] an
Fred-Nom BEAN-NUN ate-while Tim-Nom RICE-NUN Neg
mekessta.

ate.

‘While, by Fred, [B-Acc BEANS] were eaten, by Tim, [B-Acc RICE] was not eaten.’

By having a negation in the second clause, the Contrasters in each clause now take on contrastive properties by having positive and negative polarity operators as Contrast triggers. By comparing the felicitous sentence in (64) with the infelicitous one in (61), we can construe from these that 1) only when Contrasters have different Contrast Triggers can the Contrasters be judged as satisfying the contrast condition and 2) ‘for A and B to be different’ does not equal ‘for A and B to be in the Contrast relation’.

Now let us move our attention to the following example (65), slightly transformed from example (61).

(65) *[KHONG-UN] [FRED-KA] mekess-nuntey, [SSAL-UN] [TIM-I]*
BEAN-NUN FRED-NOM ate-nuntey RICE-NUN TIM-NOM
mekessta.

ate

‘While [B-Acc the BEANS] were eaten by [A-Acc FRED], [B-Acc the RICE] was eaten by [A-Acc TIM].’

In (65), the Contrasters are still maintained, but the *-nun-*marked objects precede the subjects and the subjects are also prosodically accented. It builds an obvious construction where a Contrast trigger is overtly realized. Having different Contrast Triggers, the Contrast relation between the food items in the sentence is established and hence, the sentence is felicitous.

To summarize, sentence (61) is infelicitous according to the following reasoning:

1) the connective *nuntey* requires that the clauses contain contrastive properties, and 2)

there are entities that exhibit a Contrast relation in each clause but these Contrasters do not have a distinctive property. This case demonstrates that the presence of a Contrast operator in a sentence does not create a contrastive relation between whole propositions. That is, the scope of a Contrast operator is restricted to only the following constituents in the linear order. When the clauses of *nuntey* contain Contrasters, the Contrasters become the target of the contrast condition. Here, merely containing semantically different lexical items cannot satisfy the contrast condition.

3.5 Summary

In Chapter 3, I have proposed an analysis of the semantics of the Korean particle *-nun*, the alleged Topic marker, in an accented version. I have suggest that accented *-nun* functions to generate implicit propositions. Through three examinations, viz. i) various models test, ii) refutation/negation test, and iii) “Hey, wait a minute!” test, one of propositions has been identified as an existential presupposition and the other as an exhaustive implicature. I have discussed the application of the presupposition and implicature using alternatives in a set formed by the function of Focus. The existential presupposition provides a linguistic account for how the Contrast meaning is imposed on the *-nun* marked item. I explained it by showing the relation of Contraster and Contrast Trigger. The relative order constraint between them, which I called Contrast Trigger constraint, has been supported by different scopal readings between *-nun* marked and ‘only’ phrases. In the next chapter, I will extend the discussion of this accented *-nun* to the behavior of *-nun* in a discourse.

Chapter4

Pragmatic Functions of *-nun* in Conversation

4.1 Conversation and Pragmatic Presupposition

The study in this chapter aims to elucidate how the particle *-nun* affects the felicity of a sentence in various types of conversations and try to find the answer from the behavior of the propositions derived from *-nun*. Since we have identified the propositions from *-nun* marked sentences and the type of the propositions in the previous chapter, we will concentrate on the behavior of the propositions in various conversational discourse situations in this chapter. Let us recall the pairs of conversations with *-nun* introduced at the beginning of the thesis (in Chapter 1. Section 1.2). Here is a minimal pair where the usage of *-nun* actually affects the felicity of a sentence in a conversational context.

- (1) Ann: *anthakkapkeyto, nwukwun-ka ku salin-ul mokkyek hay-ss-e.*
Unfortunately, someone-Nom the murder-Acc witness-do-Pst-Dec.
'Unfortunately, someone witnessed the murder.'
- Bill: *alayo. [BEN-I] hay-ss-eyo.*
Know. [BEN-Nom] do-Pst-Dec.
'I know. [A-AccBEN] did.'
- (2) Ann: *anthakkapkeyto, nwukwun-ka ku salin-ul mokkyek hay-ss-e.*
Unfortunately, someone-Nom the murder-Acc witness-do-Pst-Dec
'Unfortunately, someone witnessed the murder.'

Bill: # *alayo*. [BEN-UN] *haysseyo*.
Know. [BEN-NUN] do-Pst-Dec
'I know. [B-AccBEN] did.'

In the Bill's response in (1), the Focused word 'Bill' is marked with a nominative case marker *-i* and in (2), the counterpart constituent is marked with *-nun*. It is obvious that this causes different felicity of the responding sentences. Since any accented item is thought to have Focus, 'Ben' must be the updated information. In alternative semantic theories of Focus, e.g. Rooth (1992), Focus corresponds to updated information and the remnant is shared information between interlocutors or given information that the answerer is aware of at the moment when he produces the utterance¹.

In the above conversations, Bill is the one who originally has the information about who witnessed the murder. That is, even before Ann provides information that someone witnessed the murder, Bill already knows that someone witnessed the murder, and he even knows that it is Ben. As Ann states that someone witnessed the murder, Bill assumes that this is the most knowledge that Ann has, and since now he knows that Ann knows that much, he offers to update Ann's knowledge. Before Ann says her sentence, Bill would not have known how much Ann knows. The way that Bill produces his sentence is based on his assumption about how much Ann knows, an assumption that is completely based on Ann's utterance in this conversation. Bill highlights the part that he newly introduces to Ann, i.e. 'Ben' in (1).

In (2), most conditions are the same as (1) and even the assignment of Focus appears to be the same. Thus, this conversation pair seems to be eligible to have the same

¹ For discussion of what 'Given' means in Focus, see Schwarzschild (1998).

explanation as in the above paragraph. The only difference between (1) and (2) is the choice of particles, i.e. *-i* vs. *-nun*. Since we have already discussed the function of *-nun*, we can apply the function here and contemplate how the function derives the result of infelicity in the conversation pairs.

With *-nun*, the sentence generates an additional proposition ‘someone other than Ben did not witness the murder’. This proposition is a presupposition: this proposition is a *semantic presupposition*, which is called *sentential presupposition* in Stalnaker (1973, 1978) distinguished from his *pragmatic presupposition*, which he calls *speaker’s presupposition*. That is, the sentential presupposition is semantically required to be true in order to let the sentence obtain a truth-value. This requirement does not concern the pragmatic environment: the semantic requirement for a sentential presupposition to be true should be satisfied regardless of whether the sentence is in a monologue, in a dialogue, or even out of the blue.

Now that a sentence with a presupposition appears in a conversational context, we will study the pragmatic impact of the presence of *-nun*. When compared to the sentence with a case marker, which does not generate a presupposition, the reason why Bill used *-nun* is clear: i) he wanted to deliver the meaning of a presupposed proposition as well as the at-issue meaning but ii) for some reason, he did not want to deliver it as an explicit assertion. The reason is that the speaker presupposes that the sentential presupposition meaning ‘someone other than Ben did not witness the murder’ already comprises the shared information between him and the listener. That is, when Bill produced an utterance with a tacit presupposition in addition to an overt assertion, he

presupposed that the information of the sentential presupposition was already entailed in the common ground. This is the *pragmatic requirement* of presupposition.

This pragmatic view has been contended by Stalnaker (1973). What we have thought of as ‘presupposition’ in the last chapter explains the relation between a linguistic expression and a proposition, i.e. the particle *-nun* and the proposition alleged to be generated by it. However, Stalnaker’s (1973) view is as follows: “*all the facts can be stated and explained directly in terms of the underlying notion of speaker presupposition, and without introducing an intermediate notion of presupposition as a relation holding between sentences and propositions.*”

That is, he considered the presupposition as a speaker’s cognitive property, not a linguistic expression’s property. He thought that the presupposition reflects the speaker’s belief about the content and the speaker’s belief about the listener’s belief about the content. According to him, Bill’s utterance ‘[BEN-UN] did’ expresses Bill’s belief that there is someone other than Ben who did not witness the murder and also Bill’s belief that Ann would know this. This accounts for what ‘shared information’ means in the previous paragraph. This shared information is called Common Ground (Stalnaker 1972, 1973, 1978, 1988, 1998). Here is Stalnaker’s (1973) explanation of common ground.

- (3) “The common ground of a conversation at a particular time is the set of propositions that the participants in that conversation at that time mutually assume to be taken for granted and not subject to (further) discussion. The common ground describes a set of worlds, the context set, which are those worlds in which all of the propositions in the common ground are true. The context set is the set of worlds that for all that is currently assumed to be taken for granted, could be the actual world.”

-Stalnaker (1973)

His explanation here can be condensed in the two phrases: 'taken for granted' and 'no more controversy'. However, it seems unclear to me whether the common ground is really 'taken for granted' by both a speaker and a listener or whether it is merely a tentative state of the summing up of the accumulated knowledge at a specific point. In fact, many cases that do not conform to this explanation have been reported and called 'accommodation' in Lewis (1979) and many others. 'Accommodation' is actually a key to solving our problems but we still need to investigate 'presupposition' more. We will come back to the 'accommodation' issue in the next section. Another question raised from the above explanation of 'presupposition' as information being 'taken for granted' and 'no more controversy' is this: if there is not room for any more discussion, why would the speaker generate the meaning, albeit implicitly? There may be other information in the common ground but it is not that every piece of information is generated in the presupposed form. Why is only that specific information generated as a presupposition? In some cases, it is clear but in some cases, it is not. We will discuss this problem in the next section, too.

Coming back to our discussion of the pragmatic requirement of a presupposition, the requirement makes sense when we consider the fact that a presupposition is an implicit proposition. If it were intended to be a new assertion or an update of information, it should have been delivered in a more overt way. Under this view, the meaning encoded in the presupposition should already be in the common ground of the interlocutors and thus, it cannot be new. Therefore, under the view of a presupposition as common ground, a presupposition cannot serve the function of context update.

Coming back to our example of the murder, let us ponder whether this is true. The information that some person other than Ben did not witness the murder also exists in Ann's knowledge storage. The fact that Bill generated this meaning as a presupposition means that he believes that this information is already in the common ground between him and Ann. When Ann said that someone witnessed the murder, it is likely that she does not mean that everyone witnessed the murder. She presumably knows that some person (actually even more than one person) did not witness the murder.

Therefore, even though it is possible to say that Ann's utterance may imply that someone did not witness the murder, it does not exactly correspond to what Bill presupposes about what Ann already knows. The 'someone' in Bill's presupposition may or may not be a single person, but it is a member of a salient limited set of people. What the presupposition requires in order to be appropriately used in the conversation is not satisfied since Ann does not have the knowledge of a salient set of potential non-witnessers before Bill's utterance. The failure of this pragmatic requirement for the presupposition accounts for the infelicity of the conversation pairs in (2).

One might recall that (2) generates an additional proposition, an exhaustive implicature, and wonder whether the exhaustive implicature of this sentence also has a pragmatic requirement like the presupposition. An implicature, however, does not behave like a presupposition. The only case where this implicature mattered was the example that we have seen in a monologue context. As already mentioned, in the case of a monologue, since a speaker does not want to contradict any proposition he has previously produced, even an implicitly expressed meaning had to be considered in the production of following

utterances. However, since we are discussing a conversation and especially the pragmatic effect of a response sentence, the implicature of the response cannot impinge on the felicity of a conversation pair.

The contrast that the following example shows with the infelicitous ‘someone-*nun*’ pair in (2) confirms the pragmatic requirement on a sentential presupposition. While in the ‘someone’ pairs in (1)-(2), Bill agreed to Ann’s assertion, in the following ‘no one’ pairs in (4)-(5), Bill disagrees with Ann’s assertion.

(4) Ann: *anthakkapkeyto, amwuto ku salin-ul mokkyek haci anh-ass-e.*
Unfortunately, anyone the murder-Acc witness do Neg-Pst-Dec
‘Unfortunately, no one witnessed the murder.’

Bill: *kulssey... [BEN-UN] hay-ss-eyo.*
Well... [BEN-NUN] do-Pst-Dec
‘Well... [B-AccBEN] did.’

In this conversation, the response with *-nun* is felicitous. The difference from the infelicitous (2) is the quantifier and negation, *amwuto...anh* ‘no one’ used in Ann’s sentence. The sentential presupposition of Bill’s utterance, ‘someone other than Ben did not witness the murder’, is entailed by Ann’s utterance ‘no one witnessed the murder’, which forms common ground at the moment of Bill’s utterance. In Ann’s knowledge, before Bill’s utterance, even Ben was thought not to have witnessed the murder. Bill tries to update Ann’s wrong knowledge by providing the correct information as he thinks (we do not know whether what Bill said is true or what Ann said is true). The updated information corresponds to the asserted at-issue meaning. This exactly fits into the requirement.

Then, the question previously raised instantly comes up: if Bill believes that Ann already knows that people other than Ben had not witnessed the murder and Bill himself believes that, why would he want to generate a presupposition about it? That is, why would he want to use the presupposition triggering expression *-nun* when he has the option of choosing an expression that does not trigger this presupposition? It is not, of course, an obligation to make every piece of information in the common ground into a presupposition. As in the ‘someone-case marker’ pair in (1), a response with a case marker to Ann’s “no one” comment, which does not trigger a presupposition, is fine.

- (5) Ann: *anthakkeyto, amwuto ku salin-ul mokkyek haci anh-asse.*
 Unfortunately, anyone the murder-Acc witness do Neg-Pst
 ‘Unfortunately, no one witnessed the murder.’

Bill: *kulssey...[BEN-I HAY-SS-EYO].*
 Well... Ben-i do-Pst-Dec
 ‘Well... [F BEN did].’

This conversation pair makes a minimal pair with the ‘someone ~ *Ben-i*’ conversation in (1) as well as the one with the ‘no one ~ *Ben-nun*’ pair introduced in (4). The pair in (5) contrasts with (1) in the ‘someone’ versus ‘no one’ phrase in Ann’s utterances. It contrasts with (4) in the ‘*Ben-i*’ versus ‘*Ben-un*’ in Bill’s utterances. The contrast of ‘someone’ versus ‘no one’ results in the Focus assignment on different constituents. The contrast of ‘*Ben-i*’ versus ‘*Ben-un*’ results in the different connotations of the answers.

The accent pattern of Bill’s answer in this pair seems to be deviant from what we have seen from the previous pairs. As described in (5), either both subject and verb are accented or a subject is accented. Bill’s entire answer is focused in this conversation. Let

us compare this with (1). In (1), from Ann's utterance, Bill knew that Ann knows at least the fact that someone witnessed the murder. He only needs to update the identification of the one who witnessed the murder. However, in this pair, Bill has to update the content of the whole proposition since Ann does not know that someone witnessed the murder. The whole proposition 'Ben did' is, therefore, focused. If it follows the accent assignment rule (Selkirk 1984, 1994), the subject 'Ben' is the eligible position for the prosodic accent. In Korean, accenting both the subject and the verb is also possible.

Another minimal contrast with (5) is the pair in (4). Different from the 'someone' pairs in (1) and (2), the 'no one' pairs in (4) and (5) allow either the case marker or *-nun* in their answers. What would be the difference between using a case marker and *-nun*? Now we have a linguistic account for the intuitive connotative difference: the presupposition of *-nun* requires that both Bill and Ann have the same knowledge of non-witnesses as common ground. They have agreement on that part. However, the case-marked response does not express any content in common ground, but only updates the old information. This results in the connotation difference.

Through the four minimal conversation pairs, we have studied how the sentential presupposition derived from *-nun* can function in a pragmatic way. It strengthens our presupposition argument of *-nun* over Lee's or Hara's scalar or exhaustive implicature analysis of *-nun* and *-wa* respectively. If the function of *-nun* is to generate one of the mentioned implicatures, how could the contrast among the four pairs be explained? Implicatures do not have a pragmatic requirement like presuppositions.

The presupposition analysis of *-nun* seems to successfully capture the behavior of its hosting sentence in conversational contexts. However, apparently there are some cases where this pragmatic presupposition analysis is too strong to explain the data. We will study examples that apparently cannot be embraced by our analysis here and try to find a way to resolve the problem.

4.2 Accommodation and Informative Presupposition

In the previous section, we have argued that the linguistic expression that generates a semantic presupposition is pragmatically presupposed to be in common ground by a speaker. We also have observed how placing the semantic presupposition generated by *-nun* in the common ground functions in a discourse. In this section, we will study the apparent counterexamples to what we have seen in the previous sections. We can find some presuppositions that are apparently not in the common ground and still the usage of the presupposition does not pose any problem in the discourse. We will first study how this problem has been dealt with in the literature and come back to discuss how similar problems appear in the *-nun* examples and seek ways to resolve them.

4.2.1 Accommodation

Let us study what kind of relation semantic presuppositions exhibit with common ground and how they would behave when they apparently disobey the way that we have proposed for a pragmatic presupposition to follow. Consider the following sentence uttered out of blue.

(6) “Sorry I’m late. I had to pick up my sister from the airport.”

By using the phrase ‘my sister’, the speaker’s presupposition that she has a sister would be in the common ground of her and the listener. However, this is not necessarily true. The listener may not have known that the speaker had a sister before she said the above sentence. Apparently, the presupposition of this sentence violates the pragmatic requirement. However, it is felicitous. Based on this problem, some people such as Gauker (1998) argued that the pragmatic theory of presupposition as common ground is “simply wrong”.

Consider that the following sentence uttered in a situation where the listener is not aware that his daughter is engaged. The daughter herself is also well aware that her dad does not know anything about her engagement.

(7) “O Dad, I forgot to tell you that my fiancé and I are moving to Seattle next week.”
Von Fintel 2000

Even though this is an extreme way to inform her father that she is engaged, it cannot be said to be wrong to say this. Apparently in cases like this, the speaker creates a presupposition even though (s)he is aware that the presupposition is not in the listener’s background or that different information is stored in the listener’s knowledge. The speaker tries to change the common ground and implicitly fits it into a new common ground without explicitly providing new information, that is, not in the explicit way of updating information. This is called accommodation (Lewis 1979, Stalnaker 1973, von Fintel 2000 among many others). Lewis, in his famous paper ‘Accommodation’, defines the phenomena of ‘accommodation’ as follows.

(8) The Rule of Accommodation for Presupposition

“If at time *t* something is said that requires presupposition *P* to be acceptable, and if *P* is not presupposed just before *t*, then-ceteris paribus and within certain limits-presupposition *P* comes into existence at *t*.”

Lewis suggested that accommodation is a kind of adjustment of context that happens “quietly and without fuss **when required**”.² His description is right, but the follow up questions such as when it is required or how it can happen without fuss should be answered to explain the accommodation.

Stalnaker (1973,1974) himself, who suggested the common ground theory, acknowledged the problem as well. In order to account for these problematic cases, he strengthened the pragmatic aspect of presupposition. Specifically, the fact that a presupposition is a speaker’s belief is strengthened, that is, the presupposition is not actually present in the common ground, but the speaker pretends to make the content part of common ground. Even though he knows that the listener does not have that knowledge, he believes that the listener would accept it when he acted as if the presupposed information was already in the common ground. We need to think about why the speaker intentionally expresses the new content to the listener as if it is already present to him. We also need to think about why the listener accepts it “without fuss”. The reasons are not directly related to linguistic disposition. They completely depend on the speaker’s and listener’s attitudes.

Economy can be a good explanation. For instance, in the ‘sister’ example in (6), the speaker is the authority who knows that she has a sister and the listener accepts the

² This is my boldface

fact and has no reason to doubt it. The speaker may think that there is no reason for her to spend the time and energy to explain that she has a sister before she makes an assertion that she had to pick up her sister from the airport. This account fits our intuition and sounds reasonable. However, the problem with this idea is not in giving a satisfactory description. This solution highlights only the part of speaker's role in the generation of presupposition and weakens the explanatory power regarding the originally suggested relation between the presupposition and common ground. Although it is true that speaker's intention plays an important role in this phenomenon, we need an explanatory account that is more linguistically based. Compare the accommodated presuppositions above to the behavior of the presupposition in the following sentence uttered out of blue.

- (9) "John can't come to the meeting tonight. He is having dinner in New York, too."
Kripke 1990

Adding the expression 'too' at the end of the sentence makes this utterance nonsense to the listener. It is because 'too' generates a presupposition that says there is another person (a salient person both interlocutors already know) who is having dinner in New York. However, this presupposition does not exist in the listener's pre-knowledge although the speaker pretends that it is there. In contrast to the 'sister' and 'engagement' case, presupposition accommodation of the 'too' sentence seems to be impossible. Von Stechow (2000) says that the most accommodation that the listener can make is that there is some unspecified person who is having dinner in New York at the night, which must be true but cannot be enough to recover the broken conversation. In the 'pretense of a speaker' account, we need an additional account for why a speaker's pretense fails to be accepted by a listener. This sentence cannot lead to a felicitous conversation as in the

‘engagement’ example. Descriptively, the linguistic expression ‘too’ seems to generate too strong a presupposition to be accommodated. However, we do not know what ‘too strong’ means here.³ Whether or not accommodation is successful seems to depend on the presupposition trigger. For some reason, the presupposition generated by ‘too’ is more reluctant to be accommodated. (See Kripke (1990) for more detailed discussion).

4.2.2 Is the Presupposition Account too Strong?

The claim that a presupposition of a sentence should be in the common ground successfully accounted for the contrast among four pairs of ‘someone’ versus ‘no one’ in assertions and *-i/-ka* ‘nominative case marker’ versus *-nun* ‘Contrastive operator’ in responses in example (1-2) and (4-5). However, the successful account in those contexts does not always seem to make the right prediction in other cases. Consider the following conversation.

(10) Ann: *nwuka ku salin-ul mokkyek hay-ss-ni?*
 Who the murder-Acc witness do-Pst-Q
 ‘Who witnessed the murder?’

Bill: *[BEN-I] hay-ss-eyo.*
 [BEN-Nom] do-Pst-Dec
 ‘[A-AccBEN] did.’

This is a wh-question and answer pair. Since we have already discussed the property of wh-question and answer pairs in the Chapter 2, there is not much to discuss about this pair. Here, Bill’s answer may raise an exhaustive implicature that only Ben witnessed the murder. This exhaustive meaning is derived under the combined

³ Von Stechow (2006:12) suggests that this as problems for Stalnaker’s ‘pretense’.

assumption that when Focus is assigned, it forms a domain of potential witnesses (Rooth 1992) and that maxim of quantity (Grice 1975) works.⁴

However, Focus does not always seem to require the formation of an explicit domain for a limited set of potential witnesses. For instance, let us assume the situation that Ann skimmed an article in the morning newspaper about a terrible murder and she wonders who witnessed it. When she asked who witnessed it as in (10), she does not have any specific set of people as a potential witness in mind. Bill's answer would not be different from the answer that he would have given had he and Ann had a specific set of people in mind as potential witnesses. That is, Bill's answer can take place in any context, whether the question targets a limited or an unlimited set of people. Here is an example of this conversation pair with *-nun*.

(11) Ann: *nwuka ku salin-ul mokkyek hay-ss-ni?*
Who the murder-Acc witness-do-Pst-Q
'Who witnessed the murder?'

Bill: *[BEN-UN] hay-ss-eyo.*
[BEN-Nun] do-Pst-Dec
'[B-AccBEN] did.'

Under the assumption that a presupposition denotes a proposition in the common ground, the fact that the answer with *-nun* is accepted means that its sentential presupposition is entailed by the common ground. The question is, then, what the

⁴ The process will be as follows: Under the assumption that Bill is a cooperative conversation partaker, if he does not provide other people except Ben for the information about who witnessed the murder, it would be because they did not do it. This process illustrates the generation of conversational implicature of Focus. In the generation of conversational implicature, the speaker 'Bill' assumed that the existence of some limited set of people is in Ann's mind, but he did not assume that Ann would have any information regarding them. That is, he did not presuppose any pre-knowledge regarding this information of the other interlocutor, Ann.

common ground would be when Ann asks a wh-question rather than making an assertion. What kind of knowledge do they share after Ann asks a question? What instantly comes to mind is the popular assumption that a wh-question has an existential proposition as its presupposition. That is, when Ann asks the above wh-question, she presupposes that there is someone who witnessed the murder. After Ann's utterance, Bill will know that Ann believes in the existence of a witness. If this is true, it becomes more mysterious since in (1), where there is an assertion of the existence of a witness, the *-nun* marked answer is not possible. In addition, it contradicts our intuition. According to our analysis, Bill's utterance in (11) tells us that he believes that Ann knows that someone other than Ben did not witness the murder. However, it is hard to believe that Ann has that content in mind when she asks who witnessed the murder.

The problem that a presupposition is not in common ground seems to undermine the argument that we have built thus far. However, at least a small piece of good news is that this problem has not been raised for the first time by our discussion. This problem has been recognized since Stalnaker first argued presupposition to be in common ground. The bad news is that even though this problem occurs in other discussions of presupposition, we still have difficulty in accounting for the different behavior of presuppositions which we observed between responses to assertions and responses to wh-questions.

The *-nun* examples that we have seen in the introduction had a felicity contrast. Could we possibly explain it as the same problem as whether or not accommodation is possible? According to the 'accommodation' explanation, presupposition, which was

originally suggested to be uninformative, can actually be informative, serving the function of context update: remember the phrase by Lewis that “context is tacitly updated without fuss”. This provides us with an optimistic view that we might account for why the answer *BEN-UN haysseyo* ‘BEN-UN did’ could be a good answer to a wh-question. The expected scenario would be that the presupposition of the sentence was accommodated to common ground accepted by the listener. Even though Ann did not assume that some person other than Ben, who she also knows, would have not witnessed the murder when she first asked the question, when she had to accept it as tacit information in her knowledge, the information updated her existing knowledge. This is the accommodation process in the listener’s epistemic aspect.

4.2.3 Informative Presupposition

We have confirmed that accommodation accounts for what is an apparent counterexample to the analysis of presupposition generated by *-nun* in the common ground such as in (7). In this section, I want to explore other types of examples where the function of accented *-nun* has a crucial role for the flow of discourse. The corresponding examples that I want to explore in Korean have been previously studied under the name of Contrastive Topic in Germanic languages. As I have previously mentioned, I am not going to argue that they are exactly corresponding structures. However, it is undeniable that they are very similar in their interpretations. Buring (1994, 1997) has provided a successful account for this construction in a semantic way. The approach we will take for Korean data will be a more pragmatic one. We will first study Buring’s semantic

approach for the English examples and move to the pragmatic approach for the same types of data that have been provided in the literature.

4.2.3.1 Semantic Account (Buring 1994, 1997)

In Buring (1994, 1997), these examples in English were accounted for in a semantic way, developed from Rooth's (1985, 1992) alternative semantics for Focus. Buring suggested that Contrastive Topic (S-topic in 1994) is a partial topic of a more comprehensive Discourse Topic (D-topic). As a partial topic, Contrastive Topic presupposes residual topics that are not explicitly acknowledged. Based on this idea and applying Rooth's alternative semantics of Focus, he introduces a Topic value to semantics. It is built up step by step from the ordinary semantic value. The ordinary value of a proposition 'The female pop-stars wore caftans' is a proposition itself as in (13).

- (12) A: What did the pop stars wear?
 B: The [_{B-Acc}female] pop-stars wore [_{A-Acc}caftans].

- (13) [The female pop stars wore caftans]^{O5} = The female pop stars wore caftans

On top of the ordinary semantic value, if focus semantic value is added, the proposition that contains a focal element has a value of a set of sets of propositions. So the focus semantic value of 'The [FEMALE]^F pop stars wore caftans' forms a set whose elements consist of various sentences with substitution of 'female pop stars' with other eligible alternatives such as 'male pop stars' or 'Italian pop stars' as given in the context.

- (14) [The FEMALE pop stars wore caftans]^F = {the FEMALE pop stars wore caftans, the MALE pop stars wore caftans, the ITALIAN pop stars wore caftans..}

⁵ The 'O' means the semantic value of an ordinary sentence, the 'F' means the semantic value of Focus, the 'T' means the semantic value of Topic.

Before Buring 1997, providing a satisfactory explanation was a big assignment for researchers, who tried to solve the difference between a focal element with a bridge contour and two falling accents. The only value that could be derived from these focal items was the focus semantic value to make a set of propositions. However, by introducing the Topic semantic value, the proposition that contains a rising and falling contour can be theoretically distinguished from the one that contains plain double foci, i.e. two falling accents. Buring formalizes a proposition that contains CT as a member of a set of sets of propositions in (15). In this system, Contrastive Topic, like Focus, introduces an alternative set. This does not contradict the previous theories but formalizes them in a more systematic way. Also it puts the interpretative function of Contrastive Topic on the same level as Focus.

- (15) [The FEMALE pop stars wore caftans]^F = {{the FEMALE popstars wore caftans, the MALE pop stars wore caftans, the ITALIAN pop stars wore caftans...}, {the FEMALE pop stars wore leggings, the MALE pop stars wore leggings, the ITALIAN pop stars wore leggings...}, {the FEMALE pop stars wore skirts, the MALE pop stars wore skirts, the ITALIAN pop stars wore skirts...}}

CT is interpreted in a similar way as Focus, having its own system of variable substitution and set formation. Buring's suggestion was made with reference to English B-accent. In English, the meaning of the above examples was indicated by an accent type, the rising contour of a pitch accent. The falling type of accent indicates an information structure category, Focus, and the other type indicates another type of information structure category, Contrastive Topic. In the semantic aspect, one forms a set of alternatives and the other one forms a set of sets of alternatives.

4.2.3.2 Unless Entailed, Either Be Informative or Be Relevant!

In this section, we will take a pragmatic approach to account for the appearance of accented *-nun* in various examples. Accommodation accounts for why a *-nun* marked sentence could be used as an answer in (11), which I repeat here.

(11) Ann: *nwuka ku salin-ul mokkyek hay-ss-ni?*
Who the murder-Acc witness-do-Pst-Q
'Who witnessed the murder?'

Bill: *[BEN-UN] hay-ss-eyo.*
[BEN-Nun] do-Pst-Dec
'[_{B-Acc}BEN] did.'

A couple of questions follow from the accommodation analysis. First, can accommodation account for why a *-nun*-marked answer always triggers the reading of a limited set of specific potential witnesses? Secondly, why did accommodation not occur in the assertion and response pair of 'someone-*Ben-un*' in (1)?

In answer to the first question, assume that Bill did not have a limited set of specific people in mind when he answered using *-nun* in (11). This would mean that he presupposes that some unspecified person did not witness the murder. The potential witness could be anyone in the world and to say that one of them did not witness the murder does not provide any information to the listener. It goes against the Maxim of Quantity (Grice 1975). We will have a more detailed discussion regarding this in section 4.2.4, especially, with an example (21).

As for the second question, I will develop the following account. When a speaker's utterance contains a presupposition despite the fact that he believes that it is not in the common ground, he must have a purpose for using it. The purpose is either to be

economic or informative. The economic purpose corresponds to the ‘my sister’ example of accommodation in (6). When it is obvious that no refutation is expected and the usage of the presupposition obeys the Maxim of Quality (say only truthful things), accommodation is planned and used by a speaker for economic reasons.

A speaker uses accommodation for an informative purpose when a presupposition helps a listener obtain requested information. For instance, let us assume a situation where Ann skims a morning newspaper and reads a title of a news article about a murder. If Ann asks to Bill the identification of a murderer after reading only the title, Bill would not obstinately use the presupposition triggering marker *-nun* if he is a cooperative conversation partaker. That is, the conversation in (11) is not a possible conversation in the situation we are assuming. Why? First, i) Bill knows that his presupposition is not in the common ground and second, ii) Bill knows that his presupposition neither helps to narrow down the answer nor does it imply the identification of the murderer since there is no limited number of candidates under consideration for the witness. That is, the ‘someone’ that corresponds to the Contrast Trigger to ‘Ben’ that has the property of not witnessing the murder is one of the unlimited unspecific people. There must be numerous people in the world who have not witnessed the murder. Therefore, the presupposition obtained by using *-nun* does not add any relevant information. The usage of *-nun* in this context is no more informative than the usage of a case marker. Based on these, after all, iii) the answerer knows that the accommodation process would not be able to update the common ground. Accommodation is possible only if it helps in economizing the conversation process or facilitating the effective update of common ground. In particular,

the accommodated presupposition triggered by the latter reason corresponds to the so-called *informative presupposition*.

Let us consider more cases of informative presupposition. Speakers know that their presuppositions as well as their assertions can serve the function of common ground update in some situations. They also know that the listener would recognize their intention as having the pragmatic purpose of common ground update. The following example (16) is also one of the cases where the usage of *-nun* is accepted to be felicitous by producing an informative presupposition.

(16)⁶ Chris: *Miwu-ka yangpok-ul sa-l kelako sayngkakha-ni?*
Minu-Nom suit-Acc buy-will that think-Q
'Do you think Minu would buy this suit?'

Dan: *kulssey, [NA-NUN] hwaksilhi an sa-lke-ya.*
Well, I-Nun certainly Neg buy-Fut-Dec.
'Well, [B-acc I] certainly wouldn't.'

In the conversation pair in (16), as for Chris's question about the possibility of Minu's purchase of a suit, Dan provides information about himself but not about Minu. As noted in the introduction, this apparently violates Question-Answer Congruence since Dan does not provide information that is required in the question but provides information that is actually not required. Why do we accept Dan's answer to be felicitous in the given context then?

⁶ This example is borrowed and translated from Buring's (1994, 1997) Contrastive Topic example in the following.

A: Do you think Fritz would buy this suit?

B: Well, [I]_{CT} certainly [wouldn't]_F.

By having *-nun* on the subject, Dan's sentence has a presupposition that someone other than I would buy the suit. For the presupposition to be informative, the set of alternatives of 'I' should be a limited set of people as noted in the 'newspaper reading and questioning' context. Under the assumption that Dan tries to be cooperative, the listener will try to get the most information that she can. If the alternative of 'I' is the salient one, which was mentioned in the preceding utterance, 'Minu', Dan's utterance would be evaluated to be most informative. In this conversation pair, the answer that Chris wanted is obtained from the implicit meaning of the sentence (= presupposition) but not from the overt meaning (= at-issue meaning). Someone might ask why Dan uses a presupposition but not an assertion to provide the information. There can be various reasons. He might not want to commit to the answer because he is not sure about the information. Speakers may prefer indirect answers to direct answers in order to avoid complication or trouble, or they may just want to be polite. An example utilizing presupposition as an answer to avoid complication or an embarrassing situation is provided in (17).

(17) Eric: *neuy pwuin-i talun namca-lang kissu-hay-ss-ni?*
 Your wife-Nom other men-with kiss-do-Pst-Q?
 'Did your wife kiss other men?'

Fred: *WULI PWUIN-UN talun namca-lang kissu ANH-HA-CI.*
 My wife-Nun other men-with kiss Neg-do-Dec.
 'My wife didn't kiss other men (but who knows about other wives?).'

The answers of these questions in (16) and (17) are provided by the presupposition of the sentence but not from the at-issue meaning. Therefore, if presupposition is not generated from the sentence, it is predicted not to be a felicitous

answer. The prediction turns out to be right in the following pair, which has the case marker *-ka* that does not generate any presupposition.

- (18) Chris: *Minwu-ka yangpok-ul sal ke-lako sayngkakha-ni?*
Minu-Nom suit-Acc buy will-that think-Q
'Do you think Minu would buy this suit?'

Dan: #*kulssey, [NAY-KA] hwaksilhi an sa-lke-ya.*
Well, I-Nom certainly Neg buy-Fut-Dec.
'Well, [_{A-acc} I] certainly wouldn't.'

- (19) Eric: *neuy pwuin-i talun namca-lang kissu-hay-ss-ni?*
Your wife-Nom other men-with kiss-do-Pst-Q?
'Did your wife kiss other men?'

Fred: #*WULI PWUIN-I talun namca-lang kissu AN-HAY-SS-E.*
My wife-Nom other men-with kiss Neg-do-Pst-Dec.
'My wife didn't kiss other men.'

Let us study another type of data that prefers the *-nun* marked answer, (20), to the case marked counterpart. This conversation, which has been originally discussed from Buring's Contrastive Topic example (12), is familiar to us now.

- (20) Harriet: *kaswutul-i mwue ip-ess-e?*
Popstars-Nom what wear-Pst-Q?
'What did the pop stars wear?'

Ignatz: [*YECA KASWUTUL-UN*][*KAPUTAN-UL*]*ip-es-se.*
Female singers-Nun caftan-Acc wear-Pst-Dec.
'The [_{B-Acc} female]_{CT} popstars wore [_{A-Acc} caftans].'

Buring (1994, 1997) pointed out that even though the answer is not complete but provides only partial information, the answer is felicitous. In the Korean example in (20), *-nun* is used. The overt answer in this case provides at least partial information unlike the examples of 'suit' and 'wife's kiss'. In terms of the quantity of information, it is not a good enough answer.

We have implicit information as well as the explicit information of ‘pop stars’ by having a presupposition. The ‘female pop stars’ will form a limited set of alternatives by the requirement of *-nun*. The presupposition provides information that at least one alternative in this set wears different clothing from caftan. Under the assumption that Ignatz is a cooperative speaker, the alternative corresponds to ‘male singers’. Overall, Ignatz provides information that the female pop stars wore caftans and males wore something other than caftans, though he may have incomplete information (he may not know exactly what the male singers wore but at least he knows that they wore different clothing from the females). In this situation, if using a case-marker delivers information about only ‘female pop stars’, about which he has the complete information, he omits his partial knowledge about the male pop stars. When he uses *-nun*, he provides the most information that he has despite of its incompleteness, thereby he is faithful to the conversational maxim, especially the maxim of quantity: provide as much as possible! (in Grice’s wording).

4.2.4 Supplemental Information

Now we come back to our original example that motivated us to think of accommodation: the wh-question and answer pair. I have suggested that an answer to a wh-question can have a *-nun* marked answer since accommodation is possible, but we have not examined how accommodation actually works here. I repeat the example in (21). Since now we know that for the informative usage of presupposition by *-nun*, the formation of a limited set of alternative is necessary, I will add the limited set of people to the context for a more natural conversation flow.

- (21) [context] Ann is suspicious of Ben, Carl, and Diane about witnessing a murder since they were guarding the place where the murder happened.

Ann: *enu kyengpiwen-i ku salin-ul mokkyek hay-ss-ni?*
Which guardian-Nom the murder-Acc witness-do-Pst-Q
'Which guardian witnessed the murder?'

Bill: *[BEN-UN] hay-ss-eyo.*
[BEN-Nun] do-Pst-Dec
'[B-accBEN] did.'

- (22) [context] Ann is suspicious of Ben, Carl, and Diane about witnessing a murder since they were guarding the place where the murder happened.

Ann: *enu kyengpiwen-i ku salin-ul mokkyek hay-ss-ni?*
Which guardian-Nom the murder-Acc witness-do-Pst-Q
'Which guardian witnessed the murder?'

Bill: *[BEN-I] hay-ss-eyo.*
[BEN-Nom] do-Pst-Dec
'[A-accBEN] did.'

Bill straightforwardly provides the answer in the at-issue meaning of his sentence different from the 'suit' and 'wife' conversation of Chris and Dan. Also, different from the 'pop star' example, Bill provides the complete answer. He provides the necessary information in his at-issue meaning and thus, one might be doubtful as to whether the presupposition here is necessary. In other pairs where its presupposition is the source of information, the alternation with a case marker does not form a felicitous discourse. However, as we have seen in (22), the case marker alternative *Ben-i* also makes a felicitous answer and actually it is the preferred one. The success of accommodation here means either the presupposition is economizing the context or is informative. It does not seem to economize the context by providing more information than the sentence with a case marker. The information provided by the presupposition here is supplementary

information. The presupposed information may not be necessary in the sense that it was not exactly required by the preceding question. However, the presupposed information is relevant to what has been requested since the information is about the alternatives who are all potential witnesses. Ann is concerned with whether the alternatives have witnessed the murder. Since both Ann and Bill have a limited set of people, the three guardians, under consideration as potential witnesses, the presupposed information is informative and functions as supplemental information. It is no harm to add some supplemental relevant information using *-nun*. Compare the following example to (21). This will show a clear comparison between informative presupposition and supplemental presupposition.

- (23) [context] Ann is suspicious of Ben, Carl, and Diane about witnessing a murder since they were guarding the place where the murder happened.

Ann: *enu kyengpiwen-i ku salin-ul mokkyek haci-an-ass-ni?*
 Which guardian-Nom the murder-Acc witness-do-Neg-Pst-Q
 ‘Which guardian has not witnessed the murder?’

Bill: *[BEN-UN] hay-ss-eyo.*
 [BEN-Nun] do-Pst-Dec
 ‘[B-accBEN] did.’

- (24) [context] Ann is suspicious of Ben, Carl, and Diane about witnessing a murder since they were guarding the place where the murder happened.

Ann: *enu kyengpiwen-i ku salin-ul mokkyek haci-an-ass-ni?*
 Which guardian-Nom the murder-Acc witness-do-Neg-Pst-Q
 ‘Which guardian has not witnessed the murder?’

Bill: *#[BEN-I] hay-ss-eyo.*
 [BEN-Nom] do-Pst-Dec
 ‘[A-accBEN] did.’

We slightly changed the context here from the example (21) and (22). Ann has a negative question. The answer remains the same. In (23), the answer has the

presupposition that either Carl or Diane, or probably both of them, have not witnessed the murder. The assertion states that Ben and probably only Ben witnessed the murder, which is not the requested information. Here, thus, the source of required information is from the presupposition, not from the assertion. Unlike the minimally contrasted previous pair in (21), the presupposition of the answer in (23) is necessarily informative. In case the presupposition is necessarily informative, the case-marked counterpart would be infelicitous since it does not obtain the necessary information due to the lack of presupposition. We predict then that the answer with a case marker would not be allowed and the prediction turns out to be right in (24). In fact, analyzing the conversation in (24), we can find that the sentence ‘Ben witnessed the murder’ does not provide information about who did not witness the murder.

In this section, we have studied how cases where a presupposition of a sentence is not in the common ground are allowed in various discourse contexts. It turned out that the permitted cases had informative presuppositions either necessarily or supplementarily.

4.2.5 Interaction between Implicit Propositions

The question that we have not discussed so far is whether the usage of *-nun* is affected by implicit propositions (= non-at-issue meanings) of a preceding utterance. We have seen that the usage of *-nun* in a discourse reflects the epistemic state of the common ground at the moment when the *-nun* marked utterance is produced. Since a non-at-issue meaning is also added to the common ground as an at-issue meaning, the usage of *-nun* will be affected by the non-at-issue meanings of the previous utterance. Consider the following examples.

(25) Ann: He was murdered in Laurel Canyon around 2 AM.
nwuka ku salin-ul mokkyek hay-ss-keyss-ni?
who dem murder-Acc witness do-Pst-modal-Q?
'Who would have witnessed the murder?'

Bill: a. BEN-UN did. (Preferred)⁷

Bill: b. BEN-I did.

(26) Ann: He was murdered.
nwuka ku salin-ul mokkyek hay-ss-ni?
who dem murder-Acc witness do-Pst-Q?
'Who witnessed the murder?'

Bill: a. BEN-UN did.

Bill: b. BEN-I did. (Preferred)

The contrast of these two pairs is not as obvious as the previous examples. In (25), the speaker Ann is pessimistic about the existence of a witness whereas she does not have such a negative connotation in (26). The speaker's pessimism is not expressed in an overt way using a negative marker. Rather she uses an indirect means of expression. She expresses negative implicature using the modal expression 'would have', which corresponds to *-keyss-* in Korean. Ann's utterance is apparently in the form of a question, by having *-keyss-*, it is a rhetorical question. Being a rhetorical question, Ann's question in (25) prefers the answer with *-nun* to the answer with a case marker.

The preference for the type of the answer of (26) is clearly different from (25). Example (26) is a neutral wh-question without any implicature and it prefers a neutral answer with a case marker for the reasons laid out in section 4.2.4. Although one might want a semantic/pragmatic analysis of rhetorical questions to explain the interaction between the rhetorical question and the answer, let us assume that rhetorical questions

⁷ Since this sentence has been repeated several times, for convenience, I specify only the markers in Korean.

have a negative implicature that is lacking in neutral questions and not discuss the analysis of the rhetorical question itself (Romero and Han 2002). The conclusion that we can get from the above contrast cannot be accounted for without the pragmatic account of *-nun* in a discourse. In the following example, Ann's utterance has a different type of non-at-issue meaning from the above example (23). Consider the following examples.

(27) Ann: *John-man ku salin-ul mokkyek-hay-ss-e.*
 John-only that murder-Acc witness-do-Pst-Dec.
 'Only John witnessed the murder.'

Bill: *sasil, BEN-I hay-ss-eyo.*
 In fact, BEN-NOM do-Pst-Dec.
 'In fact, [A-AccBEN] did.'

(28) Ann: *John-man ku salin-ul mokkyek-hay-ss-e.*
 John-only that murder-Acc witness-do-Pst-Dec.
 Only John witnessed the murder.

Bill: *#sasil, BEN-UN hay-ss-eyo.*
 In fact, BEN-NUN do-Pst-Dec.
 'In fact, [B-AccBEN] did.'

When Ann's sentence contains *-man* 'only', she means two propositions out of a single sentence: one is called *prejacent implication* in Roberts (2006), 'John witnessed the murder', and the other one is called *exclusive implication*, 'No one except John witnessed the murder'. As for the exclusive implication, it is generally assumed to be an entailment of the sentence. However, for the prejacent meaning, still controversial debates about it seem to be going on. In any case, both prejacent and exclusive entailment are the meanings derived from the sentence of Ann's in (27) and (28).

- (29) *John-man ku salin-ul mokkyek-hay-ss-e.*
John-only that murder-Acc witness-do-Pst-Dec.
'Only John witnessed the murder.'

- a. the prejacent meaning: John witnessed the murder.
- b. the exclusive meaning: Nobody except John witnessed the murder.

When Bill asserted 'Ben did', it disproves both the prejacent and exclusive meaning of Ann's utterance. When an assertion denies both the prejacent and the exclusive meaning, the conversation flow is felicitous. However, infelicity occurs in the answer with *-nun* as in (28). Let us confirm the meaning of the answer of (28).

- (30) BEN-*UN* witnessed the murder.
- a. the at-issue meaning: Ben witnessed the murder.
 - b. the existential presupposition: There is someone other than Ben who did not witness the murder.

The at-issue meaning of this sentence disproves both propositions of Ann's sentence. Since the at-issue meaning in (28) is exactly same as the felicitous pair in (27), what causes the infelicity in (28) must be the existential presupposition. The way to solve this problem is to find the part of the preceding utterance that the existential presupposition is incompatible with. Bill's existential presupposition is not compatible with the exclusive meaning of Ann, which is in the common ground after Ann's utterance. Since the exclusive meaning is in the common ground, the presupposition of the following utterance should be entailed by it. However, having the restriction of 'except John' in (29b), the exhaustive meaning (29b) cannot entail the existential presupposition (30b).

One might ask whether accommodation is possible here. The answer is that accommodation of the presupposition (30b) is not possible. For the accommodation to be

successful, it should be informative. For the proposition to be informative, the variable ‘someone’ must be filled by the most salient alternative, ‘John’, in this discourse context. The ‘someone’ in the presupposition (30b) refers to John, the presupposition makes an assertion refuting the proposition that John witnessed the murder. That is, filling the variable of ‘someone’ in the presupposition results in making the presupposition assert something. An assertion cannot be expressed in the form of a presupposition. This process causes the failure of the usage of *-nun* in this answer. We can compare this pair to the following pair where the presupposition of Bill’s sentence is entailed by Ann’s non-at-issue meanings, i.e. the propositions in the common ground.

(31) Ann: *John-man ku salin-ul mokkyek-hay-ss-e.*
 John-only that murder-Acc witness-do-Pst-Dec.
 ‘Only John witnessed the murder.’

Bill: *sasil, [BEN-TO] hay-ss-e.*
 In fact, BEN-ALSO do-Pst-Dec.
 ‘In fact, also [BEN] did.’

The particle, *-to* ‘also’, generates additional propositions besides an at-issue meaning. The presupposition of *Ben-to* is that there is some person other than Ben who witnessed the murder. In the given discourse, for the presupposition to be in the common ground, it takes the most salient alternative, which must be ‘John’. Then, the presupposition of *Ben-to haysse* ‘Ben also did.’ in (31) becomes ‘John witnessed the murder’, which is entailed by the propositions in the common ground: 1) John witnessed the murder, and 2) No one except John witnessed the murder. Therefore, the conversation in (31) can be felicitous.

4.3 Summary

As we have observed so far, the usage of *-nun* is intimately related to the pragmatic stage of a discourse context and the interlocutors' epistemic state at the moment of the utterance. Thus, it is not surprising that *-nun* has been recognized as the direct indicator of Topic or Contrastive Topic. However, in this chapter following the previous one where I argued it is not, I have shown that the effect that *-nun* exhibits in contrast with case marking in a subtle context needs more explanation than merely attributing it to the difference between a Topic and a non-Topic phrase. I have accounted for them through the behavior of an existential presupposition generated by *-nun*. In this paradigm, we do not need special stipulations to account for the pattern that *-nun* exhibits in contrast to case markers. Once we have established that the function of accented *-nun* as generation of a presupposition, we use only theories that exist for independent reasons, such as accommodation, to account for the accented *-nun* in a discourse.

In the next chapter, we will move on to another topic, unaccented *-nun*. Unaccented *-nun* exhibits quite different properties from accented *-nun*. Because of the interpretational and behavior discrepancy, these two have been treated as independent particles or as having independent functions. We will investigate whether they are really independent. Also, if not, what would be the unified analysis for them and how could each version of *-nun* be established by the analysis.

Chapter5

The Analysis of Unaccented *-nun*

In the last two chapters, I have argued that the presence of *-nun* influences discourse felicity but not via Focus or Topic. The discourse effect of accented *-nun* depends on the success of accommodation of the presupposition contributed by *-nun*. By rejecting the characterization of *-nun* as a Topic marker, we can successfully capture the point that not all Contrasters need be Contrastive Topics.

The data that we have covered so far have all involved an accent, i.e. so-called contrastive *-nun*. The general treatment of *-nun* and *-wa* in Korean and Japanese linguistics respectively is to distinguish contrastive *-nun* and *-wa*, which are thought to mark Contrastive Topic, from non-contrastive *-nun* and *-wa*, which are thought to mark Thematic Topic, i.e. what the sentence is about. I repeat the examples of two types of *-nun*.

- (1) *Minwu-nun UCLA-uy haksayng-i-ta.*
Minu-Nun UCLA-Gen student-be-Dec
'(As for Minu), Minu is a UCLA student.'
- (2) [*MINWU-NUN*] *UCLA-uy haksayng-i-ta.*
[MINU-NUN] UCLA-Gen student-be-Dec.
'[MINU] is a UCLA student (but not other people).'

‘Minu’ in (1) corresponds to a sentential Topic while in (2), in addition to expressing what the sentence is about ‘Minu’, ‘Minu’ exhibits a contrastive relation with alternatives. However, I suggested in chapter 2 that what correlates with ‘aboutness’ Topichood is the syntactic position in which ‘Minu’ is placed in both sentences. As an alternative analysis of *-nun*, in Chapter 3, I suggested that *-nun* generates implicit proposition(s). This claim has been presented in the investigation of the Contrast meaning derived from an accented *-nun* marked item. In this chapter, I will study the unaccented version of *-nun*. Contrary to the conventional treatments, I will maintain that the function of unaccented *-nun* is the same as the one that I have suggested for the accented version.

In this chapter, I will illustrate three properties of unaccented *-nun*: specificity, genericity, and being cognitively active. I will argue that it is *-nun*’s existential presupposition that accounts for these three effects. However, these properties are easily confused with the concept of Topic. In order to clarify the issues, I will distinguish the definition of Topic from the above properties of *-nun* by adopting Gundel’s (1988, 1998, 2003a, 2003b) distinction of two types of ‘givenness’. This will be discussed in detail in section 5.3.

Before that, I will first confirm what kind of meaning is generated by unaccented *-nun* based on the proposed meaning of *-nun* in Chapter 3. This will be done by subtracting the meaning generated by an accent from the accented version of *-nun*. Having the proposal in mind, we will explore the linguistic data of unaccented *-nun*. It starts from the studies on unaccented *-wa*, which has rich literature. I will review Heycock’s (2007) analysis of unaccented *-wa* and point out some shortcomings.

This chapter is an exploratory chapter that tries to explain two types of –*nun*'s in a unified way. Due to the character of *-nun* as a discourse item, the discussion may leave loose ends, which will be good future research topics.

5.1 Unaccented –*nun* Equals Accented –*nun* Minus an Accent

I will first confirm the function of unaccented *-nun* before observing the properties that unaccented *-nun* exhibits. The first task is to derive the function of unaccented *-nun* from accented *-nun* since the meaning of Contrast generated by *-nun* is not merely the combination of the function of *-nun* and focus represented by an accent. They are interactive. Recall that accented –*nun* generates two additional propositions besides the at-issue meaning as follows.

- (3) The meaning of the accented *-nun*
 - i. Presupposition of the existence of an alternative which differs minimally from the Contraster
 - ii. Implicature of the non-existence of an alternative which does not differ from the Contraster

The existential presupposition in (3i) and the exhaustive implicature in (3ii) require a Focus alternative set. In the absence of Focus, these meanings cannot be informative. Thus the exhaustive implicature cannot be part of the meaning of unaccented *-nun*.

As for the existential presupposition, let us consider the above two examples, (1) and (2). In the case of accented *-nun*, the focus on the –*nun* marked item makes it possible for *-nun* to be a focus sensitive operator and interact with the following Focus, completing the contrastive relation with an alternative. For instance, in (2), 'Minu' is

focused, which means that *Minu* is an element of a limited set such as {*Minu*, *Mina*, *Mini*} and as a Contraster, there is at least one of *Minu*'s alternatives who is not a UCLA student. In the unaccented version in (1), the lack of an accent bears two results: 1) there is no specified set of alternatives to '*Minu*' and 2) there is no interaction between the two Focuses (i.e. Contraster and Contrast Trigger) due to the lack of Focus in the *-nun* marked item (i.e. Contraster). The first result makes an alternative for '*Minu*' be anyone in the world. That is, by lacking the quantified domain of a (limited) set of alternatives, the presupposition cannot be informative in a discourse as it is in the accented version¹ (see the discussion in section 4.2). Accordingly, accented *-nun* and unaccented *-nun* achieve different effects in the content aspect of information. The second result causes the *-nun* marked item to interact with the following *verum* Focus. The role of following Focus on the positive polarity operator is to specify the predicate of the Contraster, '*Minu*' in (2) as to be a student of UCLA, being distinguished from other students whose predicate is 'not being a student of UCLA'.

Since there is no linguistically specified alternative to the Contraster, the meaning of *-nun* without an accent is thus merely the existential presupposition of a marked item and at least one more element. The basic meaning of *-nun* would be roughly described as follows.

(4) The meaning of *-nun* without an accent

The existence of a *-nun* marked item and at least one other element which is an alternative to it is presupposed.

¹ Recall the example of 'newspaper reading' context in 4.2.2. It has been noted that without the existence of limited set of alternatives, accommodation of the presupposition is not informative.

When a speaker uses *-nun*, he presupposes that the non-empty set is already in the common ground. Having this in mind, we will observe the characteristic patterns that *-nun* exhibits and examine whether the analysis here can account for the pattern in section 5.3.

5.2 Heycock's Analysis (1993, 2007) and its Shortcomings

In this section, I will introduce Heycock's (1993, 2007) analysis of Japanese unaccented *-wa* that directly associates it to marking Thematic Topic. She begins by accounting for the following examples.

- (5) *John-wa gakusei desu.*
John-wa student is
'Speaking of John, he is a student.'
- (6) *John-ga gakusei desu.*
John-Nom student is
'[FJOHN] is a student.'
- (7) *John-wa kita.*
John-wa came
'Speaking of John, he came.'
- (8) *John-ga kita*
John-Nom came
'John came'

Heycock (1993, 2007) and Shibatani (1990) try to provide accounts for the contrast between the above pairs. They note that when a subject with a nominative case marker combines with an individual level predicate as in (6), it has an exhaustive meaning while this is not the case with a stage level predicate in (8).² The relation

² They do not note any other property that the subject in (6) has such as whether the presence is obligatory or not when the exhaustive reading appears. The question may be raised as to whether a subject with an individual level predicate has an exhaustive reading even without being accented (= focused) or whether

between the respective readings and predicate type are attributed to structural properties, not morphological marking. Instead, the morphological marking is thought to have an indirect relation to the meaning. To make an argument for the indirect relation of morphological marking and predicate type, Heycock (1993, 2007) makes the following assumptions.

- (9)
- I. Nominals, but not predicates, that are topics must be marked with *-wa*.
 - II. Every sentence, but not every clause, must have a topic (whether overt or null).
 - III. Topics and foci are necessarily disjoint (this follows from Vallduví's definition of topic/LINK and focus, to be discussed below).
 - IV. Stage level predicates, but not individual-level predicates, have a Davidsonian event argument that is available as a topic.

Combining the above hypotheses with the property of each predicate type, Heycock accounts for why nominative case marking cannot avoid getting a narrow focus reading when it is combined with an individual level predicate in (6). The following is her reasoning why *John-ga* obtains an exhaustive meaning in (6) based on her assumptions in (9).

In (5), *-wa* indicates that 'John' is the Topic of the sentence. It is the same in the reading of (6). Having 'John' as Topic in (5) and (6) does not pose a problem in understanding John as a Thematic Topic. Since Topic and Focus are necessarily disjoint (assumption 9III), the predicate is always assumed to be the Focus in this type of sentence. According to Heycock's assumption (9II), there must be a Topic in this

focus is enforced in this combination of a subject and a specific type of predicate. This will be accounted for in the explanation of Heycock's analysis.

sentence. According to her hypothesis (9I), if a NP were a Topic, it would have *-wa*, therefore, the only NP in (8), 'John', cannot be a Topic. However, the predicate has a Davidsonian event argument, being a stage level predicate, and thus is eligible to be the Topic. Therefore, the subject of a stage level predicate can correspond to Focus and the whole sentence can, too. However, an individual level predicate lacks an event argument which is eligible to be a potential Topic. The only possible candidate for Topic in this sentence is a predicate. Of course, for this to be possible, Heycock has to have an additional postulation that a predicate as well as a nominal phrase is eligible to be a Topic. Assuming the predicate is a Topic, the whole sentence cannot be focused since Focus and Topic are disjoint (assumption (9IV)). Therefore, the subject *John-ga* always has narrow Focus reading.

Summing up, Heycock denies a direct correlation between a nominative case marker and Focus. I agree that a nominative case marker does not function as a Focus marker. Avoiding the directly stipulated connection between the marking and the reading, Heycock's proposal describes well how a nominative case marker can obtain an exhaustive reading (the narrow Focus reading) in an indirect way. Instead, she suggests the strong bond between *-wa* and Topichood. If all the assumptions in (9) are confirmed to be true, it would be an insightful generalization.

However, I have to raise questions regarding her assumptions. In fact, the first assumption in (9) that every nominal Topic must be marked with *-wa* is too strong. We can easily produce a Topic phrase with a nominative case marker given an appropriate context. The correlation of subject marking with the following predicate is a tendency but

not an absolute property. The tendency can be changed anytime if a proper context is given. Consider the following examples.

(10) With an Individual level predicate

A: Tell me about Mr. Ahn.

a. B: *Ahn sensayngnim-un SNU-uy kyoswu-ya.*
Ahn Mr-*Nun* SNU-Gen professor-Dec.
'Mr. Ahn is a professor of SNU.'

b. B': *Ahn sensayngnim-i SNU-uy kyoswu-ya.*
Ahn Mr-*Nom* SNU-Gen professor-Dec.
'Mr. Ahn is a professor of SNU.'

(11) With a stage level predicate

A: Tell me what you saw about Mr.Ahn.

a. B: *Ahn sensayngnim-un SNU-lul ttwie taniko iss-ess-e.*
Ahn Mr-*nun* SNU-Acc jump around be-Pst-Dec.
'Mr.Ahn was jumping around SNU.'

b. B': *Ahn sensayngnim-i SNU-lul ttwie taniko iss-es-se.*
Ahn Mr-*Nom* SNU-Acc jump around be-Pst-Dec.
'Mr.Ahn was jumping around SNU.'

A contradiction of Heycock's generalization (i) that *-nun* must attach to a Topic argument is easily demonstrated in (10b). Usually 'tell me about X' is diagnostic as a sentence that generates a Topic in the following sentence. One might argue that what Heycock defines as a Topic might be defined in a different way from the Topic generated by 'tell me about X'. But it is closest to what Heycock adopts as Topic which corresponds to LINK in Vallduvi (1992). Here is the relevant citation from Heycock (2005) about her idea of what Topic is.

- (12) “Vallduvi’s notion of link embodies in a quite direct way the intuition that sentence topic is what the sentence is ‘about.’...The link points to a specific file card where the (new) information carried by a given sentence is to be entered.”

Heycock’s notion of Topic (= LINK) exactly corresponds to *An sensayngnim* ‘Mr.Ahn’ in the above sentence. Therefore, the assumption (9I) must be too strong. The Topic phrase can actually be expressed by both *-nun* and nominative case marker *-i/-ka* under the proper context. Still, however, without a context, the sentences with *-nun* and *-ka* hold true of the observation that Kuno and Heycock made. This raises two questions. First, how can the tendency of interpretational differences depending on subject markings and predicates that appeared in (5)-(8) be accounted for? Second, if *-nun* marks Topic, why does the context not stimulate the exclusive usage of *-nun* for a Topic item but instead, allows free variation of markers?

5.3 Three Characteristics Of *-nun* To Be Related To Referential Givenness

In this section, I will illustrate three characteristics of the behavior of *-nun*: specificity, genericity, and being cognitively active. When these properties are illustrated as an alternative analysis of marking topic, the properties of *-nun* and concepts of Topic may cause confusion since the term ‘Topic’ itself sometimes embraces the properties mentioned for *-nun*. However, the term ‘Topic’ used for the arguments of *-wa* and *-nun* in the literature does not embrace the properties mentioned above.

In order to avoid confusion and distinguish the properties of *-nun* from the concept of Topic adopted in the *-nun* and *-wa* literature, I will introduce Gundel’s idea of two types of ‘givenness-newness’. He argued that confusion regarding the term ‘Topic’ was derived from conflating two types of givenness under the single term ‘Topic’. After

illustrating his division of two types of givenness, which he calls ‘relational’ and ‘referential’, I will suggest that the properties of *-nun* corresponds to the latter (referential givenness).

5.3.1 Gundel’s (1988, 1999, 2003) Referential and Relational Givenness

The terminological vagueness of Topic has been a longstanding problem, lacking a consensus as to its definition. Gundel (1988, 1999, 2003a, 2003b) notes that despite the terminological problem of Topic, there is at least some agreement that the definition of Topic and Focus are related to the division of given and new information. He distinguishes two logically independent senses of ‘givenness-newness’, one referential and the other relational. He argues that the conflation of these two types of ‘givenness-newness’ is the cause of numerous definitions of Topic and Focus in slightly different ways. His distinction is based on what the linguistic literature has defined for Focus, Topic, or the cognitive status of discourse referents.

In Gundel's sense, the relational givenness-newness division reflects a partition of a sentence into two complementary parts in a way similar to the division of subject and predicate. The relational givenness-newness division corresponds to the division of Topic and Focus in the following ways in the literature: psychological (or logical) subject-psychological predicate (van der Gabelenz 1868), Topic-Comment (Gundel 1974, 1989, Reinhart 1981), Presupposition-Focus (Chomsky 1971, Jackendoff 1972, 2000), Theme-Rheme (Kuno 1972, Vallduvi 1992). The general usage of the term Topic (or Theme) mostly corresponds to relational ‘givenness’ and the term Focus (or Comment) corresponds to relational ‘newness’.

In the literature, when *-nun* and *-wa* are thought to indicate Topic, the Topic corresponds to relational ‘givenness’ (as a Theme or ‘aboutness’ Topic in Kuno (1972), Hoji (1985), Shibatani (1990), Heycock (1993, 2007), Vermulen (2008) among many others).

In contrast to relational givenness-newness, referential givenness-newness concerns the relation between a linguistic expression and a corresponding (conceptual) entity in (a model of) the speaker’s/hearer’s mind, the discourse, or some real or possible world. The concepts that Gundel takes as illustrating referentially given-new information correspond to Existential Presupposition (Strawson 1964), referentiality and specificity (Fodor and Sag 1982, Enç 1991), the familiarity condition on definite descriptions (Heim 1982), the accessibility level of Ariel (1988), the activation and identifiability status of Chafe (1994) and Lambrecht (1994), and the familiarity scale of Prince (1981) among others. I will refer to the referential sense of given information as ‘topic’ with a lower case ‘t’.

I reject the general premise of the one-to-one mapping of *-nun* and *-wa* marked constituents to the category of ‘givenness’ (Topic) in the relational sense. Rejecting this premise, I suggest the *-nun* is related to referential givenness (‘topic’). One of the advantages of this treatment is that the independently stipulated function of *-nun* in the accented version can extend its application to account for the unaccented version. Even though this connection cannot draw a complete and clear picture of the relation between two versions of *-nun*, it will reinforce the idea that they cannot be two separate morphemes.

By attributing the relational sense of topic to syntactic position and morphological marking by *-nun* to the referential sense, we can clarify the informational system of marking. This can also be evidence for the analysis of Gundel by presenting a case of the overt marking of Gundel's referential/relational distinction, a type of marking that is missing in English. In the following, I will illustrate three properties of *-nun*, all of which can be embraced under the term 'referential givenness'.

5.3.2. Three Properties of *-nun*

5.3.2.1 Specificity

When we connect *-nun* to the properties of referential 'givenness', the first question raised would be whether 'referentially given' means 'given in a discourse context'. For an NP to be 'referential' in a discourse is usually understood as being related to 'definiteness' or 'specificity'.

Regarding 'definiteness' in Heim's theory, NPs carry a pair of indices that connect the NP to its referent. If the indices find the NP's corresponding referent previously introduced from the discourse, according to the Familiarity Condition and Novelty Condition,³ the NP is definite. Consider the following example. I have slightly transformed the test that Enç (1991) used to show the specificity of Turkish case-marked objects from the un-specificity of non-case marked ones.

- (13) a. *tay yeses aitul-i pang-ulo tulew-ass-ta.*
 five six children-Nom room-to enter-Pst-Dec.
 'Five to six children entered the room.'

³ **The Novelty-Familiarity Condition**

Suppose something is uttered under the reading represented by ϕ , and the file prior to the utterance is **F**. Then for every NP_i in ϕ , it must be the case that: $i \in \text{Dom}(\mathbf{F})$ if NP_i is definite, and $i \notin \text{Dom}(\mathbf{F})$ if NP_i is indefinite. Otherwise, the utterance is not felicitous under this reading.

- b. (**ku*) *twu sonye-lul nay-ka alko iss-ta.*
(*the) two girl-Acc I-Nom know be-Dec
'I know the two girls.'

In the above example, the subject in (13b) has a demonstrative *ku*. In Korean, which does not have a definite article and whose bare noun is ambiguous between indefinite and definite meanings, a demonstrative *ku* clearly forces the definiteness meaning. The phrase *ku twu sonye* 'the two girls' does not have a corresponding referent in (13a), and thus, the sentence (13b) is not good with the demonstrative. In fact, omitting the demonstrative can save this sentence in two different ways: in one reading the bare NP, 'two girls', is still related to the 'five to six children' and in the other reading, the girls are a completely independent group from the previously introduced group of children. This means the absence of 'definiteness' does not completely rule out a referring relation among NPs. It can make 'five to six children' eligible for association with 'two girls'.

Enç (1991) calls this property 'specificity', which should be distinguished from 'definiteness'. Enç relates both definiteness and specificity to their 'linking' to previously established discourse referents. The property that they are not novel must be their common property. She finds the distinguishing factor between them to be the nature of the linking. The linking relation of 'definiteness' requires the item to be *identical* to its referent, whereas that of 'specificity' is weaker and looser. She identifies the nature of the linking of specificity as *inclusion*. She calls the antecedent of a definite NP a *strong antecedent* and the antecedent of a specific NP a *weak antecedent*. However, in many cases, it is not possible to posit independent strong and weak antecedents since the strong

antecedents entail weak ones: inclusion is entailed by identity. The distinction between specificity and definiteness explains the independent need of the Novelty Condition and the Familiarity Condition although, apparently, these two conditions sound like different names for a single phenomenon. Specificity requires obedience to the Novelty Condition and Definiteness requires obedience to the Familiarity Condition.

In the following examples where the subjects of the (b) sentences exclude definiteness by not having a demonstrative, the distinction between ‘having definiteness’, ‘having specificity’, and ‘being new’ (Enç 1991) will be clarified. Each example in the following consists of three consecutive sentences. The sentences in (15) make a coherent discourse while those in (14) do not.

- (14) a. *myechmyech aitul-i pang-ulo tulew-ass-ta.*
 several children-Nom room-to enter-Pst-Dec.
 ‘Several children came into the room.’
- b. *twu sonye-nun nay-ka alko iss-ta.*
 two girl-Nun I-Nom know be-Dec.
 ‘I know two girls (among them).’
- c. *#ku sonyetul-i pang-ulo tule oci ahn-ass-ta.*
 the girls-Nom room-to enter come Neg-Pst-Dec
 ‘The two girls did not enter the room.’
- (15) a. *myechmyech aitul-i pang-ulo tulew-ass-ta.*
 several children-Nom room-to enter-Pst-Dec.
 ‘Several children came into the room.’
- b. *twu sonye-lul nay-ka alko iss-ta.*
 two girl-Acc I-Nom know be-Dec.
 ‘I know two girls.’
- c. *ku sonyetul-i pang-ulo tule oci ahn-ass-ta.*
 the girls-Nom room-to enter come Neg-Pst-Dec
 ‘The two girls did not enter the room.’

In both examples, the *ku sonyetul* ‘demonstrative girls’ in the (c) sentences, having a demonstrative *ku*, must refer to the two girls in the second sentence. In the first example (14), the subject of the second sentence (14b), *twu sonye-nun* ‘two girls-*nun*’ that is the co-referent of the ‘two girls’ in the third sentence, is read as a part of ‘several children’ in the first sentence. Accordingly, the third sentence is contradictory in this case since the ‘two girls’ that it refers to should be part of the several children who came into the room.

In (15), the object, ‘two girls’, of the second sentence (15b) has an accusative case marker. The ‘two girls’ in (15b) could mean either the two girls in the group who entered the room or an independent group of two girls from the previously introduced group of several children who entered the room in (15a). The third sentence (15c), in fact, disambiguates the ‘two girls’ in (15b) as being separated from the group in (15a). The contrast shows that *-nun* cannot be ambiguous as to the specificity status of the NP. It must connect the NP to the already existing referents. The NPs, ‘two girls’ in the (b) sentences are apparently not definite. Compare the ‘two girls’ in (14b) and (15b) to the ‘demonstrative two girls’ in (14c) and (15c). The ‘two girls’ in (14c) and (15c) refer exactly to the girls in the preceding sentences, (14b) and (15b), while the two girls in (14b) and (15b) do not exactly correspond to the children in the preceding sentence, (14a) and (15a). The referent of the NP, ‘two girls’, is part of the preceding NP, ‘several children’. That is, having a *-nun* marker, ‘two girls’ in (14b) is a specific indefinite NP, which is not previously referred to, but related to the previous discourse domain. In contrast to this, having a case marker, ‘two girls’ in (15b) can be either specific indefinite

or unspecific indefinite. Therefore, it can be unrelated to previously established referents, which saves the following sentence (15c) from making a contradictory statement to (15a).

How can the meaning of *-nun* that is postulated in section 5.1 be related to this phenomenon? It is not proper to say that *-nun* indicates the status of specificity of an NP. Definiteness and specificity are the property of an NP. That is, *-nun* is not the means for indicating the property that the NP already has. The way *-nun* is related to specificity of a NP is that *-nun* adds the existential presupposition to the common ground of the NP and excludes the possibility of the NP's obeying the Novelty Condition. Bare NPs in Korean are ambiguous regarding the specificity property in the absence of a proper context. Assigning the existential presupposition to the NP triggers the specificity reading.

The function of *-nun* we posited in section 5.1 fits better with specificity than definiteness. What *-nun* adds is the existential presupposition but what definiteness requires is the identity property and obedience to the Familiarity Condition. These requirements are stronger than those made by *-nun*'s existential presupposition.

We have concluded that *-nun* is related to specificity but not to definiteness in this subsection. Let us explore other types of patterns of items marked with unaccented *-nun*.

5.3.2.2 The Disambiguation of a Generic/Existential Reading

In the preceding section, we have checked how the meaning of *-nun* can be connected to specificity. In this subsection, we will study the second characteristic of *-nun* that enforces the generic reading of a sentence. Consider the following sentence.

- (16) a. *pi-ka nayli-nta*
rain-Nom fall-Dec
'Rain falls (It rains).'

- b. ??*pi-nun nayli-nta*
rain-Nun fall-Dec
‘Rain is such that it falls.’

Since Kuno (1972), the above sentences have been a well-known minimal pair that exhibits contrast between a case marker and *-nun*. The restriction in the combination of type of subject NP and one-place predicates reminds us of the work of Carlson (1977), which initiated the classification of stage and individual level predicates. His classification showed the interpretational differences of bare plural subjects depending on the predicate types. This raises the possibility that Carlson's classification is related to the contrast between the above examples. The following well-known example shows a correlation between a predicate type and a different type of interpretation with bare plural subjects: only a generic reading with an individual level predicate in (18) and both existential and generic reading with a stage level predicate in (17).

- (17) Firemen are available. (existential, generic)
(18) Firemen are altruistic. (generic)

Korean subjects with *-i/-ka* and *-nun* provide the following pattern.

- (19) *kongcwunimtul-i ttwie tanici anh-a.*
Princesses-Nom running around Neg-ind.
‘Princesses are not running around.’ (existential)
- (20) *kongcwunimtul-un ttwie tanici anh-a.*
Princesses-Nun running around Neg-ind.
‘Princesses are such that they do not run around.’ (generic)

Different markings of subjects in (19) and (20) not only restrict the meaning of the subject NPs but also lead to different types of predicate. ‘Princesses’ in (19) refers to ‘individuals’ while the same word in (20) refers to ‘kind’. If it refers to ‘individuals’, the

NP ‘princesses’ has the specificity property as introduced in the previous section. Since we have already discussed the appearance of specificity property with *-nun*, we will focus on the appearance of genericity in this section.

It is not possible for an NP that represents a kind to be combined with a stage level predicate. The subject, *kongcwunimtul* ‘princesses’, in (19) has the existential reading that there are princesses and these princesses are not running around at the present moment. The predicate ‘running around’ can be perceived as stating a temporary event and thus, it may be considered to be a stage level predicate. On the other hand, ‘princesses’ in (20) expresses the generic meaning of ‘princesses’ and a property of the class of princess. Although the predicate ‘running around’ is apparently an event predicate describing the temporary behavior of an agent, when this is combined with this *-nun* marked subject, the predicate imposes this property on the class of ‘princess’ in general and functions as an individual level predicate. Thus, the whole sentence (20) expresses a generic meaning of princesses. Summing up, (19) and (20) obtain existential and generic reading respectively depending on the marking of the subject.

According to the proposal regarding *-nun* in this thesis, the existential presupposition of a non-empty set that is invoked by a *-nun* marked item enforces the generic reading of the marked item. It leads to the individual level reading of its predicate if the predicate is ambiguous between individual and stage level predicates as in example (20).

The task is now to explain how *-nun* produces the effect of rendering the property of the NP, ‘princesses’, a kind. The following conversation confirms the fact the NP

refers to a kind, not to individuals. If we imagine a situation where a mother and a young daughter have a conversation, each sentence of the mother's triggers a different response from the daughter.

- (21) *Mother:* *kongcwunim-tul-i* *ttwie tanici anh-a.*
Princess-pl-Nom running around Neg-Dec.
'Princesses are not running around.'

Daughter: #*emma, kongcwunim-i mwue-ya?*
mom, princess-Nom what-Q?
'Mom, what is a princess?'

- (22) *Mom:* *kongcwunim-tul-un* *ttwie tanici anh-a.*
Princess-pl-Nun running around Neg-ind.
'Princesses are such that they do not run around.'

Daughter: *emma, kongcwunim-i mwue-ya?*
mom, princess-Nom what-beQ?
'Mom, what is princess?'

In (22), as a response to the sentence with *-nun*, the daughter can ask what *kongcwunim* is since what the mother is talking about is a kind, not individuals. In contrast to this, the same question does not work as a response to the sentence with the case marker *-i* since in that sentence, the word means the individuals that it refers to.

The next question would then be how the presence of an existential presupposition of a non-empty set in the common ground can generate the generic reading of the bare plural NP and a generic reading of the sentence. A generic meaning of an NP is the one where the speaker presupposes the existence of at the moment that he utters the sentence. For instance, speaking of unicorns, although their referents do not actually exist, when a speaker says "Unicorns are polka-dotted," he presupposes the existence of unicorns in his imaginary world. When a speaker defines a kind or illustrates

the character of a kind, how could he possibly do it without presupposing the existence of that kind? Therefore, the meaning that expresses the ‘kind’ of a noun is well-matched with what *-nun* expresses.

As I have already emphasized several times, the relation of *-nun* to the ‘kind’ reading is not an absolute one. It is possible only when the meaning is ambiguous. In the above case in (19)-(20), the predicate has a present tense, which makes the predicate ambiguous between individual and stage level, and the NP ‘princess’ can be read both as an individual and as a kind.

The above discussion accounts for the reason why *pi-nun naylinta* ‘rain-*nun* falls’ is judged to be unnatural in (23).

(23) ??*pi-nun nayli-nta*
rain-Nun fall-Dec
‘Rain is such that it falls.’

(24) *LA-eyse-nun pi-nun kyewul-ey manhi nayli-nta.*
LA-in-Nun rain-Nun winter-in much fall-Dec
‘In LA, rain is such that it falls a lot in winter.’

First, consider why (23) is unnatural. The marker *-nun* induces the generic reading of ‘rain’ as rain is such that it falls. However, ‘falling’ cannot be a generic property of rain. The property of the predicate ‘fall’ is always temporal and it can be only a stage level predicate. If we change the predicate to ‘fall a lot in the winter’, it can serve as a property of rain (= individual level predicate), and thus we expect it to be natural with *-nun*. The prediction turns out to be right in (24). The following example, in which the predicate is a restrictive relative clause, tests whether the predicate is possible as a

property of the subject or not. We can confirm that the predicate ‘fall’ fails and is ineligible as property of the subject, ‘rain’.

- (25) a.??Rain that falls.
b. Rain that is cold.
c. Rain that falls in the winter.

The reason for the unnatural reading is that the meaning of *pi-ka naylinta* ‘it rains (rain falls)’ is not well-matched with the generic reading induced by *-nun*. Through the examples in this section, we confirm that *-nun* induces the generic reading of a sentence if the meaning of a sentence is otherwise ambiguous.

5.3.2.3 Cognitively Active

The third effect of *-nun* is well reflected in the contrast of the following examples.

- (26) [Context] The president has been killed by a terrorist’s sudden attack and the spokesman of the Blue House is announcing his death.

Yelepwun, taytonglyeng-i/#-un tolakasy-ess-supnita.
Multiple people, president-Nom/#-NUN pass away-Pst-Dec.
‘Ladies and Gentlemen, the president has passed away!’

- (27) [Context] After suffering a long-term illness, the president has died. The spokesman of the Blue House is announcing his death.

Yelepwun, taytonglyeng-i/-un tolakasy-ess-supnita.
Multiple people, president-Nom/-Nun pass away-pst-dec.
‘Ladies and gentlemen, the president has passed away.’

In both of the contexts, the announcement that the president has passed away is new information. The difference is, however, found in the following: in the second context, the president and his death have been under consideration of listeners, albeit that fact is not revealed in the discourse context, while in the first context, the whole situation is unexpected.

This type of usage of *-nun* forms a counterargument against a Topic analysis of *-nun*, according to which ‘the president–*nun*’ in (27) should be the Topic of which the rest of the sentence is predicated. Intuitively, one might be tempted to say that in the first context, the event argument corresponds to the Topic of the sentence. That is, the whole sentence is about the new event that the president has passed away. However, in the two situations, the predicate is identical and is a stage level predicate. Why the first one chooses an event argument as its Topic and the second one chooses the president as its Topic is not logically explained.

The contrast that appears in these examples is hard to capture without a context. Unlike the the previous two characteristics of *-nun*, the usage of *-nun* in (26) and (27) does not disambiguate the semantic reading of the marked item. In both readings, the president may be interpreted as a specific president of a specific country. Thus, the usage of *-nun* here does not distinguish a specific and a non-specific reading. In addition, the interpretational difference between the above two examples is not the difference between a generic reading and an existential reading. Apparently, the meaning difference that appears between (26) and (27) is more subtle than the difference that appears in the two cases in previous sections.

Considering that a *-nun* marked item is existentially presupposed, when a speaker uses *-nun* instead of *-i/-ka*, he presupposes that the item is already under consideration by the conversation partakers. It recalls the notion of ‘givenness’ in Chafe (1975) in a broad

sense. More recently, Portner (2005) has described topic⁴ as follows, which seems to be closest to what I have described for *-nun* marked items in this section.

- (28) “(I report that) my/the speaker’s mental representation of X is active.”
Portner (2005)

This accounts for why the *-nun* marked president is not appropriate as a subject for the unexpected event. The president had not been under consideration regarding the event of death before the announcement in the context (26).

The same explanation can apply to the example of the conversation between a detective and a witness in (29) and (30).

- (29) Detective: On the day that the murder happened, what did you see?

Witness: *Ku nal, Ben-i pokto-ey ssulecye iss-ess-eyo.*
On that day, Ben-Nom corridor-at fall down be-Pst-Dec.
‘On that day, Ben was lying in the corridor, having fallen down.’

- (30) Detective: On the day that the murder happened, what did you see?

Witness: *Ku nal, ?Ben-un pokto-ey ssulecye iss-ess-eyo.*
On that day, Ben-Nun corridor-at fall down be-Pst-Dec.
‘On that day, Ben was lying in the corridor, having fallen down.’

In the above conversation pairs, the day corresponds to Topic and the whole sentence following the adverb phrase *ku nal* ‘on that day’ is under broad Focus being new information. The subject ‘Ben’ is a part of new information but unlike Contrastive Topic examples, it is not accented. Therefore, the information status of *Ben-i* and *Ben-un* are the same in that both of them belong to new information.

⁴ He did not specifically distinguish between Topic and topic but what he defines regarding ‘topichood’ is in the same line of ‘topic’ but not ‘Topic’.

However, there is a subtle meaning difference between the two phrases. The subtle difference does not seem to be the truth value difference but something else. Unlike the usage of accented *-nun*, the sentence in (30) does not seem to have any additional proposition.

The difference does not appear in the linguistic meaning (semantic content) but in the status of ‘Ben’ in the interlocutors’ cognitive state. In (29), with case-marked ‘Ben’, the witness (the speaker) does not care whether ‘Ben’ is already under consideration of the detective (the hearer) while in (30), the witness expresses, through using *-nun* with ‘Ben’, that he assumes that the detective already has ‘Ben’ in mind regarding the murder. For instance, under the context that the witness saw the detective holding Ben’s picture when the detective interviewed him, the witness can answer as in (30). However, he cannot answer as in (30) in an out of the blue context. In other words, the speaker who uses *-nun* thinks that the *-nun* marked item is cognitively active in the hearer’s cognition. In this respect, the *-nun* marked item can be taken as ‘given’ in the sense of Chafe (1975) cited in (31).

- (31) “...[having] to do with the speaker’s assessment of how the addressee is able to process what he is saying against the background of a particular context at the moment, in certain temporary states with relation to that knowledge.”

This account applies in the same way to the following example.

- (32) Detective: On the day that the murder happened, what did you see?

Witness: *Ku nal, nwukwunka-ka pokto-ey ssulecye iss-ess-eyo.*
That day, someone-Nom corridor-at fall down be-Pst-Dec.
‘On that day, someone was lying in the corridor, having fallen down.’

(33) Detective: On the day that the murder happened, what did you see?

Witness: #*Ku nal, nwukwunka-un pokto-ey ssulecye iss-ess-eyo.*
That day, someone-Nun corridor-at fall down be-Past-Dec.
'On that day, someone was lying in the corridor, having fallen down.'

The context provided here is exactly the same as in (29) and (30). The only difference is the subject. In the above pairs, the subject NP is a proper name while in (32) and (33), it is *nwukwunka* 'some person'. The 'someone' here can be read either as a specific person (*de re* reading) or as an unspecific person (*de dicto* reading). However, regardless of whether the 'someone' is read as *de re* or *de dicto*, the usage of *-nun* in this situation with 'someone' is not felicitous. In (30) and (33), what *X-nun* is supposed to express is "I (the speaker) know that you (the hearer) have already considered X regarding this event." However, in this context, it is not so plausible that 'someone' who the witness talks about is already under consideration by the detective. If someone comes up with an elaborated context that the specific 'someone' mentioned by the witness is already under consideration by the detective, *-nun* would be allowed to attach to 'someone'.

5.4 Summary

In this chapter, we have tried to account for the pattern that unaccented *-nun* exhibits. Unaccented *-nun* has been broadly used as a Topic marker without any doubt although the term Topic does not have a fully agreed upon definition. This is not an ideal situation. Without knowing the exact definition or property of the category itself, we cannot understand the alleged marker for it. The study of unaccented *-nun* in this chapter is an attempt to shed some light on the properties of what we have so far thought to be a

Topic being marked by *-nun* and to provide a unified analysis for both contrastive and non-contrastive usages of *-nun*.

Chapter 6

Concluding Remarks

The study of Contrastive Topic has raised many controversial issues especially regarding the conventional way of understanding Topic-Focus articulation. To have features of both Topic and Focus at the same time is not compatible with the conventional idea of the disjoint relation of Topic and Focus. Korean could not be free from this controversy, either. The particle *-nun* in Korean that is alleged to appear both in the Thematic Topic and the so-called Contrastive Topic has led people to associate Contrastive Topic to the information structure component, Topic. However, in the approach to treat *-nun* simply as a Topic marker, it is hard to account for the contrastive meaning. As well stated in Vallduvi (1992), encoding of the Information Structure component, such as Topic and Focus, is independent of logico-semantic meaning and other pragmatic understanding. However, in our communicative process of interpreting utterances, three factors, the semantic content of the utterance, discourse context, and pragmatic procedures such as Gricean conversational maxims should be combined (Potts 2008). I have taken *-nun* as an item that works in this interpretational process rather than as a device to represent Information Structure component. I have shown that *-nun*

actually associates with semantic phenomena as well as pragmatic phenomena. My suggestion is that the fundamental function of *-nun* is to generate an existential presupposition and an exhaustive implicature, and depending on whether the existential presupposition is compatible with the discourse context or not, the felicity of the sentence is decided.

The starting point of this suggestion was to conduct experiments of utterances containing *-nun*. Through these experiments, I have concluded that not any accented *-nun* marked items can be a Contrastive Topics. Depending on the question type and context, not only the prosodic prominence but other two factors have turned out to be correlated with the interpretation of the *-nun* marked sentences: i) the location of a *-nun* marked item within a sentence and ii) the prosodic property of the constituent following a *-nun* marked item. That is, the contrastive meaning that the *-nun* marked sentence obtains is not solely from the meaning of the *-nun* marked item but from the meaning of both the *-nun* marked item and the related neighboring constituents, which I call Contrast Trigger and R in Chapter 3.

This enlightens the essential relation between a *-nun* marked item and the following focused constituent. In Buring (1997), the existence of a focused item within a sentence is considered to be essential. Oshima (2002) and Hara (2006) point this out as the weak point of Buring's theory of Contrastive Topic by providing cases where the accented *-nun* marked constituent (and its Japanese counterpart marked with *-wa*) alone can generate the contrastive meaning of Contrastive Topic without the existence of another focused item. However, I point out that the apparent lack of an additional focused

item other than the accented *-nun* marked item can be explained by *verum focus* (Remero and Han 2002, Romero 2005). In my analysis, the existence of a focused item following the *-nun* marked item is essential, being called Contrast Trigger. The existence of this Contrast Trigger and its relation to the *-nun* marked item accounts for the contrastive meaning of sentences that include accented *-nun* marked items without stipulating a special interpretation for Contrastive Topic.

The analysis of the generation of existential presupposition and exhaustive implicature of accented *-nun* marked items explains not only the meaning of the sentences that include *-nun* but also their pragmatic behaviors through informative accommodation. The application of speaker's presupposition and informative accommodation (Stalnaker 1972, 1973, 1978, 1988, 1998) to the pragmatic behavior of *-nun* marked items successfully accounts for the various types of discourses.

The last thing to be noted is the existential presupposition generated from *-nun* can explicate the function of *-nun* to indicate the 'referential givenness' in Gundel's (1988, 1998, 2003a, 2003b) sense but not the 'relational givenness', which is generally expressed as 'aboutness topic'. Association of the existential presupposition of *-nun* to referential givenness is explanatory but does not provide a formalized account for the direct association between them. Future research for this part is strongly recommended. I believe that the research on the relation of the presupposition of *-nun* and the referential givenness can contribute to enlightening the properties of concepts complexly mixed under a single term, 'Topic'.

APPENDIX

Data Script Used for the Experiments in Chapter 2

EXPERIMENT 1

A1, A3: Target Sentences for Experiment 1

EXPERIMENT 3

A3, A4: Target Sentences for Experiment 3

SET1. 말벌

Q: 말벌이 누구를 많이 물었노?

A1: 말벌이 미나를 많이 물었어요.

A2: 미나를 말벌이 많이 물었어요.

A3: 말벌이 미나는 많이 물었어요.

A4: 미나는 말벌이 많이 물었어요.

SET1. Bee Bite

Q: Who did the bee bite a lot?

A1: Bee-Nom Mina-Acc a lot bit.

A2: Mina-Acc Bee-Nom a lot bit.

A3: Bee-Nom Mina-Nun a lot bit.

A4: Mina-Nun Bee-Nom a lot bit.

SET2. 마늘

Q: 농민들이 뭐를 많이 버리고있노?

A1: 농민들이 마늘을 많이 버리고있어요.

A2: 마늘을 농민들이 많이 버리고있어요.

A3: 농민들이 마늘은 많이 버리고있어요.

A4: 마늘은 농민들이 많이 버리고있어요.

SET2. Garlic

Q: What are the farmers throwing away a lot?

- A1: The farmers-Nom garlic-Acc a lot. throw away
- A2: Garlic-Acc the farmers-Nom a lot throw away
- A3: The farmers-Nom garlic-Nun a lot throw away
- A4: garlic-Nun the farmers-Nom a lot throw away

SET3. 맘마미아 (뮤지컬)

Q: 민우가 뭐를 오늘 보러갔노?

- A1: 민우가 맘마미아를 오늘 보러갔어요.
- A2: 맘마미아를 민우가 오늘 보러갔어요.
- A3: 민우가 맘마미아는 오늘 보러갔어요.
- A4: 맘마미아는 민우가 오늘 보러갔어요.

SET3. Mamma Mia (the Musical)

Q: What did Minu go to watch today?

- A1: Minu-Nom Mamma Mia-Acc today went to watch
- A2: Mamma Mia-Acc Minu-Nom today went to watch
- A3: Minu-Nom Mamma Mia-Nun today went to watch
- A4: Mamma Mia-Nun Minu-Nom today went to watch

SET4. 마이애미

Q: 미나가 어디를 올여름에 방문했노?

- A1: 미나가 마이애미를 올여름에 방문했어요.
- A2: 마이애미를 미나가 올여름에 방문했어요.
- A3: 미나가 마이애미는 올여름에 방문했어요.
- A4: 마이애미는 미나가 올여름에 방문했어요.

SET4. Miami

Q: Where did Mina visit this summer?

- A1: Mina-Nom Miami-Acc this summer visited.
- A2: Miami-Acc Mina-Nom this summer visited.
- A3: Mina-Nom Miami-Nun this summer visited.
- A4: Miami-Nun Mina-Nom this summer visited.

SET5. 돈 2.

Q: 엄마가 뭐를 마루에 놔줬노?

A1: 엄마가 이만 원을 마루에 놔줬어요.

A2: 이만 원을 엄마가 마루에 놔줬어요.

A3: 엄마가 이만 원은 마루에 놔줬어요.

A4: 이만 원은 엄마가 마루에 놔줬어요.

SET 5. Money II.

Q: What did mom leave on the floor?

A1: Mom-Nom twenty-rhousand Korean-won-Acc on the floor has left.

A2: Twenty-rhousand Korean-won-Acc Mom-Nom on the floor has left.

A3: Mom-Nom twenty-thousand Korean won-Nun on the floor has left

A4: Twenty-thousand Korean won-Nun on Mom-Nom on the floor has left

SET 7. 멍멍이

Q: 우리애가 뭐를 멀리 보냈어요?

A1: 우리애가 멍멍이를 멀리 보냈어요.

A2: 멍멍이를 우리애가 멀리 보냈어요.

A3: 우리애가 멍멍이는 멀리 보냈어요.

A4: 멍멍이는 우리애가 멀리 보냈어요.

SET7. PUPPY

Q: What did our child send far away?

A1: Our child-Nom puppy-Acc far sent away.

A2: Puppy-Acc our child-Nom far sent away.

A3: Our child-Nom puppy-Nun far sent away.

A4: Puppy-Nun our child-Nom far sent away.

SET 8. 유모

Q: 유모가 누구를 이리로 데려왔노?

A1: 유모가 언니를 이리로 데려왔어요.

A2: 언니를 유모가 이리로 데려왔어요.

A3: 유모가 언니는 이리로 데려왔어요.

A4: 언니는 유모가 이리로 데려왔어요.

SET8. NANNY

Q: Who did the nanny bring here?

A1: Nanny-Nom elder sister-Acc here brought.

A2: Elder sister-Acc Nanny-Nom here brought.

A3: Nanny-Nom elder sister-Nun here brought.

A4: Elder sister-Nun nanny-Nom here brought.

EXPERIMENT 2

SET1: CITY TRIP

(1) [CONTEXT] 존, 메리, 수가 각자 여름방학 동안 자동차로 마이애미, 시카고 LA 등 미국 주요도시를 도는 횡단여행을 계획하고 있었다. 하지만, 갑자기 기름값이 너무 오르는 바람에 경비가 훨씬 예산을 초과하게 되서 계획실행이 불투명해졌다. 방학이 끝나고 선생님이 존에게 물어보셨다

Y/N-Q: 선생님: 너네들 미국 횡단 여행 갔나?

ANSWER: 1: 메리가 마이애미는 갔어요.

2: 마이애미는 메리가 갔어요.

3: 메리가 마이애미를 갔어요.

4: 마이애미를 메리가 갔어요.

SET1. CITY TRIP

(1) [CONTEXT] John, Mary, Sue respectively planned to go to road trip to the major cities of USA, Miami, Chicago, and LA during their vacation. However, due to the sudden raise of the fuel price, the cost has trespassed the budget and accordingly, the realization of the plan got to be opaque. After the vacation, their teacher has asked to John.

Y/N-Q: Did you guys go to the road trip?

Answer: 1. Mary-Nom Miami-Nun went.

2. Miami-Nun Mary-Nom went.

3. Mary-Nom Miami-Acc went.

4. Miami-Acc Mary-Nom went.

(2) [CONTEXT] 존, 메리, 수가 각자 여름방학 동안 자동차로 마이애미, 시카고 LA 등 미국 주요도시를 도는 횡단여행을 계획하고 있었다. 방학이 끝나고 선생님이 존에게 물어보셨다

Wh-Q: 선생님: 누가 어느 도시를 갔노? 마이애미는? 시카고는? LA 는?

ANSWER: 1: 메리가 마이애미는 갔어요.

2: 마이애미는 메리가 갔어요.

3: 메리가 마이애미를 갔어요.

4: 마이애미를 메리가 갔어요.

(2) [CONTEXT] John, Mary, Sue respectively planned to go to road trip to the major cities of USA, Miami, Chicago, and LA during their vacation. After the vacation, their teacher has asked to John.

Y/N-Q: Who went which city? How about Miami? Chicago? LA?

Answer: 1. Mary-Nom Miami-Nun went.

2. Miami-Nun Mary-Nom went.

3. Mary-Nom Miami-Acc went.

4. Miami-Acc Mary-Nom went.

SET2. HOUSE CLEANING

(1) [CONTEXT] 엄마가 며칠 집을 비우시면서 미나와 언니한테 집청소를 해놓으라고 하셨다. 하지만, 이틀후 엄마가 돌아와보니 집안이 여전히 엉망이었다. 화가 나신 엄마가 언니를 불러 물어보셨다.

Y/N -Q:너네 집 청소 했나?

Answer: 1) 미나가 마루는 청소했어요.

2) 마루는 미나가 청소했어요.

- 3) 미나가 마루를 청소했어요.
- 4) 마루를 미나가 청소했어요.

(1) [CONTEXT] Mom asked Mina and her sister to clean the house while she is out of the house for several days. However, when she came back in a couple days, the house was in such a mess. Mom got angry and asked the elder sister.

Y/N-Q: Mom: Did you guys cleaned the house?

Answer: A1. Mina-Nom floor-Nun cleaned.

A2. Floor-Nun Mina-Nom cleaned.

A3. Mina-Nom floor-Acc cleaned.

A4. Floor-Acc Mina-Nom cleaned.

(2) [CONTEXT] 엄마가 며칠 집을 비우시면서 미나와 언니한테 집청소를 해놓으라고 하셨다. 이틀후 엄마가 돌아와보니 집안이 깨끗해져 있었다. 엄마가 언니를 불러 물어보셨다.

wh-Q: 누가 어디를 치웠노? 마루는? 거실은?

Answer: 1) 미나가 마루는 청소했어요.

2) 마루는 미나가 청소했어요.

3) 미나가 마루를 청소했어요.

4) 마루를 미나가 청소했어요.

(2) [CONTEXT] Mom asked Mina and her sister to clean the house while she is out of the house for several days. However, when she came back in a couple days, the house was in such a mess. Mom got angry and asked the elder sister.

Y/N-Q: Who cleaned where? How about the floor? How about the living room?

Answer: A1. Mina-Nom floor-Nun cleaned.

A2. Floor-Nun Mina-Nom cleaned.

A3. Mina-Nom floor-Acc cleaned.

A4. Floor-Acc Mina-Nom cleaned.

SET3. 연어요리

(1) [CONTEXT] 메리의 친구들은 채식주의자들이 많은 편이다. 그런 메리가 바베큐파티를 한다고 친구들을 불렀다고해서, 궁금해진 나는 친구에게 물어보았다.

y/n-Q: 개네들 뭐 먹었나?

- ANSWER: 1) 브라이언이 연어요리는 먹었어.
2) 연어요리는 브라이언이 먹었어.
3) 브라이언이 연어요리를 먹었어.
4) 연어요리를 브라이언이 먹었어.

(1) [Context] Mary has a lot of vegetarian friends. I heard that Mary invited her friends to the BBQ party and asked this question out of curiosity.

y/n-Q: Did they eat something?

- Answer: 1) Brian-Nom Salmon-Nun ate.
2) Salmon-Nun Brian-Nom ate.
3) Brian-Nom Salmon-Acc ate.
4) Salmon-Acc Brian-Nom ate.

(2) [CONTEXT] 메리가 바베큐파티를 한다고 친구들을 불렀는데, 메리의 훌륭한 요리를 좋아하는 나는 친구에게 물어보았다.

Wh-Q: 누가 뭐 먹었노? 연어요리는? 불고기는?

- ANSWER: 1) 브라이언이 연어요리는 먹었어.
2) 연어요리는 브라이언이 먹었어.
3) 브라이언이 연어요리를 먹었어.
4) 연어요리를 브라이언이 먹었어.

(2) [Context] Mary invited friends to her BBQ party. I love Mary's great cooking and asked my friend who was invited there.

Wh-Q: Who ate what? How about salmon? Bulgogi?

- Answer: 1) Brian-Nom salmon-Nun ate.
2) Salmon-Nun Brian-Nom ate.
3) Brian-Nom salmon-Acc ate.
4) Salmon-Acc Brian-Nom ate.

SET4. 드레스

(1) [CONTEXT] 미나랑 소라랑 연아가 졸업파티에서 입을 드레스를 사러 로데오 거리를 갔다. 아르마니, 베라왕, 마크 제이콥스를 둘러봤는데, 드레스들이 예상했던 것 보다 훨씬 더 비쌌다. 로데오를 갔었던 얘기를 듣고 놀란 민우가 소라에게 물어봤다.

y/n-Q: 민우: 그래서 너네 드레스를 거기서 구입했나?

ANSWER: 소라: 1) 미나가 아르마니는 구입했어.

2) 아르마니는 미나가 구입했어.

3) 미나가 아르마니를 구입했어.

4) 아르마니를 미나가 구입했어.

(1) [Context] Mina, Sora, and Yona went to Rodeo to buy a dress for the graduation party. They looked around various shops such as Armani, Vera Wang, and Marc Jacobs and the dress was much more expensive than they expected. Minu was surprised to hear that they went to Rodeo and asked Sora.

y/n-Q: So, did they buy the dress there?

Answer: 1) Mina-Nom Armani-Nun bought.

2) Armani-Nun Mina-Nom bought.

3) Mina-Nom Armani-Acc bought.

4) Armani-Acc Mina-Nom bought.

(2) [CONTEXT] 미나랑 소라랑 연아가 졸업파티에서 입을 드레스를 사러 로데오 거리를 갔다. 아르마니, 베라왕, 마크 제이콥스를 둘러봤다. 로데오를 갔었던 얘기를 듣고 놀란 민우가 소라에게 물어봤다.

Wh-Q: 그래서 누가 어디서 드레스를 샀어? 아르마니는? 베라왕은?

ANSWER: 1) 미나가 아르마니는 구입했어.

2) 아르마니는 미나가 구입했어.

3) 미나가 아르마니를 구입했어.

4) 아르마니를 미나가 구입했어.

(2) [Context] Mina, Sora, and Yona went to Rodeo to buy a dress to wear in the graduation party. They looked around Armani, Vera Wang, and Marc Jacobs. Minu heard that they went to Rodeo and asked Sora.

Wh-Q: So, who bought a dress where? How about Armani? How about Vera Wang?

- Answer: 1) Mina-Nom Armani-Nun bought
2) Armani-Nun Mina-Nom bought
3) Mina-Nom Armani-Acc bought
4) Armani-Acc Mina-Nom bought

SET5. 뮤지컬

(1) [CONTEXT] 민우와 소라, 연아가 크리스마스에 브로드웨이 뮤지컬을 보러갔다. 보통 크리스마스 시즌에는 예약을 하지 않으며 표를 구하는 게 하늘의 별따기라고 들은 나는 친구에게 물어봤다.

Y/N-Q: 그래서 개네들 브로드웨이에서 뮤지컬 봤어?

- ANSWER: 1) 민우가 맘마미아는 봤어.
2) 맘마미아는 민우가 봤어.
3) 민우가 맘마미아를 봤어.
4) 맘마미아를 민우가 봤어.

[Context] Minu, Sora, and Yona went to watch a Broadway musical on Christmas day. I heard that it is usually extremely hard to get a ticket unless they book the ticket in advance. So, I asked to a friend,

y/n-Q: So, did they watch a Broadway musical?

- Answer: 1) Minu-Nom Mamma Mia-Nun watched
2) Mamma Mia-Nun Minu-Nom watched
3) Minu-Nom Mamma Mia-Acc watched
4) Mamma Mia-Acc Minu-Nom watched

(2) [CONTEXT] 민우와 소라, 연아가 크리스마스에 브로드웨이 뮤지컬을 보러갔다. 뮤지컬에 관심이 많은 나는 소라에게 물어봤다.

Wh-Q: 그래서 누가 뭐 봤어? 맘마미아는? 위키드는?

- ANSWER: 1) 민우가 맘마미아는 봤어.
2) 맘마미아는 민우가 봤어.
3) 민우가 맘마미아를 봤어.

4) 맘마미아를 민우가 봤어.

[Context] Minu, Sora, and Yona went to watch a Broadway musical on Christmas day. I am much interested in a musical and asked Sora:

Wh-Q: So who watched what? How about Mamma Mia? Wicked?

Answer: 1) Minu-Nom Mamma Mia-Nun watched

2) Mamma Mia-Nun Minu-Nom watched

3) Minu-Nom Mamma Mia-Acc watched

4) Mamma Mia-Acc Minu-Nom watched

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